QUAKER CHEMICAL CORP
Form DEFM14A
July 31, 2017
Table of Contents

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the

Securities Exchange Act of 1934

Filed by the Registrant Filed by a Party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material under §240.14a-12

QUAKER CHEMICAL CORPORATION

(Name of Registrant as Specified In Its Charter)

N/A

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

Table of Contents

QUAKER CHEMICAL CORPORATION

One Quaker Park

901 E. Hector Street

Conshohocken, Pennsylvania 19428

(610) 832-4000

July 31, 2017

Dear Shareholder:

On April 4, 2017, Quaker Chemical Corporation (the **Company**) entered into a Share Purchase Agreement (the **Share Purchase Agreement**) with Global Houghton Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Houghton**), Gulf Houghton Lubricants, Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Gulf**), certain current and former members of the management of Houghton (collectively with Gulf, the **Sellers**) and Gulf as representative for the Sellers (in this capacity, the **Sellers Representative**). The terms we, our, us, the Company and Quaker, as used in this letter and in the accompanying proxy statement, refer to Quaker Chemical Corporation.

Upon the terms and subject to the conditions set forth in the Share Purchase Agreement, the Company has agreed to purchase (the **Combination**) all of the outstanding share capital (the **Shares**) of Houghton from the Sellers. The Shares will be sold for an aggregate purchase price (subject to adjustment as provided in the Share Purchase Agreement) of: (1) $172,500,000 in cash; and (2) a number of shares (the **Consideration Shares**) of common stock, $1.00 par value per share, of the Company (the **Common Stock**) comprising 24.5% of the Common Stock outstanding immediately after the closing of the Combination (the **Closing**), which based on the closing stock price of shares of our Common Stock on the New York Stock Exchange on the record date, had a value of approximately $626,344,715. There can be no assurance as to what the value of the Consideration Shares will be at the Closing. If the proposed Charter Amendment, as described below, is not approved by the Company s shareholders at the Meeting (as defined below), the Company will instead issue, as the Consideration Shares, shares of a new series of voting preferred stock of the Company (the **Preferred Stock**) having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. The terms of the Share Purchase Agreement and other aspects of the Combination are more fully described in the accompanying proxy statement.

On behalf of the Board of Directors (the **Board**) of the Company, I cordially invite you to attend the Special Meeting of Shareholders (the **Meeting**) of the Company, which will be held at our headquarters, located at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, at 8:30 A.M., local time, on September 7, 2017. The matters to be considered by our shareholders at the Meeting are described in detail in the accompanying materials. The matters that our shareholders will be considering are the approval of: (1) the amendment (the **Charter Amendment**) of our Articles of Incorporation (as amended, our **Articles of Incorporation**), to provide that every holder of Common Stock will be entitled to one vote for each share of Common Stock standing in its name on the books of the Company; (2) the issuance (the **Issuance**) of the Consideration Shares (either as Common Stock or Preferred Stock) in

connection with the Combination; and (3) the adjournment of the Meeting, if necessary to solicit additional proxies if there are not sufficient votes to approve the foregoing proposals at the time of the Meeting (the **Adjournment Proposal**). This proxy is solicited on behalf of the Board.

Table of Contents

We are seeking shareholder approval of the Issuance in connection with the Combination to satisfy the rules of the New York Stock Exchange, which require shareholder approval before the issuance of common shares in connection with any transaction or series of related transactions if: (1) the common shares have, or will have upon issuance, voting power equal to or in excess of 20% of the voting power outstanding before the issuance of such shares; or (2) the number of common shares to be issued is, or will be upon issuance, equal to or in excess of 20% of the number of common shares outstanding before the issuance of the common shares. Because it is contemplated that the shares of Common Stock to be issued in the Combination will exceed the 20% threshold, the Issuance requires shareholder approval. Under the rules of the New York Stock Exchange, approval of the proposal requires the affirmative vote of the holders of a majority in voting power of the shares of Common Stock present or represented and voting on the proposal (provided that a quorum is present at the Meeting). Shareholder approval of the Issuance in connection with the Combination is a required condition to the completion of the Combination. We are also seeking approval of the other matters summarized above and described in further detail in this proxy statement.

Shareholders of record at the close of business on June 15, 2017 (the **Record Date**) are entitled to receive notice of and vote at the Meeting and any adjournment or postponement thereof.

After careful consideration, the Board unanimously recommends that you vote FOR the proposal to approve the Charter Amendment, FOR the proposal to authorize the Issuance, and FOR the Adjournment Proposal.

It is very important that you be represented at the Meeting regardless of the number of shares you own. Even if you plan to attend the Meeting, I urge you to submit your proxy promptly. You may vote your shares in person at the Meeting, via the Internet, via a toll-free telephone number or by marking, signing and dating your proxy card and returning it in the envelope provided, as described in further detail in the accompanying proxy statement. Voting over the Internet, by phone or by proxy card will not prevent you from voting in person, but it will ensure that your vote is counted if, for any reason, you are unable to attend the Meeting. If your shares are held in the name of a bank, brokerage firm, fiduciary or custodian, as record holder of your shares, please follow the voting instructions on the form you receive from your record holder. The method of submitting a voting proxy through any such record holder will depend on their voting procedures.

Your vote is very important. The Combination cannot be completed unless a quorum is present in person or by proxy and holders of a majority of the votes cast at the Meeting vote in favor of the proposal to approve the Issuance. A failure to vote your shares of Common Stock on the proposal to approve the Issuance will not count as a vote cast, and therefore will have no effect on the approval of the Issuance (unless such failures, in the aggregate, prevent a quorum as described in the accompanying proxy statement).

We urge you to read carefully the accompanying proxy statement (and the documents incorporated by reference into it) which includes important information about the Combination, the Company, Houghton, the Sellers and the Meeting. You may obtain additional information about us from the documents we file with the U.S. Securities and Exchange Commission (the **SEC**). **Please pay particular attention to the section titled Risk Factors beginning on page 20 of the accompanying proxy statement.**

These proxy materials are being mailed to shareholders of record on or about August 1, 2017.

Your continued support and interest in the Company are sincerely appreciated.

Sincerely,

Michael F. Barry

Chairman of the Board, Chief Executive Officer and

President

Quaker Chemical Corporation

Table of Contents

QUAKER CHEMICAL CORPORATION

One Quaker Park

901 E. Hector Street

Conshohocken, Pennsylvania 19428

(610) 832-4000

NOTICE OF SPECIAL MEETING OF SHAREHOLDERS

To Be Held on September 7, 2017

Dear Shareholder:

You are cordially invited to attend the Special Meeting of Shareholders (the **Meeting**) of Quaker Chemical Corporation (the **Company**), to be held at our headquarters, located at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, at 8:30 A.M., local time, on September 7, 2017. The terms we, our, us, the Company and Quaker, as used in this notice and in the accompanying proxy statement, refer to Quaker Chemical Corporation.

The Special meeting is being called in connection with the proposed purchase (the **Combination**) of all of the outstanding share capital (the **Shares**) of Global Houghton Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Houghton**), from Gulf Houghton Lubricants, Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Gulf**), and certain current and former members of the management of Houghton (collectively with Gulf, the **Sellers**) pursuant to a Share Purchase Agreement (the **Share Purchase Agreement**), dated as of April 4, 2017, by and among the Company, the Sellers, Houghton and Gulf as representative for the Sellers (in this capacity, the **Sellers Representative**) and as described in the accompanying proxy statement.

At the Meeting, you will be asked to consider and vote upon proposals to:

1. Approve an amendment (the **Charter Amendment**) of our Articles of Incorporation (as amended, our **Articles of Incorporation**), that provides that every holder of common stock, $1.00 par value per share, of the Company (the **Common Stock**) will be entitled to one vote for each share of Common Stock standing in its name on the books of the Company;

2. Approve the issuance (the **Issuance**) of a number of shares (the **Consideration Shares**) of equity securities that will have 24.5% of the voting rights applicable to the Company s outstanding voting securities immediately after the closing (the **Closing**) of the Combination (as defined in the proxy statement), and economic and other rights equivalent to the Company s Common Stock as described in the proxy statement; and

3. Approve the adjournment of the Meeting, if necessary to solicit additional proxies if there are not sufficient votes to approve the foregoing proposals at the time of the Meeting (the **Adjournment Proposal**).

These items of business are described in detail in the accompanying proxy statement.

All shareholders of Quaker who owned shares of record on June 15, 2017 (the **Record Date**) can attend and are entitled to vote in person or by proxy at the Meeting. If you want to vote in person and you hold Common Stock in street name (i.e., your shares are held in the name of a brokerage firm, bank or other nominee), you must obtain a proxy card issued in your name from your nominee and bring that proxy card to the meeting, together with a copy of a brokerage or other statement reflecting your stock ownership as of the Record Date and valid government-issued photo identification. If you hold Common Stock in street name and want to attend the Meeting but not vote in person at the Meeting, you must bring a copy of a brokerage or other statement reflecting your stock ownership as of the Record Date, the stock acquisition date and valid government-issued photo identification.

After careful consideration, the Board of Directors (the **Board**) of the Company unanimously recommends that you vote **FOR** each of Proposals 1, 2 and 3.

Table of Contents

YOUR VOTE IS IMPORTANT!

We cannot complete the Combination unless our shareholders approve the Issuance. Closing of the Combination is subject to the approval by our shareholders of the Issuance (the **Company Shareholder Approval**) and the satisfaction of other closing conditions, including certain regulatory approvals. We are obligated to reimburse Houghton and the Sellers for certain documented out of pocket Combination-related expenses up to $10 million if the Company Shareholder Approval is not obtained. The Share Purchase Agreement may be terminated by the Company or Gulf if any of their respective closing conditions have not been, or if it becomes apparent that any of such conditions will not be, fulfilled by April 4, 2018, unless such failure is due to the failure of the terminating party to perform or comply with any of the covenants, agreements or conditions thereof required to be performed or complied with by it before the Closing.

You should read the accompanying proxy statement and the information incorporated by reference into the proxy statement carefully. Whether or not you plan to attend the Meeting, you are urged to vote your shares promptly either by Internet, by telephone or by mail by signing, dating and mailing the proxy card in the envelope provided. You may revoke your proxy at any time before it is exercised at the Meeting as described in the accompanying proxy materials. If your shares are held in the name of a bank, brokerage firm or other nominee as record holder of our shares, follow the voting instructions on the form you receive from your nominee. The method of submitting a voting proxy through any such record holder will depend on their voting procedures.

Thank you very much for your continued support.

By order of the Board:

Robert T. Traub

Vice President, General Counsel

and Corporate Secretary

Quaker Chemical Corporation

Conshohocken, Pennsylvania

July 31, 2017

TABLE OF CONTENTS

	Page
PROXY STATEMENT	1
SUMMARY TERM SHEET	1
The Companies	2
Summary of Principal Terms of the Combination and the Issuance	3
Principal Reasons for the Combination	4
Opinion of the Company s Financial Advisor	5
Regulatory Approvals and Regulatory Notifications	5
Financing Associated with the Combination	6
Impact of the Issuance on Existing Shareholders	6
Quaker Board of Directors Following the Combination	6
Dissenters or Appraisal Rights of Existing Shareholders	7
Registration of Certain Shares of Quaker Common Stock Issued in the Combination	7
Anticipated Accounting Treatment of the Combination	7
Material U.S. Federal Income Tax Consequences of the Combination	7
Risk Factors	7
Vote Required and Recommendation of the Board	7
QUESTIONS AND ANSWERS ABOUT THE MEETING AND VOTING	8
IMPORTANT NOTE	17
FORWARD-LOOKING STATEMENTS	18
RISK FACTORS	20
THE QUAKER SPECIAL MEETING	24
Date, Time and Place of Quaker Special Meeting	24
Record Date; Outstanding Shares; Voting Rights	24
Purpose of the Quaker Special Meeting	24
How Proxies Will be Voted	24
Auditors	25
Quorum and Votes Required for Approval	25
Adjournment or Postponement	26
Voting Procedures	26
Cost of Soliciting Proxies	26
Information About These Proxy Materials	27
PROPOSAL 1 APPROVAL OF THE CHARTER AMENDMENT	28
Background	28
Current Voting Provisions	28
Description of proposed Charter Amendment	28
Reasons for Proposed Charter Amendment	29
Effects of the Charter Amendment	30
New York Stock Exchange Listing	31
U.S. Federal Income Tax Consequences	31
Vote Required and Recommendation of the Board	32

PROPOSAL 2 APPROVAL OF THE ISSUANCE	33
The Companies	33
Principal Terms of the Combination	34
Principal Reasons for the Combination	34
Background of the Combination	35
Opinion of the Company s Financial Advisor	38

TABLE OF CONTENTS

(continued)

	Page
Certain Company Projected Financial Information	46
Share Purchase Agreement	48
Non-Competition and Non-Solicitation Agreement	54
Shareholder Agreement	55
Regulatory Approvals and Regulatory Notifications to be Obtained in Connection with the Combination	57
Financing Associated with the Combination	58
Impact of the Issuance on Existing Shareholders	58
Quaker Board of Directors Following the Combination	59
Dissenters or Appraisal Rights of Existing Shareholders	59
Registration of Certain Shares of Quaker Common Stock Issued in the Combination	59
Anticipated Accounting Treatment of the Combination	59
Material U.S. Federal Income Tax Consequences of the Combination	59
Vote Required and Recommendation of the Board	60
PROPOSAL 3 APPROVAL OF THE ADJOURNMENT OR POSTPONEMENT OF THE MEETING	62
Adjournment or Postponement	62
Vote Required and Board Recommendation	62
SELECTED FINANCIAL DATA OF QUAKER	63
SELECTED FINANCIAL DATA OF HOUGHTON	66
UNAUDITED PRO FORMA CONDENSED CONSOLIDATED FINANCIAL STATEMENTS	67
HOUGHTON MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	78
For the Years Ended December 31, 2016, 2015 and 2014	78
For the Three Months ended March 31, 2017 and 2016	99
STOCK OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT	108
Certain Beneficial Owners	108
Management	109
SHAREHOLDER PROPOSALS	110
COMMUNICATIONS WITH THE BOARD	111
SOLICITATION OF PROXIES	112
OTHER MATTERS	112
WHERE YOU CAN FIND MORE INFORMATION	112
INCORPORATION BY REFERENCE	113
GLOBAL HOUGHTON CONSOLIDATED FINANCIAL STATEMENTS FOR THE THREE YEARS ENDED DECEMBER 31, 2016	F-1
GLOBAL HOUGHTON UNAUDITED CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS FOR THE THREE MONTH PERIODS ENDED MARCH 31, 2017 AND 2016	F-51

Annex A SHAREHOLDER VOTING ADMINISTRATIVE PROCEDURES A-1

Table of Contents

TABLE OF CONTENTS

(continued)

	Page
Annex B OPINION OF VALENCE GROUP	B-1
Annex C PROPOSED AMENDMENT TO CERTIFICATE OF INCORPORATION	C-1
Annex D SHARE PURCHASE AGREEMENT	D-1
Annex E FORM OF SHAREHOLDER AGREEMENT	E-1
Annex F FORM OF NON-COMPETITION AGREEMENT	F-1

Table of Contents

QUAKER CHEMICAL CORPORATION

One Quaker Park

901 E. Hector Street

Conshohocken, Pennsylvania 19428

PROXY STATEMENT

This proxy statement is furnished in connection with the solicitation by the Board of Directors (the **Board**) of Quaker Chemical Corporation (the **Company**) of proxies to be voted at our Special Meeting of Shareholders (the **Meeting**) to be held at our headquarters, located at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, at 8:30 A.M., local time, on September 7, 2017. Holders of record of shares of our common stock, $1.00 par value per share (the **Common Stock**), as of the close of business on June 15, 2017 (the **Record Date**), will be entitled to receive notice of and vote at the Meeting and any adjournment or postponement thereof. As of the Record Date, there were 13,309,643 shares of Common Stock issued and outstanding. Every holder of Common Stock is entitled to either one vote or ten votes for each share held of record on the Record Date, based on how long such shares have been owned by the holder.

The Special meeting is being called in connection with the proposed purchase (the **Combination**) of all of the outstanding share capital (the **Shares**) of Global Houghton Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Houghton**), from Gulf Houghton Lubricants, Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Gulf**), and certain current and former members of the management of Houghton (collectively with Gulf, the **Sellers**) pursuant to a Share Purchase Agreement (the **Share Purchase Agreement**), dated as of April 4, 2017, by and among the Company, the Sellers, Houghton and Gulf as representative for the Sellers (in this capacity, the **Sellers Representative**) and as described in this proxy statement.

The terms we, our, us, the Company and Quaker, as used in this proxy statement, refer to Quaker Chemical Corporation.

In connection with the Meeting, you are being asked to consider and vote upon proposals to:

1. Approve an amendment (the **Charter Amendment**) of our Articles of Incorporation (as amended, our **Articles of Incorporation**), that provides that every holder of Common Stock will be entitled to one vote for each share of Common Stock standing in its name on the books of the Company;

2. Approve the issuance (the **Issuance**) of a number of shares (the **Consideration Shares**) of equity securities that will have 24.5% of the voting rights applicable to the Company s outstanding voting securities immediately after the closing (the **Closing**) of the Combination (as defined in the proxy statement), and economic and other rights equivalent to the Company s Common Stock as described in the proxy statement; and

3. Approve the adjournment of the Meeting, if necessary to solicit additional proxies if there are not sufficient votes to approve the foregoing proposals at the time of the Meeting (the **Adjournment Proposal**).

A summary of information regarding the Combination is set forth below.

SUMMARY TERM SHEET

This summary highlights selected information from this proxy statement and the documents referred to or incorporated by reference herein, and may not contain all of the information that is important to you. Below is a summary of the principal terms of the transactions and the proposals we are asking you to consider at the Meeting. To better understand the transactions and the proposals we are asking you to consider, you should read this entire proxy statement carefully, as well as those additional documents to which we refer. Each item in this

summary includes a page reference directing you to a more complete description of that topic. You may obtain the information incorporated by reference into this proxy statement by following the instructions set forth in the section entitled Where You Can Find More Information .

The Companies (see Page 33)

Quaker Chemical Corporation

Quaker develops, produces, and markets a broad range of formulated chemical specialty products and offers chemical management services (CMS) for various heavy industrial and manufacturing applications in a global portfolio throughout its four regions: the North America region, the Europe, Middle East and Africa (EMEA) region, the Asia/Pacific region and the South America region. The principal products and services in Quaker s global portfolio include: (i) rolling lubricants (used by manufacturers of steel in the hot and cold rolling of steel and by manufacturers of aluminum in the hot rolling of aluminum); (ii) machining and grinding compounds (used by metalworking customers in cutting, shaping, and grinding metal parts which require special treatment to enable them to tolerate the manufacturing process, achieve closer tolerance, and improve tool life); (iii) hydraulic fluids (used by steel, metalworking, and other customers to operate hydraulic equipment); (iv) corrosion preventives (used by steel and metalworking customers to protect metal during manufacture, storage, and shipment); (v) specialty greases (used in automotive production processes, the manufacturing of steel, and various other applications); (vi) metal finishing compounds (used to prepare metal surfaces for special treatments such as galvanizing and tin plating and to prepare metal for further processing); (vii) forming compounds (used to facilitate the drawing and extrusion of metal products); (viii) chemical milling maskants for the aerospace industry; (ix) temporary and permanent coatings for metal and concrete products; (x) construction products, such as flexible sealants and protective coatings, for various applications; (xi) bio-lubricants (that are mainly used in machinery in the forestry and construction industries); (xii) die casting lubricants; and (xiii) programs to provide CMS.

We are a Pennsylvania corporation. Our registered office and headquarters are located in Conshohocken, Pennsylvania at One Quaker Park, 901 E. Hector Street. Our phone number is (610) 832-4000.

Global Houghton Ltd.

Houghton is an exempted company incorporated under the laws of the Cayman Islands. Houghton is a leading global provider of specialty chemicals and technical services for metalworking and other industrial applications. Its primary products include metalworking fluids and specialty hydraulic fluids. Metalworking fluids are chemical formulations used for a variety of metal processing applications. Its specialty hydraulic fluids are designed to improve performance in critical hydraulic systems of industrial machinery, offshore drilling rigs and metal rolling applications. Houghton and its subsidiaries manufacture and market more than 6,000 specialty chemical formulations developed over its 150-year history. Its products are often customized for a customer s specific application and can provide cost savings and other benefits to a customer s manufacturing process, such as increasing machine throughput, extending tool life, reducing corrosion, bacterial growth and waste, and improving surface finishing. To complement its extensive product portfolio, Houghton and its subsidiaries also offer a broad range of value-added technical services to its customers. The scope of technical services provided depends on each customer s specific requirements and can range from basic product customization and on-site technical support to comprehensive chemical management.

The address of Houghton s principal executive offices is Whitehall House, 238 North Church Street, P.O. Box 1043, George Town Grand Cayman KY1-1102 Cayman Islands and its phone number is (345) 949-0050.

Gulf Houghton Lubricants Ltd.

Gulf Houghton Lubricants Ltd. (**Gulf** and, together with certain current and former managers of Houghton who are parties to the Share Purchase Agreement, **Sellers**) is an exempted company incorporated under the laws of the Cayman Islands. The address of Gulf s principal executive offices is Whitehall House, 238 North Church Street, P.O. Box 1043, George Town Grand Cayman KY1-1102 Cayman Islands and its phone number is (345) 949-0050.

Summary of the Principal Terms of the Combination and the Issuance (Page 34)

The Combination and Issuance

On April 4, 2017, the Company entered into the Share Purchase Agreement. Upon the terms and subject to the conditions set forth in the Share Purchase Agreement, the Company agreed to purchase all of the Shares of Houghton from the Sellers for an aggregate purchase price (subject to adjustment as provided in the Share Purchase Agreement) of: (1) $172,500,000 in cash; and (2) a number of shares (the **Consideration Shares**) of Common Stock comprising 24.5% of the Common Stock outstanding immediately after the Closing (the date of such Closing, the **Closing Date**), which based on the closing stock price of shares of our Common Stock on the New York Stock Exchange on the Record Date, had a value of approximately $626,344,715. In addition, effective as of the Closing, the Company anticipates refinancing substantially all of Houghton s consolidated indebtedness, which as of March 31, 2017 was approximately $700 million in the aggregate, net of cash. There can be no assurance as to what the value of the Consideration Shares will be at the Closing. If the proposed Charter Amendment, as described in this proxy statement, is not approved by the Company s shareholders at the Meeting, the Company will instead issue, as the Consideration Shares, preferred stock (the **Preferred Stock**) having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. A portion of the cash consideration and the Consideration Shares, initially totaling in the aggregate $100,000,000, will at the Closing be placed in escrow to secure against breaches of the Sellers representations, warranties and covenants in the Share Purchase Agreement.

Closing of the Combination is subject to the approval by the shareholders of the Company of the Issuance (the **Company Shareholder Approval**) and the satisfaction at the Closing of other closing conditions, including certain regulatory approvals, as described below. The approval of the Charter Amendment is not a condition to the Closing.

If the Company or Houghton is required, in order to obtain necessary regulatory approvals, to commit to any divestiture, license, hold separate, sale or other disposition of or with respect to the businesses, assets, properties or product lines of the Company, Houghton or any of their respective subsidiaries, representing a certain amount of pro forma combined 2016 net sales of the Company and Houghton (which commitment we refer to as a **triggering divestiture**), the purchase price will, subject to certain limitations, be adjusted downward. In addition, the Company, or Gulf in certain circumstances, may choose not to go forward with the Combination if triggering divestitures representing more than $80 million of pro forma combined 2016 net sales are required in connection with obtaining regulatory approval. There can be no assurance that a triggering divestiture will not occur, and accordingly there can be no assurance that the purchase price will not be adjusted, or that substantial divestitures will not be required, in which event the Combination may not close.

The Company and the Sellers have each made customary representations and warranties. The parties liabilities under the Share Purchase Agreement are subject to certain caps and thresholds. In addition, the Company, Sellers and Houghton are subject to customary covenants between the date of the Share Purchase Agreement and the date of the Closing, including the obligation to operate Houghton in the ordinary course of business consistent with past practice.

Conditions to Closing of the Combination

The Closing is conditioned on the following conditions, among others, having been satisfied or waived in accordance with the Share Purchase Agreement:

All necessary and material filings and notices required to be made before Closing under the applicable antitrust and competition laws (the **Antitrust Laws**) shall have been made and any applicable and mandatory waiting period or other time periods (including any extensions thereof) under such legislation or regulation in any such jurisdiction shall have expired or been terminated, all other material obligations under the Antitrust Laws having been complied with in each case in connection with the transactions contemplated by the Share Purchase Agreement, and all material authorizations,

-3-

consents or approvals necessary under the Antitrust Laws in any jurisdiction for or in respect of the transactions contemplated by the Share Purchase Agreement shall have been obtained from all appropriate governmental authorities in each such jurisdiction and all such authorizations, consents or approvals shall remain in full force and effect and there shall be no notice of any intention to revoke, suspend, or adversely restrict or modify any of the same;

No governmental authority shall have enacted, issued, promulgated, enforced or entered any order which is in effect and has the effect of making the transactions contemplated by the Share Purchase Agreement illegal, otherwise restraining or prohibiting consummation of such transactions or causing any of the transactions contemplated hereunder to be rescinded following completion thereof;

The representations and warranties of each Seller and the Company contained in the Share Purchase Agreement, the other transaction documents and any certificate or other writing delivered pursuant to such agreement must have been true and correct in all material respects as of the date of the Share Purchase Agreement and in all material respects as of the Closing Date (except for representations and warranties made as of a specified date, which must have been true and correct as of the specified date); *provided*, *that* certain fundamental representations and warranties must be true and correct as of the Closing Date in all respects;

Each Seller and the Company must have duly performed and complied in all material respects with all agreements, covenants and conditions required by the Share Purchase Agreement and each of the other transaction documents to be performed or complied with by them before or on the Closing Date;

No Action shall have been commenced by any Governmental Authority against the Company, or against any Seller or Houghton or any subsidiary and be pending, which would prevent the Closing. No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any transaction contemplated hereby;

All other required consents shall have been received; and

From the date of the Share Purchase Agreement, there shall not have occurred any material adverse effect (as defined in that agreement), nor shall any event or events have occurred that, individually or in the aggregate, with or without the lapse of time, could reasonably be expected to result in a material adverse effect.

Principal Reasons for the Combination (Page 34)

The Board of Directors (the **Board**) of the Company and the Company s management believe that the Combination, of which the Issuance is a part, is a compelling opportunity to meet the multiple objectives of the Company s operating strategies and should increase shareholder value. Combining the Company s and Houghton s product solutions and service offerings will allow the resulting company to better serve customers in the automotive, aerospace, heavy equipment, metals, mining, machinery, marine, offshore, and container industries. The business is expected to have one of the world s most expansive metalworking platforms comprised of specialty products that include removal fluids, forming fluids, protecting fluids, heat treating fluids, industrial lubricants and greases. The expanded portfolio

is expected to generate significant cross-selling opportunities and allow further expansion into growth markets that include India, Korea, Japan, and Mexico. By combining resources, the combined company is expected to increase the breadth of its innovative technology, accelerate its product development capabilities, speed its time to market, and diversify its long-term R&D pipeline.

In addition, the Company currently anticipates achieving cost synergies of approximately $45 million, the majority of which are expected to be realized within two years of Closing. These synergies are expected to be driven primarily by supply efficiencies and cost reductions. Additional value creation is expected through the cross-selling opportunities and the ability to provide an expanded array of products and solutions for customers, as discussed above.

Table of Contents

Opinion of the Company s Financial Advisors (Page 38)

By letter agreement dated September 29, 2016, as amended on March 2, 2017 (as so amended, the **Engagement Agreement**), the Company retained The Valence Group to provide a fairness opinion in connection with the Combination. In connection with this engagement, The Valence Group rendered its opinion that, as of April 3, 2017 and based upon and subject to the factors and assumptions set forth therein, the consideration to be paid by the Company in the Combination pursuant to the Share Purchase Agreement was fair, from a financial point of view, to the Company. In reviewing the opinion, the Board considered, among other things, that the differences between the common stock to be issued if the Charter Amendment is approved, and the preferred stock to be issued if the Charter Amendment is not approved are not material and do not substantively affect shareholder rights. Because the Board deemed these two alternatives to be functionally equivalent in all material respects, it determined that The Valence Group s assumption of the adoption of the Charter Amendment effectively addressed both potential scenarios, and that therefore the opinion would in all material respects be equally applicable under either scenario. The Board advised The Valence Group of this determination and The Valence Group agreed that this was a reasonable assumption.

As contemplated by the Engagement Letter with The Valance Group, the full text of the written opinion of The Valence Group, dated April 3, 2017, which sets forth the assumptions made, matters considered and limitations on the review undertaken in connection therewith, is attached as Annex B to this proxy statement. The summary of the opinion of The Valence Group set forth in this proxy statement is qualified in its entirety by reference to the full text of such opinion. Shareholders are urged to read the opinion carefully and in its entirety. The Valence Group s opinion was not intended to be and does not constitute a recommendation to any member of the Board, any security holder of the Company, or any other person as to how they should vote or act with respect to any matter related to the Combination or otherwise.

Regulatory Approvals and Regulatory Notifications (Page 57)

Closing of the Combination is subject to the following principal regulatory approvals and regulatory notifications:

Under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the **HSR Act**), certain transactions, including the Combination and the issuance of the Consideration Shares, may not be completed until notifications have been given and information furnished to the Antitrust Division of the Department of Justice (the **Antitrust Division**) and the Federal Trust Commission (the **FTC**) and all statutory waiting period requirements have been satisfied. Completion of the Combination is subject to the expiration or termination of the applicable waiting period under the HSR Act. Both the Company and Houghton filed their respective Notification and Report Forms with the Antitrust Division and the FTC. On July 3, 2017, the Company and Houghton each received a formal request for additional information pursuant to 16 C.F.R. § 803.20 (a **Second Request**) from the FTC. The effect of a Second Request is to extend the waiting period until 30 calendar days following the date both companies have substantially complied with the Second Request, unless the waiting period is terminated earlier by the FTC, or extended by agreement of the companies or court order. The parties intend to respond to the Second Request as quickly as practicable, and to continue to work cooperatively with the FTC in connection with its review. Completion of the Combination and issuance of the Consideration Shares remains subject to receipt of certain required or recommended regulatory approvals, including notification, clearance and/or approval in the European Union and Australia. The parties intend to continue to work cooperatively with regulators in each of these jurisdictions to facilitate the resolution of their respective reviews. China s regulatory authority notified the parties on July 17, 2017 that it approved the Combination.

The Company s compliance with applicable United States federal and state securities laws and the New York Stock Exchange (**NYSE**) Listing Rules in connection with the Issuance. The rules of the NYSE require shareholder approval before the issuance of securities in connection with the acquisition of the stock or assets of another company if the issuance would constitute more than 20% of the total number of shares of common stock outstanding before the issuance. We are seeking shareholder approval of the Issuance to satisfy these rules.

Financing Associated with the Combination (Page 58)

In connection with entering into the Share Purchase Agreement and the transactions contemplated thereby, the Company on April 4, 2017 also entered into a Senior Secured Credit Facilities Commitment Letter (together with all exhibits thereto, the **Commitment Letter**) with Bank of America, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Deutsche Bank AG New York Branch and Deutsche Bank Securities Inc. (collectively, the **Commitment Parties**). Pursuant to the Commitment Letter and subject to the terms and conditions set forth therein, the Commitment Parties have committed to provide senior secured credit facilities of up to $1.15 billion consisting of (i) a $575 million senior secured term loan to the Company on the Closing Date, (ii) a senior secured term loan in Euros in an amount equal to $175 million to certain European subsidiaries of the Company (collectively, the **Foreign Borrowers**) on the Closing Date, and (iii) a $400 million revolving facility available to the Foreign Borrowers or the Company (collectively, the **Financing**). The proceeds of the term loans and a portion of the revolving credit loans are expected to be used at the Closing for the purpose of funding (i) the payment of $172.5 million of the consideration to be paid in cash in respect of the Combination, (ii) the repayment of an estimated amount of approximately $66 million of existing indebtedness of the Company and its subsidiaries, (iii) the repayment of an estimated amount of approximately $752 million of indebtedness of Houghton and its subsidiaries, and (iv) the payment of an estimated amount of approximately $50 million of fees and expenses incurred in connection with the foregoing. It is also expected that the remainder of the revolving facility would remain available to provide liquidity for the Company after the Closing for general corporate purposes. The commitment to provide the Financing is subject to certain terms and conditions, including the negotiation of definitive documentation and other customary closing conditions consistent with the Share Purchase Agreement and Commitment Letter. We have negotiated the terms of the credit agreement and the form of the guaranty agreement (neither of which have yet become effective and both of which need some additional information and/or schedules before they are complete) and expect to complete the negotiation of the remainder of the definitive agreements governing the Financing and finalize the documentation before the Closing.

Impact of the Issuance on Existing Shareholders (Page 58)

The Issuance will dilute the Common Stock ownership percentages of our existing shareholders. As of the Record Date, there were 13,309,643 shares of Common Stock issued and outstanding. When the Combination is completed, the Common Stock owned by the Sellers will represent, in the aggregate, 24.5% of the issued and outstanding shares of Quaker s Common Stock immediately after the Closing, or a number of shares of voting Preferred Stock having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. Each Seller will be entitled to that portion of the Consideration Shares represented by its ownership interest in Houghton as of the Closing.

As a result of the Issuance, Gulf will become our largest shareholder and will have substantial influence over matters submitted to a vote of our shareholders, including the election of directors, amendment of our organizational documents, acquisitions or other business combinations involving Quaker, and potentially the ability to prevent extraordinary transactions such as a takeover attempt.

Quaker Board of Directors following the Combination (Page 58)

As a result of the Combination, Gulf will initially be entitled to representation on our Board, the size of which we expect to be increased from nine to twelve members at or before the Closing, resulting in three vacancies in the Board. Under the terms and subject to the conditions of the Shareholder Agreement, three individuals designated by Gulf, who have not yet been identified, will be appointed to the Board at the Closing to fill those vacancies, each to serve on one of our Board s three separate director classes. Gulf will thereafter have the right to nominate: three individuals for election to the Board for so long as the aggregate percentage ownership of Gulf (and the other Shareholders as defined

in the Shareholder Agreement) as of the record date for such meeting exceeds 19%; two individuals for so long as their percentage ownership exceeds 14%; and one individual for so long as their percentage ownership exceeds 10%. Upon the mutual agreement of the Company and the Sellers,

Gulf may be entitled to two of nine directors, instead of three of twelve directors, in which case the parties will agree to alternative percentages.

Dissenters or Appraisal Rights of Existing Shareholders (Page 59)

Under applicable Pennsylvania law, the Company s shareholders do not have dissenters or appraisal rights in connection with the Issuance of the Consideration Shares. We do not plan to independently provide shareholders with any such rights.

Registration of Certain Shares of Quaker Common Stock Issued in the Combination (Page 59)

The shares of Common Stock issued to Sellers in the Combination will not be registered under the Securities Act of 1933 (as amended, the **Securities Act**), and will be subject to various restrictions and limitations on transfer under U.S. securities laws. The Company has agreed to register the shares held by Gulf upon certain term and conditions as set forth in the Shareholder Agreement, following six months after the Closing. The Company has also agreed upon certain terms and conditions to register the shares of the individual stockholders of Houghton who also are Sellers under the Share Purchase Agreement and who are receiving shares of the Company s Common Stock in the Combination, within thirty days of the Closing.

Anticipated Accounting Treatment of the Combination (Page 59)

Quaker prepares its financial statements in accordance with accounting principles generally accepted in the United States of America (referred to as GAAP). The Combination will be accounted for by Quaker using GAAP. Quaker expects to allocate the purchase price being paid by it to the fair value of Houghton s tangible and intangible assets as of the Closing Date, with the excess purchase price, if any, being recorded as goodwill.

Material U.S. Federal Income Tax Consequences of the Combination (Page 59)

The Combination will not result in any taxable gain or loss for U.S. federal income tax purposes to Quaker or to any Quaker shareholder in his, her or its capacity as a Quaker shareholder. Quaker shareholders who are also Sellers, if any, should consult their own tax advisors as to the tax consequences of participating in the Combination with respect to their Houghton stock, or the shares of Quaker Common Stock (or Preferred Stock) they may be entitled to receive in the Combination.

Risk Factors (Page 20)

There are a number of risks related to the Combination and the Issuance and to the existing business of the Company and the business of the Company after the Combination. See *Risk Factors* beginning on page 20 of this proxy statement for a discussion of these and other risks.

Vote Required and Recommendation of the Board (Page 59)

You may vote in favor of, against, or abstain from voting on each of the proposals being presented at the Meeting, namely, the Charter Amendment proposal, the Issuance proposal and the Adjournment proposal. The Charter Amendment proposal, the Issuance proposal and the Adjournment proposal each require the affirmative vote of a majority of votes cast by the Company s shareholders at the Meeting (provided that a quorum is present at the Meeting). Abstentions, failures to vote and broker non-votes, if any, are not considered votes cast and will therefore have no effect on the outcome of the vote on these proposals.

The Board unanimously recommends a vote FOR the approval of the Charter Amendment proposal, a vote FOR the approval of the Issuance proposal and a vote FOR the approval of the Adjournment proposal.

QUESTIONS AND ANSWERS ABOUT THE MEETING AND VOTING

The following are some of the questions, and answers to those questions, that you as a shareholder of the Company may have about the Combination, the Issuance and the other matters being considered at the Meeting to which this proxy statement relates. The information in this section does not provide all of the information that may be important to you with respect to the matters being considered at the Meeting. Therefore, you should read this proxy statement carefully, as well as the full contents of the other documents to which this proxy statement refers or incorporates by reference. These documents contain information that may be important to you in determining how you will vote on the matters to be considered at the Meeting. See Where You Can Find More Information beginning on page 110.

Q: When is the Meeting and where will it be held?

A: The Meeting will be held on September 7, 2017, at 8:30 A.M. local time, at Quaker Chemical Corporation, One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428. The date, time and place of any adjournment or postponement of the Meeting will be established in accordance with our governing documents and applicable law.

Q: Why am I receiving these proxy materials?

A: Our Board is sending this proxy statement to provide shareholders with information about the Combination and the proposals so that they may determine how their shares should be voted at the Meeting.

Q: What am I being asked to vote on?

A: You are being asked to consider and vote on three matters:

1. approval of the Charter Amendment proposal;

2. approval of the Issuance proposal; and

3. approval of the Adjournment proposal.

Q: How does the Board recommend that I vote on the proposals?

A: The Board unanimously recommends that you vote:

1. **FOR** the Charter Amendment proposal;

2. **FOR** the Issuance proposal; and

3. **FOR** the Adjournment proposal.

Q: How many shares can be voted at the meeting?

A: As of June 15, 2017, the Record Date for the Meeting, 13,309,643 shares of Quaker Common Stock were issued and outstanding. Every holder of Quaker Common Stock is entitled either to one vote or ten votes for each share held of record on the Record Date, based on how long such shares have been owned by the holder, as determined using the Company s voting procedures, a copy of which is attached to this proxy statement as Annex A.

Q: Who is entitled to vote at the Meeting?

A: Only those shareholders who owned Common Stock at the close of business on the Record Date, which is June 15, 2017, are entitled to vote at the Meeting. At the close of business on the Record Date, we had 739 shareholders of record.

Table of Contents

Q: How many votes may I cast at the meeting?

A: Our voting structure has historically been generally designed to favor the interests of the long-term holders. To that end, you will be entitled to cast either one vote or ten votes for each share of Common Stock you held on June 15, 2017, the Record Date for the Meeting, depending upon how long you had held the shares as of the Record Date. As more specifically provided in Article 5 of Quaker s Articles of Incorporation:

Each share that, as of the Record Date, you had beneficially owned since June 15, 2014 will entitle you to ten votes.

Each share you acquired after June 15, 2014 will entitle you to one vote, with some exceptions. These exceptions are explained in Annex A to this proxy statement.

Based on long-standing practice, we presume that shares you hold in street or nominee name, or that are held for your account by a broker, clearing agency, voting trustee, bank, trust company, or other nominee, were acquired by you after June 15, 2014 and, accordingly, entitle you to one vote for each of these shares. You may, however, rebut this one-vote presumption by completing and executing the affidavit appearing on the voting instruction form. The Company and the Board reserve the right to require evidence to support the affidavit.

Q: What is the total number of votes that may be cast at the meeting?

A: Based on the information available to us, as of June 15, 2017, at the Meeting the holders of 579,424 shares of Quaker Common Stock will be entitled to cast ten votes for each share held and the holders of 12,730,219 shares of Quaker Common Stock will be entitled to cast one vote for each share held, for a total of 18,524,459 votes. The number of shares that we have indicated are entitled to one vote includes those shares presumed by us to be entitled to only one vote, as described above. Because some of the holders of these shares may rebut this presumption, the total number of votes that may be cast at the meeting may increase.

Q: Where can I find more information on the voting procedures for the meeting?

A: For additional information on our voting procedures, including the procedures for determining whether a share entitles its holder either to one vote or ten votes, and how to rebut the one-vote presumption, please refer to Annex A.

Proposal 1

Q: Why is shareholder approval of the Charter Amendment described in Proposal 1 being sought?

A:

The Board has concluded, particularly in light of the proposed Combination, that there is no longer a compelling reason not to align our voting structure with that of the substantial majority of public companies and thereby potentially enhance corporate governance ratings of Quaker assigned by independent monitoring groups. These monitoring groups generally have disfavored enhanced voting rights for long-term shareholders.

The Board also considered the effect that the Issuance would have on Gulf s voting power both before and after three years. As of the Record Date, 13,309,643 shares of Common Stock were outstanding. If the equity component of the consideration in the Combination were calculated based on this amount, Quaker would issue 4,319,023 shares of Common Stock to the Sellers (24.5% of the outstanding shares). Under the current provisions of our Articles of Incorporation, this would only give Gulf 18.9% of the shareholder vote at issuance, because of the approximately 579,424 shares that, according to our records, have been held for more than three years. Because the presumption is rebuttable that shares held in street name have been held for less than three years, that percentage could go down, perhaps substantially, if street name holders rebut this presumption. This disparity between economic and voting rights is not consistent with our agreement with Gulf.

Moreover, after three years, the number of shares entitled to ten-votes per share may change substantially. Hypothetically, and by way of illustration, if Gulf retained all of the shares issued in the Combination and we issued (or repurchased) no other shares of Common Stock, under our current Articles of Incorporation, after three years Gulf would still have shares of Common Stock equal to 24.5% of the outstanding shares, but it would be entitled to 43,190,230 votes. Assuming the number of other long-term holders remains approximately the same, Gulf would then hold approximately 70.0% of the voting power of the Common Stock, which would allow it to elect all members of the Board and take other actions that are inconsistent with the parties intent in the Combination. Equally important, the holders of the remaining 75.5% of our outstanding Common Stock would have their aggregate voting power reduced to only 30.0% of the total voting power of the Common Stock. To avoid this result, the Company will only issue Common Stock as Consideration Shares if the Charter Amendment is adopted; otherwise, it will issue Preferred Shares that will have in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other powers equivalent to the Common Stock.

In addition, the Board considered the following:

The Charter Amendment Will Fully Align Voting Power With Economic Ownership. Under our existing structure with differential voting rights, the economic interests of our shareholders may be different than their voting power. If the Charter Amendment is adopted, all holders of Quaker Common Stock will have voting power aligned to their economic ownership, and the disparity between voting power and economic ownership would be eliminated.

The Charter Amendment Reduces Confusion Over the Distribution of Voting Power. The Board believes that the elimination of special ten-vote voting rights will reduce confusion over the distribution of voting power among our shareholders. Currently, shareholders holding through banks or brokers are presumed to hold one-vote shares, but they may assert special ten-vote voting rights by following certain procedures. As a result, from time to time there has been confusion among Quaker shareholders regarding their voting power relative to other Quaker shareholders. In addition, because shareholders who hold shares in street name have until the date of the meeting to rebut the presumption that their shares have been held for less than three years, it is impossible to know in advance of the meeting exactly how many votes are eligible to be cast, which creates potential confusion for both the Company and shareholders.

The Charter Amendment Reflects the Reduced Frequency of Time-Phased Voting Systems. The Board believes that the time-phased voting rights of long-term shareholders have become significantly less prevalent among U.S. public corporations than when it was adopted in 1987. Recent studies and surveys indicate that only a small percentage of surveyed U.S. public companies maintain time-phased voting structures. Further, the significance of this feature for existing shareholders will be necessarily reduced by the issuance of shares in connection with the Combination. As a result, our Board concluded that, following the Combination, there would no longer be a compelling reason not to align with the majority of public companies and thereby potentially enhance corporate governance ratings of Quaker assigned by independent monitoring groups.

The Amendment Eliminates Administrative Burdens on Quaker. The complexity of Quaker s time-phase voting structure requires Quaker to bear additional administrative costs and burdens that are currently

necessary to determine the voting power attributable to the high-vote shares. Each year, Quaker personnel must administer the time-phase voting system and oversee complex calculations to determine the total number of votes held by the long-term shareholders, right up to the date of any Shareholder Meeting. In addition, Quaker s transfer agent must implement and maintain cumbersome systems designed to monitor high-vote shares, which increase the costs of its services. Currently, Quaker no longer believes the benefits of its time-phase voting structure justify these administrative costs.

The Charter Amendment, if approved by our shareholders at the Meeting, is expected to be filed with the Secretary of State of the Commonwealth of Pennsylvania shortly after the Meeting, and to become effective whether or not the Combination is consummated.

Q: Why does the Board recommend I vote FOR Proposal 1?

A: After careful consideration, the Board unanimously recommends that the Company s shareholders vote FOR Proposal 1 for the reasons discussed in the prior question.

Proposal 2

Q: Why is shareholder approval of the Issuance described in Proposal 2 required?

A: Under the rules of the New York Stock Exchange, shareholder approval is required before the issuance of common shares, or securities convertible into common stock, in connection with any transaction or series of related transactions, such as contemplated by the Share Purchase Agreement if: (1) the common shares (or other securities) have, or will have upon issuance, voting power equal to or in excess of 20% of the voting power outstanding before the issuance of such shares; or (2) the number of common shares to be issued is, or will be upon issuance (or conversion of such other securities), equal to or in excess of 20% of the number of common shares outstanding before the issuance.

Under the Share Purchase Agreement, we have agreed to issue a number of Consideration Shares comprising 24.5% of our Common Stock outstanding immediately after the Closing (unless the Charter Amendment is not adopted, in which case Preferred Stock will be issued). Whether or not the Charter Amendment is approved at the Meeting, it is contemplated that the shares issued in the Combination will exceed the 20% threshold. Therefore, the Issuance requires shareholder approval.

Q: Will the Issuance described in Proposal 2 dilute the existing shareholders percentage of ownership in the Company?

A: Yes. The Issuance will dilute the Common Stock ownership percentages of our existing shareholders. When the Combination is completed, the Sellers will acquire (i) if the Charter Amendment described in Proposal 1 is approved at the Meeting, a number of shares of Common Stock comprising 24.5% of the Common Stock outstanding immediately after the Closing Date or, (ii) if the Charter Amendment described in Proposal 1 is not approved, shares of a newly-designated series of preferred stock of the Company to be approved by our Board having, as of the date of the Meeting, among other terms, economic rights equivalent to a 24.5% ownership interest of the outstanding shares of Common Stock and possessing 24.5% of the voting power of the Company s outstanding capital stock.

Q: How was the percentage of Quaker Common Stock to be issued in connection with the Combination determined?

A: In determining the percentage of Quaker Common Stock to be issued in connection with the Combination, our Board considered a number of factors, including (1) Houghton s revenue quality and growth history; (2) the prospects for Houghton s performance after combining Houghton s business with Quaker s; (3) the value and

contract terms of Houghton s existing customer contracts; (4) Houghton s prospects and potential growth opportunities; (5) the quality of Houghton s management and employees; and (6) Houghton s current earnings before interest, taxes, depreciation and amortization (**EBITDA**) and other measures of profitability, and ability for those measures to be accretive to Quaker s shareholders. In considering the relative amounts of the components of the proposed consideration, cash and stock, the Company considered existing cash on hand, expected cash flow and long term leverage goals, as well as the Seller s strong preference for a greater proportion of cash. Once the Company determined the amount of cash it expected to be available, and the amount that it expected to be able to borrow without negatively affecting its long term leverage objectives, the remaining amount necessary to produce the aggregate purchase price was calculated as stock consideration.

Q: Why is the Company engaging in the Combination and the Issuance?

A: For several years, the Board and the Company s management have been focused on executing strategies to increase shareholder value through both organic growth and a disciplined mergers and acquisitions strategy. The Board and the Company s management believe that the Combination, of which the Issuance is a part, is a compelling opportunity to meet the multiple objectives of the Company s operating strategies and should increase shareholder value. We expect that combining the Company s and Houghton s product solutions and service offerings will allow the resulting company to better serve customers in the automotive, aerospace, heavy equipment, metals, mining, machinery, marine, offshore, and container industries. The business is expected to have one of the world s most expansive metalworking platforms comprised of specialty products that include removal fluids, forming fluids, protecting fluids, heat treating fluids, industrial lubricants and greases. The expanded portfolio is expected to generate significant cross-selling opportunities and allow further expansion into growth markets that include India, Korea, Japan, and Mexico. By combining resources, we expect the combined company to increase the breadth of its innovative technology, accelerate its product development capabilities, speed its time to market, and diversify its long-term R&D pipeline.

In addition, the Company currently anticipates achieving cost synergies of approximately $45 million, most of which are expected to be realized within two years of Closing. These synergies are expected to be driven primarily by supply efficiencies as well as cost reductions. Additional value creation is expected through the cross-selling opportunities and the ability to provide an expanded array of products and solutions for customers, as discussed above. The Board also considered the historic financial performance and condition of Houghton.

Q: Is the Combination and Issuance subject to obtaining financing?

A: No, the Combination is not subject to obtaining financing and if Quaker is unable to obtain sufficient financing for the Combination, it would be unable to close the Combination and could be in breach of its obligations under the Share Purchase Agreement, which could expose us to significant damage claims by the Sellers. However, in connection with entering into the Share Purchase Agreement and the transactions contemplated thereby, the Company on April 4, 2017 also entered into a Senior Secured Credit Facilities Commitment Letter (together with all exhibits thereto, the **Commitment Letter**) with Bank of America, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Deutsche Bank AG New York Branch and Deutsche Bank Securities Inc. (collectively, the **Commitment Parties**). Pursuant to the Commitment Letter and subject to the terms and conditions set forth therein, the Commitment Parties have committed to provide senior secured credit facilities of up to $1.15 billion consisting of (i) a $575 million senior secured term loan to the Company on the Closing Date, (ii) a senior secured term loan in Euros in an amount equal to $175 million to certain European subsidiaries of the Company (collectively, the **Foreign Borrowers**) on the Closing Date, and (iii) a $400 million revolving facility available to the Foreign Borrowers or the Company (collectively, the **Financing**). The proceeds of the term loans and a portion of the revolving credit loans are expected to be used at the Closing for the purpose of funding (i) the payment of $172.5 million of the consideration to be paid in cash in respect of the Combination, (ii) the repayment of an estimated amount of approximately $66 million of existing indebtedness of the Company and its subsidiaries, (iii) the repayment of an estimated amount of approximately $752 million of indebtedness of Houghton and its subsidiaries, and (iv) the payment of an estimated amount of approximately $50 million of fees and expenses incurred in connection with the foregoing. It is also expected that the remainder of the revolving facility would remain available to provide liquidity for the Company after the Closing for general corporate and

working capital purposes. The commitment to provide the Financing is subject to certain terms and conditions, including the negotiation of definitive documentation and other customary closing conditions consistent with the Share Purchase Agreement and Commitment Letter. We have negotiated the terms of the credit agreement and the form of the guaranty agreement (neither of which have yet become effective and both of which need some additional information and/or schedules before they are complete) and expect to complete the negotiation of the remainder of the definitive agreements governing the Financing and finalize the documentation before the Closing.

Table of Contents

Q: Are there risks associated with the Combination?

A: Yes. The material risks associated with the Combination and Issuance that are known to us are discussed in the section entitled *Risk Factors* beginning on page 20 of this proxy statement. Those risks include, among others, the possibility that the integration of Houghton with our business may not be completed successfully, cost-effectively or on a timely basis; the loss of a major customer of Houghton or of Quaker as a result of the Combination or otherwise; the departure of certain key employees of both companies; and our ability to integrate, attract and retain new employees after the Combination. There may be other risks not described in this proxy statement of which we are not currently aware or which we do not currently believe are material.

Q: What will happen if the Issuance is not approved by Quaker s shareholders?

A: If our shareholders do not approve the Issuance, the Combination will not occur as contemplated by the Share Purchase Agreement. If our shareholders do not approve the Issuance, both Houghton and Quaker will have the right to terminate the Share Purchase Agreement.

Q: Will there be any change to the board of directors of Quaker after the Combination?

A: Yes. As a result of the Combination, Gulf will initially be entitled to representation on our Board, the size of which we expect to be increased from nine to twelve members at or before the Closing, resulting in three vacancies in the Board. Under the terms and subject to the conditions of the Shareholder Agreement, three individuals designated by Gulf, who have not yet been identified, will be appointed to the Board at the Closing to fill those vacancies, each to serve in one of our Board s three separate director classes. Gulf will thereafter have the right to nominate: three individuals for election to the Board for so long as the aggregate percentage ownership of Gulf (and the other Shareholders as defined in the Shareholder Agreement) as of the record date for such meeting exceeds 19%; two individuals for so long as their percentage ownership exceeds 14%; and one individual for so long as their percentage ownership exceeds 10%. Upon the mutual agreement of the Company and the Sellers, Gulf may be entitled to two of nine directors, instead of three of twelve directors, in which case the parties will agree to alternative percentages.

Q: Will anything happen to my Quaker Common Stock upon completion of the Combination?

A: No. After the completion of the Combination, each existing Quaker shareholder will have the same number of shares of Quaker Common Stock that he or she held immediately before the Combination. However, because we will be issuing new shares of our Common Stock in connection with the Combination (if the Issuance is approved), each existing share of our Common Stock will represent a smaller ownership percentage of a larger company after the Combination.

Q: Why does the Board recommend I vote FOR Proposal 2?

A: In developing its recommendation to the shareholders to vote in favor of the Issuance, the Board considered many factors, including the positive and negative factors described in the section of this proxy statement entitled Proposal 2 Approval of the Issuance Vote Required and Recommendation of The Board and concluded that the Issuance is advisable and in the best interests of the Company. The Board believes that the Company s financial position, capital structure and business will be strengthened as a result of the Combination and the Issuance. After careful consideration, the Board unanimously recommends that the Company s shareholders vote FOR Proposal 2.

Other

Q: Are the Company shareholders entitled to dissenter s rights?

A: Company shareholders are not entitled to dissenter s rights for their shares under Pennsylvania law in connection with the Combination.

Table of Contents

Q: What happens if I sell my Common Stock after the Record Date but before the Meeting?

A: If you transfer your Common Stock after the Record Date but before the date of the Meeting, you will retain your right to vote at the Meeting.

Q: Can I access the Notice of Special Meeting of Shareholders and proxy statement on the Internet?

A: The notice of special meeting of shareholders, proxy statement and proxy card are available on the Internet at www.proxyvote.com.

Q: How do I vote?

A: Shareholders of record can vote in person at the Meeting or by proxy. There are three ways to vote by proxy:

by telephone you can vote by telephone by calling the toll-free number listed on the proxy card;

by Internet you can vote over the Internet at www.proxyvote.com and follow the instructions provided; or

By mail you can vote by mail by marking, signing, dating and mailing the proxy card in the envelope provided.

Telephone and Internet voting facilities for shareholders of record will be available 24 hours a day, 7 days a week and will close at 11:59 p.m. Eastern Time, on September 6, 2017.

If you properly complete, sign and return a proxy card, your shares will be voted as you specify. However, if you sign and return a proxy card but do not specify a vote with respect to the proposal, your shares will be voted as the Board recommends with respect to the proposal and in the proxy s discretion with respect to any other matter that may be properly considered at the Meeting.

If you are a beneficial owner (that is, your shares are held in street name by a bank, broker or other nominee or intermediary, which we collectively refer to as brokers), you will receive voting instructions from the holder of record. You must follow the instruction of the holder of record in order for your shares to be voted. If your shares are not registered in your own name and you plan to vote your shares in person at the Meeting, you should contact your broker or agent to obtain a legal proxy or broker s proxy card and bring it to the Meeting in order to vote.

Q: Can I change my vote after I submit my proxy?

You may revoke your proxy and change your vote:

by submitting a duly executed proxy bearing a later date; or

if you are a registered shareholder, by giving written or electronic notice of such revocation to the Corporate Secretary of the Company before or at the Meeting, and electing to vote while attending the Meeting.

Your most recent proxy card or telephone or Internet proxy is the one that is counted, unless revoked. Your attendance at the Meeting itself will not revoke your proxy unless you give written or electronic notice of revocation to the Corporate Secretary before your proxy is voted.

If you hold your shares in street name (that is, through a broker or other nominee), you may revoke a previous vote only by following the procedures established by the broker or other nominee.

You may provide written notice to our Secretary at Quaker Chemical Corporation, Attention: Corporate Secretary, One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, or give electronic notice to Mr. Robert T. Traub, Vice President, General Counsel and Corporate Secretary, at traubr@quakerchem.com.

Table of Contents

Q: Who will count the votes?

A: The Judge of Election appointed at the Meeting, who will be a representative of Broadridge Financial Solutions, Inc., will serve as the inspector of election and tabulate and certify the votes.

Q: What is a quorum ?

A: A quorum is a majority of the votes entitled to be cast on a particular matter, which may be present in person at the Meeting or represented by proxy. The presence of a majority of the votes entitled to be cast, represented in person or by proxy, will constitute a quorum for the transaction of business at the Meeting. Your shares will be counted for purposes of determining a quorum if you attend the Meeting and vote in person or if you vote by telephone, by Internet or by submitting a properly executed proxy card by mail. Abstentions and broker non-votes will be counted for determining whether a quorum is present for the Meeting.

Q: What vote is required for approval of each proposal?

A: Each of the three proposals requires the same vote to be approved. You may vote in favor of the proposal, against the proposal or abstain from voting on the proposal. Approval of the proposal requires the affirmative vote of the holders of a majority of the votes cast on the proposal (provided that a quorum is present at the Meeting). Abstentions, failures to vote and broker non-votes, if any, are not considered votes cast and will therefore have no effect on the outcome of the vote on this proposal.

Q: Will any other business be conducted at the Meeting?

A: According to our bylaws, the only business that may be considered at a special meeting is that which is contained in the notice of such meeting. Therefore, only Proposals 1 and 2, and, if necessary, Proposal 3, will be considered at the Meeting and no other business will be presented for consideration. Quaker shareholders are urged to complete, sign, date and return the accompanying proxy card in the enclosed envelope.

We will publish preliminary results, or final results if available, in a Current Report on Form 8-K within four business days of the Meeting. If final results are unavailable at the time we file the Form 8-K, then we will file an amended report on Form 8-K to disclose the final voting results within four business days after the final voting results are known.

Q: What is the difference between holding shares as a shareholder of record and as a beneficial owner?

A: If your shares are registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, LLC, you are considered, with respect to those shares, a shareholder of record. In this case, this proxy statement, the notice of special meeting and the proxy card have been sent directly to you by us.

If your shares are held in a stock brokerage account or by a bank or other holder of record, you are considered the beneficial owner of shares held in street name. As a result, this proxy statement, the notice of special meeting and the proxy card have been forwarded to you by your broker, bank or other holder of record who is considered, with respect to those shares, the shareholder of record. As the beneficial owner, you have the right to direct your broker, bank or other holder of record on how to vote your shares by using the voting instruction card included in the mailing or by following their instructions for voting by telephone or on the Internet.

Q: If my shares of Common Stock are held in street name by my broker, will my broker automatically vote my shares for me?

A: Other than with respect to certain routine matters, brokers holding shares of our Common Stock for beneficial owners must vote those shares according to the specific instructions they receive from the

-15-

beneficial owners, unless the brokers have been given discretionary voting power by the beneficial owners. In certain circumstances, brokers holding shares for a beneficial owner may not have discretionary voting power and may not have received voting instructions from the beneficial owner of the shares for a particular proposal. In such cases, a broker may not vote on any proposal for which the broker does not have voting power or instructions, which is known as a broker non-vote. Broker non-votes will be counted for purposes of determining whether a quorum is present at the Meeting, but are not counted as votes cast.

The proposal for the approval of the Charter Amendment, the proposal for the approval of the Issuance and the proposal for the approval of the Adjournment are not routine matters. Accordingly, if you do not provide voting instructions to your broker with respect to these proposals, your broker may not exercise discretion and is prohibited from giving a proxy to vote your shares with respect to such proposals. Broker non-votes will have no effect on the proposal for the approval of the Issuance, the proposal for the approval of the Charter Amendment and the proposal for the approval of the Adjournment.

You should follow the directions provided by your broker regarding how to instruct your broker to vote your shares. If you give instructions on how to vote to your broker, you may later revoke the instructions by taking the steps described in the information that you receive from your broker.

Q: Where can I obtain access to these proxy materials?

A: A copy of this proxy statement, proxy card and Notice will be mailed to each shareholder of the Company entitled to vote at the Meeting. The Notice contains instructions on how to access this proxy statement and our other proxy materials online and how to vote your shares.

Q: Who can help answer my questions, and where can I get additional information about matters described in this proxy statement and additional information about the Company?

A: If you have questions about the matters described in this proxy statement, or how to submit your proxy, or if you need additional copies of the Proxy Statement or the enclosed proxy card or voting instructions, you should contact Victoria Gehris, Assistant Corporate Secretary, at Quaker Chemical Corporation, Shareholder Services, One Quaker Park, 901 E. Hector Street, Conshohocken, PA 19328 or by calling toll-free at 1-800-523-7010, ext. 4246. If you would like additional information about the Company, please refer to our annual, quarterly and current reports, proxy statements and other information on file with the SEC and available at www.sec.gov.

Table of Contents

IMPORTANT NOTE

No person is authorized to make any representation with respect to the matters described in this proxy statement other than those contained, or incorporated by reference, in this proxy statement and, if given or made, such representation must not be relied upon as having been authorized by us or any other person or entity. This proxy statement, and the information incorporated herein, provides you with detailed information about the proposals to be considered and voted upon at the Meeting. The information in this proxy statement is current as of the date of this proxy statement. Shareholders are urged to carefully review this proxy statement, which discusses each of the proposals to be voted upon at the Meeting, and the information incorporated herein.

This proxy statement does not constitute the solicitation of a proxy from any person in any jurisdiction where it is unlawful to make such proxy solicitation. The delivery of this proxy statement shall not, under any circumstances, imply that there has not been any change in the information set forth herein since the date of this proxy statement.

Table of Contents

FORWARD-LOOKING STATEMENTS

Certain information included in this proxy statement and other materials filed or to be filed by us with the SEC (as well as information included in oral statements or other written statements made or to be made by us) contain or may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements can be identified by the fact that they do not relate strictly to historical or current facts. We have based these forward-looking statements on our current expectations about future events. These forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, intentions, financial condition, results of operations, future performance, and business, including but not limited to:

- statements relating to the Charter Amendment and the Combination, and the potential benefits of the Combination;
- our current and future results and plans; and
- statements that include the words may, could, should, would, believe, expect, anticipate, estima plan or similar expressions.

These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected in such statements. A major risk is that demand for the Company s and Houghton s products and services is largely derived from the demand for their customers products, which subjects the Company and Houghton to uncertainties related to downturns in a customer s business and unanticipated customer production shutdowns. Other major risks and uncertainties include, but are not limited to, significant increases in raw material costs, customer financial stability, worldwide economic and political conditions, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence.

Other factors, including those related to the Combination and the Issuance, could also adversely affect us including, but not limited to:

- the risk that the Company s shareholders may not approve the Issuance;
- the potential for regulatory authorities to require divestitures in connection with the Combination, which would result in a smaller than anticipated combined business or, if divestitures in excess of a certain level are required, could cause the Share Purchase Agreement to be terminated;
- the risk that a required regulatory approval will not be obtained, is significantly delayed, or is subject to conditions that are not anticipated or acceptable to us;
- the risk that a closing condition to the Combination may not be satisfied in a timely manner;

risks associated with our ability to finance the Combination on acceptable terms, or at all;

the occurrence of any event, change or other circumstance that could give rise to the termination of the Share Purchase Agreement;

potential adverse effects on the Company s or Houghton s business, properties or operations caused by the implementation of the Combination;

the Company s ability to promptly, efficiently and effectively integrate Houghton s operations with those of the Company;

risks related to disruption of management time from ongoing business operations due to the Combination; and

the outcome of any legal proceedings that may be instituted against the companies following announcement of the Share Purchase Agreement and transactions contemplated therein.

Such statements include information relating to current and future business activities, operational matters, capital spending, and financing sources. From time to time, forward-looking statements are also included in Quaker s periodic reports on Forms 10-K, 10-Q and 8-K, press releases, and other materials released to, or statements made to, the public.

Although we believe that these forward-looking statements are based on reasonable assumptions, they are subject to uncertainties and factors related to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. In particular, statements, express or implied, concerning future actions, conditions or events, future operating results, the ability to generate sales, income or cash flow, to realize cost savings or other benefits associated with the Combination involve risks, uncertainties and assumptions. Any or all of the forward-looking statements in this proxy statement, the documents incorporated by reference herein and other materials filed or to be filed by Quaker with the SEC (as well as information included in oral statements or other written statements made or to be made by us) may turn out to be wrong. This can occur as a result of inaccurate assumptions or as a consequence of known or unknown risks and uncertainties. Consequently, actual results may differ materially from those that might be anticipated from our forward-looking statements.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. However, any further disclosures made on related subjects in Quaker s subsequent reports on Forms 10-K, 10-Q, 8-K and other related filings should be consulted. Our forward-looking statements are subject to risks, uncertainties and assumptions about us and our operations that are subject to change based on various important factors, some of which are beyond our control. A major risk is that the demand for the Company s products and services is largely derived from the demand for its customers products, which subjects the Company to uncertainties related to downturns in a customer s business and unanticipated customer production shutdowns. Other major risks and uncertainties include, but are not limited to, significant increases in raw material costs, customer financial stability, worldwide economic and political conditions, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence, each of which is discussed in greater detail in Item 1A of our Annual Report on Form 10-K. Furthermore, the Company is subject to the same business cycles as those experienced by steel, automobile, aircraft, appliance, and durable goods manufacturers. These risks, uncertainties, and possible inaccurate assumptions relevant to our business could cause our actual results to differ materially from expected and historical results. Other factors beyond those discussed in this Report could also adversely affect us. Therefore, we caution you not to place undue reliance on our forward-looking statements. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.

Table of Contents

RISK FACTORS

In addition to the other information included and incorporated by reference into this proxy statement, including the matters addressed in the section titled Forward-Looking Statements, you should carefully consider the following risks before deciding how to vote on the proposals presented in this proxy statement. In addition, you should read and carefully consider the risks associated with our business. These risks can be found in our Annual Report on Form 10-K for the year ended December 31, 2016, which is filed with the SEC and incorporated by reference into this proxy statement. For further information regarding the documents incorporated into this proxy statement by reference, please see the sections titled Where You Can Find More Information and Incorporation by Reference. Realization of any of the risks described below, any of the events described under Forward-Looking Statements or any of the risks or events described in the documents incorporated by reference could have a material adverse effect on our business, financial condition, cash flows and results of operations, or that of Houghton, and could result in a decline in the trading price of our Common Stock.

The Issuance will have a dilutive effect on the Company s Common Stock, which may adversely affect the market price of the Company s Common Stock.

When the Combination is completed, if the Charter Amendment described in Proposal 1 is approved at the Meeting, there will be approximately 4,319,023 additional shares of Common Stock outstanding (assuming no stock issuances or repurchases between the Record Date and the Closing), comprising 24.5% of the Common Stock outstanding immediately after the Closing Date, which based on the closing stock price of shares of our Common Stock on the New York Stock Exchange on the Record Date, had a value of approximately $626,344,715. There can be no assurance as to what the value of the Consideration Shares will be at the Closing. If the proposed Charter Amendment, as described in this proxy statement, is not approved by the Company s shareholders at the Meeting, the Company will instead issue, as the Consideration Shares, Preferred Stock having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. The issuance of the Consideration Shares will have a dilutive effect on the holdings of existing shareholders.

The Combination will result in integration and consolidation risks, and we may be unable to profitably operate our consolidated company.

We are entering into the Combination as part of our strategy to expand our businesses into new markets and geographies and to achieve certain cost synergies. In order to realize the intended benefits of the Combination, we will need to successfully integrate the operations of Houghton with our current operations. Our ability to successfully achieve this is subject to integration and consolidation risks, including:

- diversion of management time and focus from operating our business to address challenges that may arise in integrating Houghton;
- transition of operations and customers of Houghton to the combined business;
- failure to realize anticipated operational or financial synergies;

implementation or remediation of controls, procedures, and policies at Houghton;

the need to integrate operations across different cultures and languages and to address the particular economic, currency, political, and regulatory risks associated with specific countries;

possible liabilities for activities of Houghton before the acquisition, such as possible violations of laws, commercial disputes, tax liabilities, and other known and unknown liabilities that may not be sufficiently protected against in the Share Purchase Agreement; and

integration of Houghton s accounting, human resource and other administrative systems, and coordination of trading and sales and marketing functions.

Our failure to address these risks or other problems encountered in connection with the Combination could cause us to fail to realize the anticipated benefits of the Combination or incur unanticipated liabilities, any of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

In addition, because Houghton is a private company, certain procedures, including with respect to accounting and internal controls, may need to be updated or revised to meet the requirements to which the Company is subject as a public company, both under applicable securities laws and the rules of the New York Stock Exchange.

The market price of the Common Stock may decline as a result of the Issuance.

We are unable to predict the potential effects of the Combination or the Issuance on the trading activity and market price of our Common Stock. We intend to register the Consideration Shares issued to the individual Sellers (not including Gulf) within 30 days of the Closing, and the Shares being issued to Gulf may be registered for sale as soon as six months after the Closing. These registrations would facilitate the resale of such securities into the public market, and any such resale would increase the number of shares of our Common Stock available for public trading. Sales of a substantial number of shares of our Common Stock in the public market, or the perception that such sales might occur, could have a material adverse effect on the price of our Common Stock.

We may fail to complete the Combination if certain required conditions, many of which are outside of our control, are not satisfied.

Completion of the Combination is subject to various customary closing conditions, including Quaker shareholder approval of the share issuance proposal, the absence of legal orders prohibiting the consummation of the Combination, the absence of conditions or circumstances constituting a material adverse effect with respect to Houghton or Quaker, the accuracy of the representations and warranties of the parties, and the parties performance and compliance in all material respects with the agreements and covenants contained in the Share Purchase Agreement. In addition, the Company, or Gulf in certain circumstances, may choose not to go forward with the Combination if triggering divestitures representing more than $80 million of pro forma combined 2016 net sales are required in connection with obtaining regulatory approval. There can be no assurance that such divestitures will not be required, in which event the Combination may not close.

Despite our efforts, we may not be able to satisfy or timely obtain the various closing conditions, and such failure or delay in completing the Combination may cause uncertainty or other negative consequences that may materially and adversely affect our performance, financial condition, results of operations, share price and the perceived value of the Combination.

If the Combination is not completed, the price of the Company s Common Stock could decline and our future business and operations could be harmed.

The completion of the Combination is subject to conditions, many of which are beyond the control of the parties. If the Combination is not completed for any reason, the Company may be subject to a number of material risks, including the following:

- The Company will be required to reimburse Houghton and the Sellers for their documented out-of-pocket Combination-related expenses, up to $10 million, if the Sellers terminate the Share Purchase Agreement due to the Company s failure to obtain our shareholders approval of the Issuance;

The price of our Common Stock may decline;

The Company may be subject to litigation related to the failure to complete the Combination which could require substantial time and resources to resolve;

Costs related to the Combination, such as financial advisory, legal, accounting, proxy solicitation and printing fees, must be paid even if the Combination is not completed;

Matters relating to the Combination (including the negotiation of terms and integration planning) required a substantial commitment of time and resources by the Company management, which could otherwise have been devoted to other opportunities that may have been beneficial to the Company; and

The Company would not be able to realize the expected benefits of the Combination.

Failure to retain key employees could diminish the benefits of the Combination and concurrent financing transactions.

The successful combination with Houghton will depend in part on the retention of key personnel at Houghton as well as Quaker, including senior management. There can be no assurances that the Company will be able to retain needed key personnel. In addition, no assurance can be given that after the Combination, Quaker will be able to attract or retain key management personnel and other key employees to the same extent that Quaker and Houghton have been previously able to attract or retain their own employees.

The percentage of outstanding shares of Quaker Common Stock to be issued in connection with the Combination is not adjustable based on the market price of Quaker s Common Stock and, as a result, the Combination consideration at Closing may have a greater or lesser implied value than at the time the Share Purchase Agreement was signed.

The parties to the Share Purchase Agreement determined the percentage of outstanding shares of Quaker Common Stock to be issued to Sellers in connection with the Combination. This percentage is not adjustable based on changes in the market price of Quaker s Common Stock. Changes to the market price of Quaker Common Stock will not affect the number of shares that Sellers will be entitled to receive pursuant to the Share Purchase Agreement. Therefore, if the market price of Quaker Common Stock declines from the market price as of the date the Share Purchase Agreement was signed and before the Combination is consummated, Sellers would receive consideration with less implied value. Conversely, if the market price of Quaker Common Stock increases from the market price as of the date the Share Purchase Agreement was signed and before the Combination is consummated, Sellers would receive consideration with more implied value. Since the percentage of outstanding shares of Quaker Common Stock to be issued in the Combination is not adjusted based on changes in Quaker Common Stock price, rises or declines in the market value of Quaker s Common Stock will result in a corresponding rise or decline in the value of the equity consideration issued to the Sellers.

The Company will incur significant transaction costs in connection with the Combination.

The Company has incurred, and expects to continue to incur, a number of one-time costs associated with the Combination. These one-time transaction costs include or will include, but are not limited to, fees paid to financial advisors, legal, financial, tax and accounting advisors, filing fees and printing and integration costs. The Company may also incur additional unanticipated costs. These fees and costs have been, and will continue to be, substantial. Although the Company expects that the elimination of duplicative costs, as well as the realization of other efficiencies related to the Combination, should allow the Company to offset incremental transaction and transaction-related costs over time, this net benefit may not be achieved in the near term, or at all.

The Company may not be able to secure financing for the Combination on acceptable terms.

Although the Company has entered into the Commitment Letter to finance the cash component of the purchase price, as well as the current outstanding debt of both the Company and Houghton, the commitment to provide the Financing is subject to certain terms and conditions, including the negotiation of definitive documentation and other customary closing conditions consistent with the Share Purchase Agreement and Commitment Letter. We may not be able to negotiate such definitive documents on terms favorable to us, or at all. If we are unable to obtain sufficient financing for the Combination and are unable to close the Combination, we could be in breach of our obligations under the Share Purchase Agreement, which could expose us to significant damage claims by the Sellers.

If the Charter Amendment is adopted, the Company will be more susceptible to the influence of short-term holders.

If the Charter Amendment is adopted, the Company will be more susceptible to the influence of short-term holders, which may not coincide with the long-term goals of the Company or long-term holders. This could leave the Company more vulnerable to a potential take-over attempt, or other strategic actions designed to maximize share value in the short term at the expense of long-term interests.

Table of Contents

The issuance of the Consideration Shares to Gulf in the Combination will provide it with an almost 24.5% ownership interest in the Company, and Gulf will also have the contractual ability to nominate certain directors of the Company as described in more detail elsewhere in this proxy statement, which may enable Gulf to influence the direction of our business, or could prevent our other shareholders from determining significant corporate decisions without Gulf participation.

As a result of the Issuance, Gulf will become our largest shareholder and will have substantial influence over matters submitted to a vote of our shareholders, including the election of directors, amendment of our organizational documents, acquisitions or other business combinations involving the Company, and potentially the ability to prevent extraordinary transactions such as a takeover attempt or business combination. The concentration of ownership of our shares held by Gulf may make some future actions more difficult without its support. Gulf will, however, be bound by the Shareholders Agreement included as Annex E to this proxy statement, which among other provisions requires that for so long as any of Gulf s designees are on the Quaker Board, and for six months thereafter, Gulf would vote all Quaker shares consistent with the recommendations of the Quaker Board for each director nominee as reflected in each proxy statement of the Company, including in support of any Quaker directors nominated for election or re-election to the Quaker Board (except as would conflict with Gulf s rights to designees on the Board) and Gulf would not, without obtaining the prior written consent of the Quaker Board, vote with, tender into or publicly support any hostile takeover activity or tender offer targeting Quaker and not supported by a majority of the Quaker Board or Quaker s independent directors. In addition, for two years following the Closing, Gulf is restricted from acquiring additional shares of Quaker Common Stock, subject to certain exceptions. Notwithstanding this, the interests of Gulf may conflict with our interests or the interests of our other shareholders, though we are not aware of any such existing conflicts of interest at this time.

Table of Contents

THE QUAKER SPECIAL MEETING

Date, Time and Place of Quaker Special Meeting

The Quaker Special Meeting of Shareholders (the **Meeting**) to be held at our headquarters, located at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, at 8:30 A.M., local time, on September 7, 2017.

Record Date; Outstanding Shares; Voting Rights

Holders of record of shares of our common stock, $1.00 par value per share (the **Common Stock**), as of the close of business on June 15, 2017 (the **Record Date**), are entitled to receive notice of and vote at the Meeting and any adjournment or postponement thereof. As of the Record Date, there were 13,309,643 shares of Common Stock issued and outstanding. Every holder of Common Stock is entitled either to one vote or ten votes for each share held of record on the Record Date, based on how long such shares have been owned by the holder.

Purpose of the Quaker Special Meeting

The Special meeting is being called in connection with the proposed purchase (the **Combination**) of all of the outstanding share capital (the **Shares**) of Global Houghton Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Houghton**), from Gulf Houghton Lubricants, Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Gulf**), and certain current and former members of the management of Houghton (collectively with Gulf, the **Sellers**) pursuant to a Share Purchase Agreement (the **Share Purchase Agreement**), dated as of April 4, 2017, by and among the Company, the Sellers, Houghton and Gulf as representative for the Sellers (in this capacity, the **Sellers Representative**) and as described in this proxy statement.

At the Meeting, shareholders will be asked to consider and vote on proposals to:

(1) Approve an amendment (the **Charter Amendment**) of our Articles of Incorporation, as amended (our **Articles of Incorporation**), to be effective as of the Closing and that provides that every holder of Common Stock will be entitled to one vote for each common share standing in its name on the books of the Company;

(2) Approve the issuance (the **Issuance**) of a number of shares (the **Consideration Shares**) of equity securities that will have 24.5% of the voting rights applicable to the Company s outstanding voting securities immediately after the closing (the **Closing**) of the Combination (as defined in the proxy statement), and economic and other rights equivalent to the Company s Common Stock as described in the proxy statement; and

(3) Approve the adjournment of the Meeting, if necessary to solicit additional proxies if there are not sufficient votes to approve the foregoing proposals at the time of the Meeting (the **Adjournment Proposal**).

The Board does not know of any matters other than proposals (1), (2) and (3) listed above to be brought before the Meeting, and does not believe that any other matters are permitted to be raised at the Meeting. If, however, any other matters do properly come before the Meeting, the persons named in the enclosed form of proxy or their substitutes will vote in accordance with their best judgment on such matters. Any shareholder who has submitted a proxy may revoke it at any time before it is voted, by (i) written notice addressed to and received by our Secretary, (ii) by submitting a duly executed proxy bearing a later date, (iii) granting a subsequent proxy through the Internet or telephone, or (iv) by electing to revoke your prior proxy and vote at the Meeting. Attendance at the Meeting, by itself, will not constitute revocation of a proxy. Your most recent proxy card or telephone or Internet proxy is the one that is counted, unless revoked.

How the Proxies will be Voted

If proxies are properly submitted via the Internet, by telephone or by signing, dating and returning the proxy card by mail in the envelope provided, the shares of Common Stock represented thereby will be voted in the manner

specified therein. If not otherwise specified, and the proxy card is signed, the shares of Common Stock represented by the proxies will be voted FOR the Charter Amendment, FOR the Issuance, and For the Adjournment Proposal.

Auditors

We anticipate that representatives of PricewaterhouseCoopers LLP, our independent registered public accounting firm, will be present at the Meeting and, if present, we will give them the opportunity to make a statement if they desire to do so. We also anticipate that the representatives will be available to respond to appropriate questions from shareholders.

QUORUM AND VOTES REQUIRED FOR APPROVAL

A quorum is necessary for us to conduct the business of the Meeting. This means that holders entitled to cast at least a majority of the votes that all holders are entitled to cast on a particular matter to be acted upon must be present at the Meeting, in person or by proxy. Your shares are counted as present at the Meeting if you attend the Meeting and vote in person or if you properly complete and return a proxy card.

The following table summarizes the vote required for approval of each proposal and the effect on the outcome of the vote of abstentions, uninstructed shares held by brokers (which result in broker non-votes when a beneficial owner of shares held in street name does not provide voting instructions and, as a result, under the NYSE rules, the institution that holds the shares may not vote those shares on certain proposals) and signed but unmarked proxy cards.

Our voting structure has historically been generally designed to favor the interests of the long-term holders. To that end, you will be entitled to cast either one vote or ten votes for each share of Common Stock you held on June 15, 2017, the Record Date for the meeting, depending upon how long you had held the shares as of the Record Date. As more specifically provided in Article 5 of Quaker s Articles of Incorporation:

Each share that, as of the Record Date, you had beneficially owned since June 15, 2014, will entitle you to ten votes.

Each share you acquired after June 15, 2014 will entitle you to one vote, with some exceptions. These exceptions are explained in Annex A to this proxy statement.

Based on long-standing practice, we presume that shares you hold in street or nominee name, or that are held for your account by a broker, clearing agency, voting trustee, bank, trust company, or other nominee, were acquired by you after June 15, 2014 and, accordingly, entitle you to one vote for each of these shares. You may, however, rebut this one-vote presumption by completing and executing the affidavit appearing on the voting instruction form. The Company and the Board of Directors reserve the right to require evidence to support the affidavit.

For additional information on our voting procedures, including the procedures for determining whether a share entitles its holder either to one vote or ten votes, and how to rebut the one-vote presumption, please refer to Annex A.

Proposal	Votes Required for Approval	Effect of Abstentions (1)	Uninstructed Shares/ Effect of Broker Non-	Signed but Unmarked Proxy Cards (2)

				votes (1)		
Proposal 1	Approval of the Charter Amendment	Majority of votes cast (3)	No effect (4)	Not voted/No effect (4)	Voted	For
Proposal 2	Issuance	Majority of votes cast (3)	No effect (4)	Not voted/No effect (4)	Voted	For
Proposal 3	Approval of the Adjournment Proposal	Majority of votes cast (3)	No effect (4)	Not voted/No effect (4)	Voted	For

Table of Contents

(1) Abstentions and broker non-votes are included in determining whether a quorum is present.
(2) If you complete your proxy card properly, but do not provide instructions on your proxy card as to how to vote your shares, your shares will be voted as shown in this column and in accordance with the judgment of the individuals named as proxies on the proxy card as to any other matter properly brought before the Meeting.
(3) This standard for approval requires that the number of votes cast for the proposal exceed the number of votes cast against the proposal.
(4) Under Section 1103 of the Pennsylvania Business Corporation Law of 1988, as amended (Section 1103), abstentions and broker non-votes are not counted as votes cast.

Shares not present at the Meeting, shares voting abstain and broker non-votes will have no effect on the voting with respect to the Charter Amendment, the approval of the Issuance or the Adjournment Proposal, because they are not considered votes cast under Pennsylvania law.

Adjournment or Postponement

If there is no quorum, the chairman of the Meeting may adjourn the Meeting to another place, date, or time. Even if a quorum is present, the Meeting could be adjourned in order to permit further solicitation of proxies in favor of the Charter Amendment and Issuance proposals if sufficient votes are cast in favor of the Adjournment Proposal. If the adjournment is for more than 30 days or if after the adjournment a new record date is set for the adjourned meeting, a notice of the adjourned meeting must be given to each shareholder of record entitled to vote at the Meeting.

Voting Procedures

There are several methods a shareholder can use to cast his or her vote.

If the shareholder is a shareholder of record, he or she can vote: (1) in person, by attending the Meeting; (2) via the Internet, by visiting www.proxyvote.com and following the instructions provided; (3) by telephone, using the toll-free number listed on the proxy card; or (4) by mail, by marking, signing and dating the proxy card and returning it in the postage-paid envelope provided.

If the shareholder holds shares in street name, he or she can vote: (1) in person, by first obtaining a voting instruction form issued in his or her name from his or her broker and bringing that voting instruction form to the Meeting, together with a copy of a brokerage statement reflecting stock ownership as of the Record Date, the stock acquisition date and valid identification; (2) via the Internet, by visiting www.proxyvote.com and following the instructions provided; (3) by telephone, only if he or she agrees with the voting rights provided on his or her voting instruction form, by using the toll-free number found on the voting instruction form; or (4) by mail, by marking, signing and dating the voting instruction form and returning it in the postage-paid envelope provided by his or her broker.

Cost of Soliciting Proxies

We will pay the expenses of soliciting proxies in the form included with this proxy statement, including the cost of preparing, assembling and mailing material in connection with the solicitation. Quaker has retained Alliance Advisors to aid in the solicitation of proxies. It is estimated that the cost of their services will be approximately $10,000 plus expenses. In addition to the use of the mail, our directors, executive officers and employees of Quaker (without additional compensation) and employees of Alliance Advisors may solicit proxies by telephone, facsimile, electronic mail and personal contact. We will also reimburse brokerage houses and other custodians, nominees and fiduciaries for their reasonable out-of-pocket expenses for forwarding proxy materials to any beneficial holder of Quaker Common Stock.

Table of Contents

Information about These Proxy Materials

Why you received these proxy materials. You have received these proxy materials because our Board is soliciting your proxy to vote your shares at the Meeting. This proxy statement includes information that we are required to provide to you under the rules of the U.S. Securities and Exchange Commission (the **SEC**) and that is designed to assist you in deciding how to vote your shares. If you own our Common Stock in more than one account, such as individually and also jointly with your spouse, you may receive more than one notice relating to these proxy materials. To assist us in saving money and to serve you more efficiently, we encourage you to have all of your accounts registered in the same name and address by contacting our transfer agent:

American Stock Transfer & Trust Company, LLC

6201 15th Avenue

Brooklyn, NY 11219

Phone: 1-800-937-5449

Householding. The SEC permits companies and intermediaries (such as brokers and banks) to satisfy delivery requirements for proxy statements and annual reports with respect to two or more shareholders sharing the same address by delivery of a single proxy statement and annual report to those shareholders. This process, which is commonly referred to as householding, is intended to reduce the volume of duplicate information shareholders receive and also reduce expenses for companies. Quaker has instituted householding for its registered shareholders; some intermediaries may also be householding Quaker s proxy materials and annual report. Once you have received notice from the Company, your broker or another intermediary that they will be householding materials to your address, householding will continue until you are notified otherwise or until you or another shareholder who shares your address provides contrary instructions.

If at any time you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report, you should contact Victoria K. Gehris, Assistant Secretary, toll free at 1-800-523-7010, ext. 4246, or inform her in writing at Quaker Chemical Corporation, Shareholder Services, One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428. If you hold shares through an intermediary and no longer wish to participate in householding, you should contact your bank, broker or other nominee record holder.

Shareholders who share an address and are receiving multiple copies of annual reports or proxy statements but would like to receive a single copy can contact Victoria K. Gehris at the toll-free number noted above.

We undertake to deliver promptly to any shareholder at a shared address, upon written or oral request, a copy of Quaker s proxy statement and annual report. You may request these documents by calling the toll-free number or writing to the address noted above.

PROPOSALS

PROPOSAL 1 APPROVAL OF CHARTER AMENDMENT TO ELIMINATE TEN-VOTE VOTING RIGHTS OF LONG-TERM QUAKER SHAREHOLDERS

The Quaker Articles of Incorporation currently include a time-phased voting system that grants special ten-vote voting rights to shareholders who have beneficially owned their Quaker Common Stock continuously either (i) since May 7, 1987 or (ii) for a period of at least 36 consecutive calendar months (dating from the first day of the first full calendar month on or after the date the holder acquires beneficial ownership of such shares) before the record date for a shareholder vote. For the reasons discussed below, our Board of Directors unanimously recommends eliminating the special ten-vote voting rights of these long-term shareholders.

Background

Quaker s shareholders approved the time-phased voting system set forth in Quaker s Articles of Incorporation in 1987. The time-phase voting system was designed to assist the Board of Directors and management in implementing long-term growth strategies by ensuring that investors sharing Quaker s commitment to long-term performance, as evidenced by their continuing stock ownership, would exert greater influence over Quaker s affairs. This strategy was designed to protect shareholders from the adverse effect of speculative investors with short-term goals that potentially could impair management s ability to focus on long-term business goals and strategies. In addition, Quaker believed the time-phase voting system, in combination with other defensive measures, would discourage any unsolicited effort to obtain voting control without first providing the Board of Directors an opportunity to evaluate whether such change in control would be in the best interests of all shareholders.

In connection with the Combination, Quaker has proposed to amend its Articles of Incorporation to eliminate these enhanced voting rights. On April 4, 2017, the Board of Directors voted unanimously to recommend that the Quaker shareholders adopt the Charter Amendment described further below, which is referred to as the Charter Amendment. The approval of the Charter Amendment is not a condition to the Closing. The Charter Amendment, if approved by our shareholders at the Meeting, is expected to be filed with the Secretary of State of the Commonwealth of Pennsylvania shortly after the Meeting, and to become effective whether or not the Combination is consummated.

The description of the Charter Amendment below is qualified in its entirety by reference to Annex C, which sets forth the full text of the proposed amendment.

Current Voting Provisions

Article 5, subparagraph (b) of our Articles of Incorporation currently entitles persons who have beneficially owned shares of Quaker Common Stock continuously (i) since May 7, 1987 or (ii) for a period of at least 36 consecutive calendar months before the record date for a shareholder vote, to ten votes per share. All other shares of Quaker Common Stock entitle the holders to one vote per share.

Our Articles of Incorporation specify certain transfers and events that are deemed to not interrupt continuous beneficial ownership of a share of Quaker Common Stock. Under the Articles of Incorporation, Quaker is responsible for making all determinations concerning changes in beneficial ownership of its shares, or the absence of any such change. Quaker maintains written procedures designed to facilitate these determinations.

Currently under the Articles of Incorporation, each share of Quaker Common Stock, whether the holder thereof is entitled to ten votes or one, is identical to all other shares of Quaker Common Stock in all other respects.

Description of the Proposed Charter Amendment

If the Charter Amendment is adopted by Quaker s shareholders at the Meeting, it will become effective reasonably promptly after the Meeting, upon filing articles of amendment with the Secretary of State of the

Table of Contents

Commonwealth of Pennsylvania. At such time as articles of amendment are filed, each share of Quaker Common Stock will automatically, without any action by the holders of these shares, become entitled to one vote per share, regardless of how long the shares have been held. Existing certificates for shares of Quaker Common Stock will continue after such time to represent shares of Quaker Common Stock having all of the same terms except as amended by the Charter Amendment.

As a result of the Charter Amendment, each holder of Quaker Common Stock would be entitled to one vote for each share of Quaker Common Stock held by such holder (regardless of the length of time such shares has been held) with respect to matters properly submitted to the shareholders for their vote, consent, waiver, release or other action. At the effective time of the Charter Amendment, shares of Quaker Common Stock will be identical in all respects and will continue to constitute a single class of stock. Holders of Quaker Common Stock currently are not, and following the Charter Amendment will not be, entitled to vote cumulatively for directors of Quaker.

Reasons for the Proposed Charter Amendment

Quaker agreed in the Share Purchase Agreement to submit the Charter Amendment to its shareholders. In considering this action, our Board of Directors focused principally on changes in the significance of and the need for the time-phased voting system since its adoption in 1987.

The Board believes that there is no longer a compelling reason not to align our voting structure with that of the majority of public companies and thereby potentially enhance corporate governance ratings of Quaker assigned by independent monitoring groups. These monitoring groups generally have disfavored enhanced voting rights for long term shareholders.

The Board also considered the effect that the Issuance would have on Gulf s voting power both before and after three years. As of the Record Date, 13,309,643 shares of Common Stock were outstanding. If the equity component of the consideration in the Combination were calculated based on this amount, Quaker would issue 4,319,023 shares of Common Stock to the Sellers (24.5% of the outstanding shares). Under the current provisions of our Articles of Incorporation, this would only give Gulf 18.9% of the shareholder vote at issuance, because of the approximately 579,484 shares that, according to our records, have been held for more than three years. Because the presumption is rebuttable that shares held in street name have been held for less than three years, that percentage could go down, perhaps substantially, if street name holders rebut this presumption. This disparity between economic and voting rights is not consistent with our agreement with Gulf.

Moreover, at the end of three years after the Closing, the number of shares entitled to ten-votes per share may change substantially. Hypothetically, and solely by way of illustration, if Gulf retained all of the shares issued in the Combination and we issued (or repurchased) no other shares of Common Stock, under our current Articles of Incorporation, after three years Gulf would still have shares of Common Stock equal to 24.5% of the outstanding shares, but it would be entitled to 43,190,230 votes. Assuming the number of other long-term holders remains approximately the same, Gulf would then hold approximately 70.0% of the voting power of the Common Stock, which would allow it to elect all members of the Board and take other actions that are inconsistent with the parties intent in the Combination. Equally important, the holders of the remaining 75.5% of our outstanding Common Stock would have their aggregate voting power reduced to only 30.0% of the total voting power of the Common Stock. To avoid this result, the Company will only issue Common Stock as Consideration Shares if the Charter Amendment is adopted; otherwise, it will issue Preferred Shares that will have in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other powers equivalent to the Common Stock.

In connection with voting to recommend the adoption of the Charter Amendment, the Board also considered the following factors:

The Charter Amendment Will Fully Align Voting Power With Economic Ownership. Under our existing structure with differential voting rights, the economic interests of our shareholders may be different

than their voting power. If the Charter Amendment is adopted, all holders of Quaker Common Stock will have voting power aligned to their economic ownership, and the disparity between voting power and economic ownership would be eliminated.

The Charter Amendment Reduces Confusion Over the Distribution of Voting Power. The Board believes that the elimination of special ten-vote voting rights will reduce confusion over the distribution of voting power among our shareholders. Currently, shareholders holding through banks or brokers are presumed to hold one-vote shares, but they may assert special ten-vote voting rights by following certain procedures. As a result, from time to time there has been confusion among Quaker shareholders regarding their voting power relative to other Quaker shareholders. In addition, because shareholders who hold shares in street name have until the date of the meeting to rebut the presumption that their shares have been held for less than three years, it is impossible to know in advance of the meeting exactly how many votes are eligible to be cast, creating confusion for both the Company and shareholders alike.

The Charter Amendment Reflects the Reduced Frequency of Time-Phase Voting Systems. The Board believes that the time-phased voting rights of long-term shareholders have become significantly less prevalent among U.S. public corporations than when this provision was adopted in 1987. Recent studies and surveys indicate that only a small percentage of surveyed U.S. public companies maintain time-phase voting structures. Further, the significance of this feature for existing shareholders will be necessarily reduced by the issuance of shares in connection with the Combination. As a result, our Board concluded that, following the Combination, there would no longer be a compelling reason not to align with the majority of public companies and thereby potentially enhance corporate governance ratings of Quaker assigned by independent monitoring groups.

The Amendment Eliminates Administrative Burdens on Quaker. The complexity of Quaker s time-phase voting structure requires Quaker to bear additional administrative costs and burdens that are currently necessary to determine precisely the voting power attributable to the high-vote shares. Each year, Quaker personnel must administer the time-phase voting system and oversee complex calculations to determine the total number of votes held by the long-term shareholders, right up to the date of any Shareholder Meeting. In addition, Quaker s transfer agent must implement and maintain cumbersome systems designed to monitor high-vote shares, which increase the costs of its services. Currently, Quaker no longer believes the benefits of its time-phase voting structure justify these administrative costs.

The Charter Amendment, if approved by our shareholders at the Meeting, is expected to be filed with the Secretary of State of the Commonwealth of Pennsylvania shortly after the Meeting, and to become effective whether or not the Combination is consummated.

Effects of the Charter Amendment

The following paragraphs describe the effects that the Charter Amendment will have on holders of Quaker Common Stock upon its effectiveness, which would occur upon the filing of articles of amendment with the Secretary of State of the Commonwealth of Pennsylvania in the manner described above. Holders of Quaker Common Stock should note that none of the effects of the Charter Amendment described below will apply to voting at the Meeting.

While the Board believes, for the reasons set forth above, that implementing the Charter Amendment in connection with completing the Combination is in the best interests of Quaker and its shareholders generally, there will be

disadvantages to holders of Quaker Common Stock who are currently entitled to cast ten votes with respect to some or all of their Quaker Common Stock, and, possibly, to other holders of Quaker Common Stock.

At the time the Charter Amendment becomes effective, all holders Quaker Common Stock who are currently entitled to cast ten votes per share would experience immediate dilution of their relative voting power, which

Table of Contents

would reduce the ability of those holders to influence the outcome of matters submitted to a vote of shareholders, including future elections of members of the Board. In connection with the Company s most recent Annual Meeting, the Company determined that 742,665 shares were entitled to 10 votes per share and 12,548,115 shares were entitled to cast one vote for each share held as a matter of record. However, these 12,548,115 shares include all shares held in street name as the Company cannot independently track the holding period of such shares. The Company has a policy whereby holders in street name may rebut the presumption that such shares have been held less than three years, and, if ownership for more than three years can be established, such shares are entitled to 10 votes. As a result of the shareholders of record known to be entitled to 10 votes per share, and holders in street name who may establish their right to 10 votes, each other shareholder of Quaker currently has aggregate voting power slightly less than his or her economic interest in the shares of Common Stock held by him or her.

Because less voting control will be vested in long-term shareholders following the implementation of the Charter Amendment, Quaker may be more susceptible to a takeover bid, proxy contest or share accumulation than it otherwise might have been, although the Board believes that it has other mechanisms available to protect the interests of Quaker shareholders consistent with the fiduciary duties of directors under Pennsylvania law.

Because implementation of the Charter Amendment will result in all holders of Quaker Common Stock becoming entitled to one vote per share regardless of whether they are now entitled to any special ten-vote voting rights, the percentage of the total voting power of Quaker s outstanding stock held by each shareholder will change. Shareholders who have held shares of record and shareholders who hold shares in street name for less than 36 consecutive calendar months will, by virtue of the Charter Amendment and the consequent reduction in the total number of votes in the hands of long-term shareholders, realize a slight increase in the relative voting power that they are entitled to exercise with respect to those shares.

The Board does not expect that the liquidity or trading price of the Quaker Common Stock will be adversely affected solely as a result of the adoption of the Charter Amendment.

The Charter Amendment, if approved by our shareholders at the Meeting, is expected to be filed with the Secretary of State of the Commonwealth of Pennsylvania shortly after the Meeting, and to become effective whether or not the Combination is consummated.

New York Stock Exchange Listing

Quaker intends to submit a supplemental listing application in respect of the Quaker Common Stock issued in the transaction to the NYSE consistent with its obligations to register such shares under that Share Purchase Agreement.

U.S. Federal Income Tax Consequences

The change of the voting rights of Quaker Common Stock held continuously (i) since May 7, 1987 or (ii) for a period of at least 36 consecutive calendar months before the record date for a shareholder vote, pursuant to the Charter Amendment will not result in recognition of gain or loss for U.S. federal income tax purposes, the tax basis of the affected Quaker Common Stock will remain unchanged and, if the affected Quaker Common Stock is held as a capital asset at the time of the filing of the articles of amendment with the Secretary of State of the Commonwealth of Pennsylvania to effect the Charter Amendment, the holding period of the affected Quaker Common Stock will include the holding period before the Charter Amendment.

Table of Contents

Vote Required and Recommendation of the Board

The affirmative vote of a majority of votes cast by Quaker s shareholders at the Meeting is required for approval of this Proposal 1. Abstentions, failures to vote and broker non-votes, if any, will have no effect.

The Board of Directors unanimously recommends that you vote FOR approval of the proposal to amend our Articles of Incorporation to eliminate the ten-vote voting rights of long-term Quaker shareholders and provide that every holder of our Common Stock is entitled to one vote for each share of Common Stock standing in its name on our records, regardless of the period of time that such share has been held.

Table of Contents

PROPOSAL 2 APPROVAL OF THE ISSUANCE

The Companies

Quaker Chemical Corporation

Quaker develops, produces, and markets a broad range of formulated chemical specialty products and offers chemical management services (CMS) for various heavy industrial and manufacturing applications in a global portfolio throughout its four regions: the North America region, the Europe, Middle East and Africa (EMEA) region, the Asia/Pacific region and the South America region. The principal products and services in Quaker s global portfolio include: (i) rolling lubricants (used by manufacturers of steel in the hot and cold rolling of steel and by manufacturers of aluminum in the hot rolling of aluminum); (ii) machining and grinding compounds (used by metalworking customers in cutting, shaping, and grinding metal parts which require special treatment to enable them to tolerate the manufacturing process, achieve closer tolerance, and improve tool life); (iii) hydraulic fluids (used by steel, metalworking, and other customers to operate hydraulic equipment); (iv) corrosion preventives (used by steel and metalworking customers to protect metal during manufacture, storage, and shipment); (v) specialty greases (used in automotive production processes, the manufacturing of steel, and various other applications); (vi) metal finishing compounds (used to prepare metal surfaces for special treatments such as galvanizing and tin plating and to prepare metal for further processing); (vii) forming compounds (used to facilitate the drawing and extrusion of metal products); (viii) chemical milling maskants for the aerospace industry; (ix) temporary and permanent coatings for metal and concrete products; (x) construction products, such as flexible sealants and protective coatings, for various applications; (xi) bio-lubricants (that are mainly used in machinery in the forestry and construction industries); (xii) die casting lubricants; and (xiii) programs to provide CMS.

We are a Pennsylvania corporation. Our registered office and headquarters are located in Conshohocken, Pennsylvania at One Quaker Park, 901 E. Hector Street. Our phone number is (610) 832-4000.

Global Houghton Ltd.

Houghton is an exempted company incorporated under the laws of the Cayman Islands. Houghton is a leading global provider of specialty chemicals and technical services for metalworking and other industrial applications. Its primary products include metalworking fluids and specialty hydraulic fluids. Metalworking fluids are chemical formulations used for a variety of metal processing applications. Its specialty hydraulic fluids are designed to improve performance in critical hydraulic systems of industrial machinery, offshore drilling rigs and metal rolling applications. Houghton and its subsidiaries manufacture and market more than 6,000 specialty chemical formulations developed over its 150-year history. Its products are often customized for a customer s specific application and can provide cost savings and other benefits to a customer s manufacturing process, such as increasing machine throughput, extending tool life, reducing corrosion, bacterial growth and waste, and improving surface finishing. To complement its extensive product portfolio, Houghton and its subsidiaries also offer a broad range of value-added technical services to its customers. The scope of technical services provided depends on each customer s specific requirements and can range from basic product customization and on-site technical support to comprehensive chemical management.

The address of Houghton s principal executive offices is Whitehall House, 238 North Church Street, P.O. Box 1043, George Town Grand Cayman KY1-1102 Cayman Islands and its phone number is (345) 949-0050.

Gulf Houghton Lubricants Ltd.

Gulf Houghton Lubricants Ltd. (Gulf and, together with certain current and former managers of Houghton party to the Share Purchase Agreement, Sellers) is an exempted company incorporated under the laws of the Cayman Islands. The address of Gulf s principal executive offices is Whitehall House, 238 North Church Street, P.O. Box 1043, George Town Grand Cayman KY1-1102 Cayman Islands and its phone number is (345) 949-0050.

Principal Terms of the Combination

The Combination and the Issuance

On April 4, 2017, the Company entered into the Share Purchase Agreement. Upon the terms and subject to the conditions set forth in the Share Purchase Agreement, the Company agreed to purchase all of the Shares of Houghton from the Sellers for an aggregate purchase price (subject to adjustment as provided in the Share Purchase Agreement) of: (1) $172,500,000 in cash; and (2) a number of shares (the **Consideration Shares**) of Common Stock comprising 24.5% of the Common Stock outstanding immediately after the Closing, which based on the closing stock price of shares of our Common Stock on the New York Stock Exchange on the Record Date, had a value of approximately $626,344,715. There can be no assurance as to what the market value will be of the shares to be issued to the Sellers at Closing. In addition, effective as of the Closing, the Company anticipates refinancing substantially all of Houghton s consolidated indebtedness, which as of March 31, 2017 was approximately $700 million in the aggregate, net of cash. If the proposed Charter Amendment, as described in this proxy statement, is not approved by the Company s shareholders at the Meeting, the Company will instead issue, as the Consideration Shares, the Preferred Stock having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. A portion of the cash consideration and the Consideration Shares initially totaling in the aggregate $100,000,000 will at the Closing be placed in escrow to secure against breaches of the Sellers representations, warranties and covenants in the Share Purchase Agreement.

Closing of the Combination is subject to the approval by the shareholders of the Company of the Issuance (the **Company Shareholder Approval**) and the satisfaction at the Closing of other closing conditions, including certain regulatory approvals, as described below.

If the Company or Houghton is required, in order to obtain necessary regulatory approvals, to commit to any divestiture, license, hold separate, sale or other disposition of or with respect to the businesses, assets, properties or product lines of the Company, Houghton or any of their respective subsidiaries, representing in excess of $40 million of pro forma 2016 net sales of the Company and Houghton (which commitment we refer to as a **triggering divestiture**), the purchase price will, subject to certain limitations, be reduced. In addition, the Company, or Gulf in certain circumstances, may choose not to go forward with the Combination if triggering divestitures representing more than $80 million of pro forma combined 2016 net sales are required in connection with obtaining regulatory approval. There can be no assurance that all needed regulatory approvals will be obtained, or that a triggering divestiture will not occur, and accordingly there can be no assurance that the purchase price will not be adjusted, or that substantial divestitures will not be required, in which event the Combination may not close.

The Company and the Sellers have each made customary representations and warranties. Subject to certain exceptions, the parties liability under the Share Purchase Agreement is subject to certain caps and thresholds. In addition, the Company, Sellers and Houghton are subject to customary covenants between the date of the Share Purchase Agreement and the date of the Closing, including the obligation to operate Houghton in the ordinary course of business consistent with past practice.

Principal Reasons for the Combination

The Board of Directors (the **Board**) of the Company and the Company s management believe that the Combination, of which the Issuance is a part, is a compelling opportunity to meet the multiple objectives of the Company s operating strategies and should increase shareholder value. Combining the Company s and Houghton s product solutions and service offerings will allow the resulting company to better serve customers in the automotive, aerospace, heavy equipment, metals, mining, machinery, marine, offshore, and container industries. Both companies have a rich

tradition of customer focused business and expect to retain this focus through the integration, which the Company expects will minimize difficulties in integration.

The business is expected to have one of the world s most expansive metalworking platforms comprised of specialty products that include removal fluids, forming fluids, protecting fluids, heat treating fluids, industrial lubricants and greases. The expanded portfolio and increased geographic footprint is expected to generate significant cross-selling opportunities and allow further expansion into growth markets that include India, Korea, Japan, and Mexico. By combining resources, the combined company is expected to increase the breadth of its innovative technology, accelerate its product development capabilities, speed its time to market, and diversify its long-term R&D pipeline.

In addition, the Company currently anticipates achieving cost synergies of approximately $45 million, the majority of which are expected to be realized within two years of Closing. These synergies are expected to be driven primarily by supply efficiencies and cost reductions, as scalable infrastructure drives operating margin improvements. Additional value creation is expected through the cross-selling opportunities and the ability to provide an expanded array of products and solutions for customers, as discussed above.

The Board also considered the historic financial performance and condition of Houghton, as well as certain projections for Houghton, in light of the Company s due diligence review of Houghton, as discussed in more detail below.

Background of the Combination

Our Board and management periodically review and evaluate potential strategic opportunities to enhance shareholder value.

Initial Discussions

As part of the Company s ongoing evaluation of potential investment and strategic opportunities, representatives of the Company and representatives of Houghton have had occasional communications over a period of many years regarding a potential combination. As part of these occasional discussions, the Company at times involved investment bankers, but these discussions did not lead to substantive negotiations. In 2012, Houghton was acquired by the Hinduja Group through its Gulf Oil business. Following this acquisition, Michael F. Barry, the Company s Chairman, CEO and President, and Sanjay Hinduja, the Chairman of Houghton, from time to time met and on occasion discussed the possibility of a combination of the two companies. In a meeting held June 26, 2015, between Mr. Barry and Mr. Hinduja, Mr. Hinduja told Mr. Barry that he would not insist that the Hinduja Group acquire a controlling stake in Quaker in connection with any proposed transaction. Mr. Barry discussed the possibility of a combination with the Quaker Board at its regular meeting held July 27, 2015, at which the Board authorized Mr. Barry to engage Mr. Hinduja in further discussions concerning a potential combination. Following this meeting, Mr. Barry telephoned Mr. Hinduja and suggested that the parties investment bankers begin to discuss how a combination might be structured. These discussions between the investment bankers occurred. On September 9, 2015, Mr. Barry and Mr. Hinduja held a meeting with their respective investment bankers, Deutsche Bank (Deutsche) and Royal Bank of Canada (RBC), to discuss a possible transaction, and the Company made a preliminary nonbinding verbal proposal regarding the combination of Houghton and the Company. Later that month, Houghton made a preliminary nonbinding verbal counter proposal at a meeting with Mr. Barry and Mr. Hinduja on September 29th. These discussions between Mr. Barry and Mr. Hinduja and their representatives, effectively commenced the current round of discussions, culminating in the signing of the Share Purchase Agreement on April 4, 2017.

Those initial discussions were followed by further discussions which lead to a revised nonbinding proposal made by the Company on October 7, 2015. Subsequently, Houghton agreed to provide preliminary high-level diligence materials to the Company. Accordingly, the Company entered into a mutual non-disclosure agreement with Houghton on December 16, 2015 and began to receive materials related to its due diligence investigation, which included a

preliminary business and synergy analysis.

On January 18, 2016, Mr. Barry and Mr. Hinduja spoke to discuss the potential transaction, and the Company proposed terms for the acquisition of Houghton, including a $150 million cash payment and Quaker Common Stock equal to 25% of the outstanding shares, which was substantially in line with its October 2015 proposal. On February 5, 2016, Houghton provided a counter proposal reflecting a substantial difference in valuation of Houghton, including a $180 million cash payment and Quaker Common Stock equal to 26% of the outstanding shares. Houghton also conditioned the transaction on the elimination of the time-phased voting provisions in Quaker s Charter. Shortly thereafter, on February 13, 2016, Mr. Barry informed Mr. Hinduja that the Company was reaffirming the economics in its original nonbinding proposal. On February 24, 2016, the Board reviewed the Houghton counter proposal and the Company s response at the regular meeting of the Company s Board. Following this meeting, Deutsche sent a summary of the Company s nonbinding proposal to Houghton s investment bankers, RBC, which essentially re-affirmed its earlier position. Discussions on this proposal continued into May 2016, and on May 25, 2016, the parties believed that although some of the issues remained unresolved, they had reached sufficient agreement on potential structure to take further steps to explore the potential transaction. This structure, which was based upon, among other things, the earning performance of each company, their relative levels of indebtedness, and the Company s assumptions regarding potential synergies, included a proposed cash purchase price of $172.5 million plus Quaker Common Stock equal to 25% of the outstanding shares in exchange for all the outstanding shares of Houghton. The structure also contemplated Gulf s representation on Quaker s Board generally equivalent to the Sellers ownership of Quaker shares received in the transaction.

Initial Exploration of Legal and Regulatory Issues and Potential Synergies

Accordingly, in May 2016, the parties asked the Company s counsel, Drinker Biddle & Reath LLP (**Drinker**) and Houghton s counsel, Mayer Brown LLP (**Mayer**) to work together to consider any potential antitrust issues associated with a potential transaction. This review was initiated on a preliminary basis, but over the Summer and into the Fall of 2016 became more comprehensive as counsel evaluated potential areas of competitive overlap and exchanged relevant information on an outside counsel only basis.

As noted above, the negotiations between the Company and Houghton were based in part on the assumption that a combination of the parties would produce meaningful synergies. In particular, the discussions that culminated in the Company s proposal to acquire 100% of Houghton s equity for $172.5 million in cash and 25% of Quaker s outstanding Common Stock were based in part on the Company s assumption that the Combination could be expected to produce $45 million in synergies over the first two years. To validate these assumptions, in June and July 2016, after the proposed transaction consideration of $172.5 million in cash and 25% of Quaker s outstanding Common Stock had been tentatively agreed, the Company engaged two third-party advisors to analyze the potential synergies related to the proposed transaction. At the request of both the Company and Houghton, these advisors used a clean room protocol, which is not unusual in acquisition transactions involving competitive businesses. In a clean room process, sensitive information is reviewed by unrelated third parties that are subject to strict confidentiality obligations, which allows them to explore sensitive commercial information of both parties without either revealing that information to the other. These analyses confirmed that the assumption of potential synergies of $45 million was a reasonable basis for the parties negotiations. The third party analyses also suggested an upside case with additional synergies. The Company did not have confidence in the assumptions used to generate these numbers and therefore disagreed with this upside case. Summaries of the synergy analyses provided by these third-party advisors, generally corroborating the Company s estimate, were also shared with Houghton.

Negotiation of a Letter of Intent

Between May 2016 and August 2016, there were several communications between the parties and their representatives covering valuation, structure and governance issues, as well as liquidity rights related to the Sellers acquisition of

Quaker Common Stock and potential antitrust regulatory issues, which suggested to the Company that a transaction was less likely to be successfully negotiated. In considering antitrust regulatory issues, Drinker and Mayer discussed the jurisdictions from which the parties would need to seek and receive antitrust clearance and/or approval, specifically, Australia, China, Europe, and the United States. In discussing

potential antitrust regulatory issues, Drinker and Mayer also considered (i) the extent of the review that likely would be undertaken by the antitrust or competition authorities in each of those jurisdictions, and (ii) whether and the extent to which a remedy would be necessary in any of the jurisdictions prior to receiving antitrust clearance and/or approval, as well as the effect that such remedies might have on the ability to consummate the proposed transaction. Nevertheless, having tentatively resolved some of these issues, on August 24, 2016, Mr. Barry sent a draft Letter of Intent to Mr. Hinduja describing Quaker s nonbinding proposal for the transaction and which also addressed certain governance and liquidity issues related to the Sellers proposed ownership of a significant number of shares of Quaker Common Stock, as well as non-compete provisions applicable to certain Sellers. On September 2, 2016, Mayer provided initial comments on the Letter of Intent to Drinker. The status of the negotiations over the Letter of Intent, and the results to that date of the preliminary due diligence, regulatory and synergies analyses were reviewed and discussed by Quaker s Board at its regular meeting held on September 21, 2016. At this meeting, the Board also provided guidance to Quaker management regarding the parameters of the terms still subject to negotiation, including the preconditions to initiating additional due diligence, governance issues, and how to address certain transaction costs. Negotiations concerning non-compete and governance issues, including standstill provisions and liquidity options for the Sellers, continued through the Fall of 2016. In particular, these negotiations centered around the scope and duration of the proposed non-compete provisions, including the entities to be bound by such provisions, whether they should extend for a period of two or five years following the Closing (or another period within that range), and whether India should be included within the covered territory. In addition, there were extensive negotiations regarding (i) the ownership thresholds at which certain Sellers would be entitled to designate nominees to Quaker s Board, (ii) the timing of certain transfer and other restrictions relating to the Quaker Common Stock acquired by certain Sellers in the transaction, including the periods during which such Sellers would be prohibited from selling such shares and from acquiring any more shares of Quaker Common Stock, (iii) whether the individual management Sellers would receive only cash or a mix of cash and Quaker Common Stock in the transaction, and (iv) whether Quaker would register such management shares under the Securities Act of 1933 effective as of the Closing. Quaker s Board again reviewed the status of the negotiations at its regular meeting held on November 16, 2016.

Back and forth discussion on the draft nonbinding Letter of Intent continued into mid-December 2016, including (i) the exchange of numerous drafts of the proposed Letter of Intent, (ii) an in-person meeting of Drinker, Mayer, Deutsche and RBC on September 15, 2016, and (iii) periodic discussions with representatives of the Company and Houghton.

On December 16, 2016, the nonbinding Letter of Intent was executed by the parties. It included a one-year standstill agreement restricting acquisitions of Quaker s stock if the transaction was not consummated and an exclusivity agreement which subsequently was extended as the parties worked toward drafting definitive documents.

Due Diligence and Negotiation of Definitive Documents

After the Letter of Intent had been executed, the parties began to exchange more substantive due diligence information. A data room was opened on December 19, 2016 to facilitate this next level of review. In addition, the parties arranged for Quaker personnel to visit ten Houghton plants during January and early February 2017. The companies also took steps to introduce their respective management teams to each other, with joint management presentations being held in Valley Forge, Pennsylvania on January 18 and 19, 2017. In connection with the ongoing diligence and the drafting of the transaction documentation, meetings were held during January and February 2017 involving, at times, management of both parties, as well as representatives from the companies legal and financial advisors.

Drinker began working on an initial draft of the Share Purchase Agreement based on the Letter of Intent, as well as ancillary documentation including a Shareholder Agreement and Non-Compete and Non- Solicitation Agreement.

After review by the Company, Drinker provided a draft of the Share Purchase Agreement to Mayer on January 11, 2017.

During the period between January 11, 2017 and April 4, 2017, there were extensive telephone discussions and several in-person meetings among management and counsel to the parties to negotiate the terms of the proposed transaction. Certain of the material terms negotiated during this period include the scope of the representations and warranties to be made by the parties to the transaction, the amount and composition of the consideration to be placed into escrow, the obligations of the current and former management shareholders under the transaction documents, the integration of Houghton s employee benefit plans and policies in the combined entity, termination rights and remedies (including the extent to which the Company would reimburse certain of the Sellers transaction expenses in the event that the Company s shareholders did not approve the issuance of the Consideration Shares to the Sellers in connection with the transaction), the scope of the non-compete agreements, the liquidity of the Consideration Shares to be issued to the Sellers in connection with the transaction, certain Sellers rights to nominate representatives to the Board, restrictions on such Sellers ability to engage in particular actions not supported by the Board and other governance rights and restrictions relating to certain Sellers interests in Quaker following the Closing. The parties also negotiated limitations on the Sellers post-Closing indemnification liability, particularly whether certain fundamental representations and warranties would survive indefinitely or for a shorter period following Closing, the size of the deductible to which post-Closing indemnification obligations would be subject, and whether the parties respective post-Closing indemnification obligations would be limited, subject to certain exceptions, to $210 million or $70 million (or another amount within that range). During this period, Drinker and Mayer continued to analyze potential antitrust regulatory issues related to the proposed transactions, and, together with the parties and their other advisors, investigated tax and other implications of various approaches to structuring the proposed transaction. The components of the transaction consideration were also discussed during this time period, with the Sellers strongly preferring a greater proportion of cash. The relative amounts of the proposed consideration were largely influenced by the Company s consideration of cash on hand, expected cash flow and long term leverage goals. Once the Company determined the amount of cash it expected to be available, and the amount that it expected to be able to borrow without negatively affecting its long term leverage objectives, the remaining amount necessary to produce the aggregate purchase price was calculated as stock consideration.

The Company s Board considered the status of the proposed transaction at a special session of the Board held on February 26, 2017. In addition, on February 27, 2017, the Board met with Deutsche and Drinker and considered the proposed transaction and the results to date of the Company s due diligence investigation into the business and operations of Houghton, as well as regulatory and other legal issues related to the proposed transaction, and the potential for cost and other synergies. At this meeting the Board authorized Quaker management to seek to complete negotiations. Following this Board meeting, Mr. Barry, in a telephone conversation with Mr. Hinduja, advised him that, based on the results of Quaker s due diligence analysis, Quaker intended to reduce the number of shares being issued to the Sellers. Houghton did not agree with the valuation change and also disagreed with Quaker s proposal regarding Sellers post-closing indemnification obligations. During most of March 2017, little progress was made in resolving the remaining issues, although counsel to both parties continued to work cooperatively to complete due diligence and the regulatory analysis of the proposed transaction. On March 18, 2017, Drinker circulated a revised draft of the Stock Purchase Agreement to Mayer, which included a number of compromises particularly relating to the indemnification obligations of the Sellers after the Closing. The companies and their respective counsel continued to negotiate the remaining issues, and in those negotiations it was agreed that the percentage of Quaker shares to be issued to the Sellers at the closing would equal 24.5% of the then outstanding Quaker shares. Following resolution of the remaining items, and completion of due diligence, the Company s Board unanimously approved the Combination and Issuance at a special meeting held on April 4, 2017. The Company s financial advisors, The Valence Group, made a presentation to the Board at that meeting and provided their fairness opinion, which is summarized in the following section and is attached as Annex B to this proxy statement.

Opinion of the Company s Financial Advisor

By letter agreement dated September 29, 2016, as amended on March 2, 2017 (as so amended, the **Engagement Agreement**), the Company retained The Valence Group to provide a fairness opinion in connection with the Combination. In connection with this engagement, The Valence Group rendered its opinion that, as of April 3,

2017 and based upon and subject to the factors and assumptions set forth therein, the consideration to be paid by the Company in the Combination pursuant to the Share Purchase Agreement was fair, from a financial point of view, to the Company. In reviewing the opinion, the Board considered, among other things, that the differences between the common stock to be issued if the Charter Amendment is approved, and the preferred stock to be issued if the Charter Amendment is not approved are not material and do not substantively affect shareholder rights. Because the Board deemed these two alternatives to be functionally equivalent in all material respects, it determined that The Valence Group s assumption of the adoption of the Charter Amendment effectively addressed both potential scenarios, and that therefore the opinion would in all material respects be equally applicable under either scenario. The Board advised The Valence Group of this determination and The Valence Group agreed that this was a reasonable assumption.

As contemplated by the Engagement Letter with The Valence Group, the full text of the written opinion of The Valence Group, dated April 3, 2017, which sets forth the assumptions made, matters considered and limitations on the review undertaken in connection therewith, is attached as Annex B to this proxy statement. The summary of the opinion of The Valence Group set forth in this proxy statement is qualified in its entirety by reference to the full text of such opinion. Shareholders are urged to read the opinion carefully and in its entirety. The Valence Group s opinion was not intended to be and does not constitute a recommendation to any member of the Board, any security holder of the Company, or any other person as to how they should vote or act with respect to any matter related to the Combination or otherwise.

The Valence Group is a global chemicals investment bank that is continually engaged in the valuation of businesses and their securities in connection with mergers and acquisitions and other corporate transactions. The Board selected The Valence Group to provide a fairness opinion with respect to the Combination on the basis of, among other things, such experience, The Valence Group s familiarity with the Company and Houghton, and its internationally recognized qualifications and reputation in the chemicals, materials and related sectors.

The issuance of The Valence Group s opinion was approved by a committee of its partners and senior professionals, each of whom is experienced in merger, acquisition, divestiture and valuation matters.

In arriving at its opinion, The Valence Group, among other things:

- reviewed the then most recent draft, dated April 1, 2017, of the Share Purchase Agreement (the final form of which is attached as Annex D to this proxy statement) and certain related documents;

- reviewed the then most recent draft, dated February 17, 2017, of the Shareholder Agreement, by and between the Company, Gulf, Gulf Oil International, Ltd., an exempted company incorporated under the laws of the Cayman Islands, and GOCL Corporation Limited, a public limited company incorporated in India (together with Gulf Oil International, Ltd., the **Beneficial Shareholders**) (the final form of which is attached as Annex E to this proxy statement);

- reviewed the then most recent draft, dated April 2, 2017, of the Non-Competition and Non-Solicitation Agreement by and among the Company, Gulf, the Beneficial Shareholders and, for limited purposes, Gulf Oil Lubricants India, Ltd. (the final form of which is attached as Annex F to this proxy statement);

reviewed the audited consolidated financial statements of Houghton and its subsidiaries for each of the two fiscal years ended December 31, 2015, and December 31, 2016;

reviewed certain internal financial, operational, corporate and other information relating to Houghton prepared or provided by representatives of the Company, including internal financial forecasts;

had discussions with senior management of the Company relating to the past and current operations, and financial condition and prospects, of the Company and Houghton;

reviewed public information relating to the business, operations, financial performance and stock trading history of the Company and other selected public companies considered by The Valence Group to be relevant;

- reviewed public information with respect to other transactions of a comparable nature considered by The Valence Group to be relevant;

- reviewed select reports published by equity research analysts and industry sources regarding the Company and other comparable public entities; and

- reviewed such other information, analyses, investigations, and discussions as The Valence Group considered necessary or appropriate in the circumstances.

In connection with rendering its opinion, The Valence Group also reviewed (without relying upon) certain materials related to the Company s due diligence investigation of Houghton and the analysis of potential synergies associated with the Combination.

For purposes of rendering its opinion, The Valence Group relied upon and assumed (without any independent verification) the completeness, accuracy and fair presentation of all financial, legal, regulatory, tax, accounting and other information, data, advice, opinions and representations (including, without limitation, any historical financial statements of, and forecasts relating to, Houghton) that were (i) obtained by The Valence Group from public sources, (ii) provided to The Valence Group by representatives of the Company, or (iii) otherwise obtained by The Valence Group pursuant to The Valence Group s engagement; and The Valence Group did not assume any responsibility or liability for any such information, data, advice, opinions or representations. With respect to the financial forecasts, budgets and other financial and operating data concerning Houghton or the Company that were prepared by any of Houghton s or the Company s representatives, The Valence Group assumed, with the Board s permission, that they had been reasonably prepared on bases reflecting the best currently available assumptions, estimates and judgments of management of Houghton and of the representatives of the Company, as the case may be, with respect to Houghton s business, plans, financial condition and prospects. The Valence Group expressed no opinion with respect to any such forecasts or other prospective financial information or the assumptions, estimates or judgments on which they were based.

In addition, in rendering its opinion, The Valence Group assumed, with the Board s permission, that: (i) the final executed form of the Share Purchase Agreement would not differ in any material respect from the latest draft that The Valence Group reviewed; (ii) the representations and warranties of each party contained in the Share Purchase Agreement were true and correct; (iii) the parties to the Share Purchase Agreement would comply in all material respects with the terms and conditions thereof; (iv) the Combination would be consummated in accordance with the terms set forth in the Share Purchase Agreement without any waiver, amendment or delay of any terms or conditions in any way significant to The Valence Group s analysis; (v) the Charter Amendment would be approved by the Company s shareholders as contemplated by the terms of the Share Purchase Agreement; (vi) any adjustments to the consideration in accordance with the Share Purchase Agreement, whether to be made prior to, at or after the Closing, would not be material to The Valence Group s analysis or its opinion; (vii) the Company had been advised by counsel as to all legal matters with respect to the Combination, including whether all procedures required by law to be taken in connection with the Combination had been duly, validly and timely taken; (viii) the value of the Company Common Stock, when issued in connection with the Combination, would be the same as the 10-day volume weighted average price of the Company Common Stock as of March 30, 2017; (ix) any changes to the amount of indebtedness of Houghton and its subsidiaries to be refinanced or assumed by the Company at Closing would not be material to The Valence Group s analysis or its opinion; (x) the financial forecasts and estimates referred to above would be achieved at the times and in the amounts projected; (xi) all material transactions with related parties (including Gulf) to which Houghton was a party were on an arm s-length basis, and all material employment relationships with Houghton would continue after the Closing to the satisfaction of the Company; and (xii) all governmental, regulatory or other consents

and approvals necessary for the consummation of the Combination would be obtained without any material delay, limitation, restriction or condition that would have an adverse effect on the Company or Houghton or on the expected benefits of the Combination in any way meaningful to The Valence Group s analysis. The Valence Group are not legal, tax, regulatory, or accounting experts and expressed no opinion concerning any legal, tax, regulatory, or accounting matters concerning the Combination or the sufficiency of its opinion for the Board s

purposes. In its analyses and in connection with the preparation of its opinion, The Valence Group made numerous assumptions with respect to industry performance, general business, markets and economic conditions and other matters, many of which are beyond the control of any party involved in the Combination.

The Valence Group was not asked to prepare and did not assume any responsibility for making an independent evaluation or appraisal of any of the assets or liabilities (contingent or otherwise) of Houghton or any other party to the Combination, and The Valence Group was not furnished with any such evaluation or appraisal.

The Valence Group s opinion did not address the underlying business decision of the Company to engage in the Combination, nor did it address the relative merits of the Combination as compared to any other business or financial strategies or opportunities that may be available to the Company. The Valence Group s opinion addressed only the fairness, from a financial point of view, to the Company, as of the date thereof, of the consideration to be paid in the Combination pursuant to the Share Purchase Agreement. The Valence Group did not express any view on, and its opinion did not address, any other term or aspect of the Share Purchase Agreement or Combination or any term or aspect of any other agreement or instrument contemplated by the Share Purchase Agreement or entered into or amended in connection with the Combination (including, without limitation, the Shareholder Agreement and the Non-Competition and Non-Solicitation Agreement), including, without limitation, as to the fairness of the consideration or the Combination to any of the Sellers, or any creditors or other constituencies of Houghton; nor as to the fairness of the amount or nature of any compensation to be paid or payable to any of the officers, directors or employees of Houghton, or class of such persons, in connection with the Combination, whether relative to the consideration to be paid by the Company pursuant to the Share Purchase Agreement or otherwise. The Valence Group did not express any opinion as to the price at which any capital stock of the Company would trade at any time, including as to what the actual value of the Company Common Stock or any other shares comprising the Consideration Shares would be when issued in connection with the Combination. The Valence Group also did not express any opinion as to the impact of the Combination on the solvency or viability of the Company or Houghton or the ability of the Company or Houghton to pay their respective obligations as and when they became due and payable. The Valence Group s opinion should not be construed as creating, and did not create, any fiduciary or agency relationship between The Valence Group and any other party.

The terms of the Share Purchase Agreement, including the consideration to be paid by the Company pursuant thereto, were determined through arm s length negotiations between the Company and Gulf, and the Company s decision to enter into the Share Purchase Agreement was solely that of the Board. The Valence Group s opinion and financial analyses constituted only one of the many factors considered by the Board in its evaluation of the Combination and should not be viewed as determinative of the views of the Board or Company management with respect to the Combination or the consideration to be paid by the Company pursuant to the Share Purchase Agreement.

In accordance with customary investment banking practice, The Valence Group employed generally accepted valuation methodologies in rendering its opinion to the Board and contained in the presentation delivered to the Board in connection with the rendering of such opinion, and the summaries set forth below do not purport to be a complete description of the analyses or data presented by The Valence Group. Some of the summaries of the financial analyses include information presented in tabular format. The tables are not intended to stand alone, and in order to more fully understand the financial analyses used by The Valence Group, the tables must be read together with the full text of each summary. Considering the data set forth below without considering the full narrative description of the financial analyses, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of The Valence Group s analyses.

Financial Analyses

Financial Projections

Each of the various valuation methodologies employed by The Valence Group in rendering its opinion to the Board relied on financial projections for Houghton that were provided to The Valence Group by the Company.

Table of Contents

The Valence Group provided analysis of both a Management Case using the Company s forecasts for Houghton, in light of its due diligence review and an Illustrative Upside Case based on a model with lower labor and overhead costs and selling, general and administrative costs post-Closing, that management believed was possible, but less likely.

Selected Companies Analysis

Using publicly available information, The Valence Group compared selected financial data of Houghton with similar data for selected publicly traded companies that The Valence Group deemed relevant for purposes of analysis. The companies selected by The Valence Group were as follows:

- NewMarket Corporation;
- Quaker Chemical Corporation (i.e., the Company itself);
- Fuchs Petrolub SE;
- Elementis plc; and
- Innospec Inc.

These companies were selected, among other reasons, because they are publicly traded chemical companies with similarities to Houghton including product overlap, geographic focus or end-market exposure. Using publicly available information, The Valence Group calculated for each selected company the multiple of enterprise value (calculated using the closing price of shares of the applicable company s stock as of March 30, 2017) to estimated EBITDA (which means earnings before interest, tax, depreciation and amortization) for calendar year 2017, which we refer to as EV/EBITDA 2017E, and for calendar year 2018, which we refer to as EV/EBITDA 2018E, based on research analyst estimates sourced from FactSet and Thomson Reuters. This analysis indicated the following EV/EBITDA 2017E and EV/EBITDA 2018E:

	EV/EBITDA 2017E	**EV/EBITDA 2018E**
NewMarket Corporation	16.6x	15.1x
Quaker Chemical Corporation	15.9x	14.9x
Fuchs Petrolub SE	14.4x	13.7x
Elementis plc (1)	12.8x	10.9x
Innospec Inc.	10.9x	10.2x
Mean	14.1x	13.0x
Median	14.4x	13.7x

(1) Elementis plc calculated pro forma for its acquisition of SummitReheis

Based on the results of this analysis and other factors that The Valence Group considered relevant, The Valence Group selected a multiple reference range for EV/EBITDA 2017E of 13.0x 15.0x and a multiple reference range for EV/EBITDA 2018E of 12.0x 14.0x.

After applying these ranges to the Company management s estimate of the EBITDA for Houghton for calendar years 2017 and 2018 in the Management Case, the analysis indicated the following implied enterprise value ranges for Houghton:

	Implied Enterprise Value of Houghton	
	Low	**High**
EV/EBITDA 2017E	$ 1,505 million	$ 1,735 million
EV/EBITDA 2018E	$ 1,415 million	$ 1,650 million

The ranges of the implied enterprise value of Houghton were compared to the estimated consideration to be paid by the Company in the Combination of $1,433.1 million, which is comprised of: (a) $172.5 million in cash plus

(b) the Company s issuance of such number of shares of Company Common Stock, equal to 24.5% of the Company Common Stock outstanding immediately after the Closing plus (c) the Company s refinancing or assumption of approximately $691.3 million of Indebtedness of Houghton and its Subsidiaries, subject to adjustment as described in detail in Principal Terms of the Combination The Combination and the Issuance beginning on page 33 of this proxy statement.

Selected Transactions Analysis

Using publicly available information, The Valence Group examined selected transactions involving businesses that The Valence Group considered to be analogous to Houghton s business or aspects thereof for purposes of analysis. These transactions were selected, among other reasons, because they were acquisitions of chemical businesses that were similar in one or more meaningful respects to Houghton, including by virtue of product overlap, geographic focus or end-market exposure. Specifically, The Valence Group reviewed the following transactions:

Year	Acquiror	Target/Seller	Enterprise Value (1)	EV / LTM EBITDA Transaction Multiple
2016	BASF	Chemetall	$3,200 million	15.8x
2016	The Carlyle Group	Atotech B.V.	$3,200 million	11.9x
2012	Calumet Specialty Products Partners LP	Royal Purple Inc.	$333 million	11.7x
2015	New Mountain Capital	Zep Inc.	$685 million	11.7x
2000	BP Amoco PLC	Burmah Castrol PLC	$6,570 million	10.9x
2002	Shell Oil Company	Penzoil-Quaker State Company	$2,876 million	10.3x
2006	Court Square Capital Partners	MacDermid Inc.	$1,279 million	10.3x
2013	Platform Specialty Products Corporation	MacDermid Inc.	$1,800 million	10.0x
2012	Kennametal Inc.	Deloro Stellite Group	$353 million	8.0x
2012	Gulf Oil Corp. Ltd	Houghton International Inc.	$1,045 million	7.9x
Mean				10.9x
Median				10.6x
Mean (Since January 2013				12.4x
Median (Since January 2013)				11.8x

(1) Transactions denominated in foreign currencies have been converted into USD at the rate prevailing on the transaction announcement date.

The Valence Group reviewed, for each selected transaction, the multiple of the enterprise value at which the transaction was consummated to the target company s EBITDA for the 12-month period prior to the announcement of the applicable transaction, which we refer to as EV / LTM EBITDA. The Valence Group s analysis relied on publicly

available EV / LTM EBITDA transaction multiples, as well as other publicly available qualitative and quantitative measures.

Based on the results of this analysis and other factors that The Valence Group considered relevant, The Valence Group selected a multiple reference range of 10.5x 12.5x for EV / LTM EBITDA.

After applying these ranges to figures provided by the Company for Houghton s EBITDA for the 12-month period ended December 31, 2016, the analysis indicated the following implied enterprise value range for Houghton:

	Implied Enterprise Value of Houghton	
	Low	High
EV / LTM EBITDA	$ 1,260 million	$ 1,500 million

Discounted Cash Flow Analysis

The Valence Group conducted a discounted cash flow analysis for the purpose of determining an implied enterprise value range for Houghton. A discounted cash flow analysis is a method of evaluating an asset using estimates of the future unlevered free cash flows generated by the asset and taking into consideration the time value of money with respect to those cash flows by calculating their present value . The unlevered free cash flows refer to a calculation of the future cash flows generated by an asset without including in such calculation any debt servicing costs. Specifically, unlevered free cash flow for this purpose represents EBITDA, adjusted for depreciation and amortization, tax, capital expenditures and changes in net working capital. Present value refers to the current value of the unlevered free cash flows generated by the asset, and is obtained by discounting those cash flows back to the present using a discount rate that takes into account macro-economic assumptions and estimates of risk, the opportunity cost of capital and other appropriate factors; in many cases, the discount rate is the asset s estimated weighted average cost of capital. Terminal value refers to the value of all future cash flows generated by the asset for periods beyond the projections period.

In performing its discounted cash flow analysis of Houghton, The Valence Group considered the stand-alone value of Houghton based on the Management Case and the Illustrative Upside Case, in each case without regard to the estimated synergies projected to result from the Combination, which we refer to as the Synergies, as well as the value of Houghton based on the Management Case and the Illustrative Upside Case, with the Synergies.

With respect to the Management Case, The Valence Group calculated the unlevered free cash flows that Houghton was projected to generate (i) during calendar year 2017 through calendar year 2021, based upon the financial projections for Houghton constructed by Company management and (ii) during calendar year 2022 through calendar year 2026, based upon Company management s guidance with respect to EBITDA and unlevered free cash flow growth for Houghton, in each case without taking into account any projected Synergies. The Valence Group calculated a range of terminal values for Houghton at the end of the projection period by applying terminal growth rates, based on The Valence Group s professional judgment given the nature of Houghton, its business and its industry, ranging from 2.5% to 3.5%. The unlevered free cash flows and the range of terminal values were then discounted to present values using discount rates ranging from 8.5% to 9.0%, which were chosen by The Valence Group based upon an analysis of the weighted average cost of capital of Houghton.

With respect to the Illustrative Upside Case, The Valence Group calculated the unlevered free cash flows that Houghton was projected to generate during calendar year 2017 through calendar year 2021, based upon the financial projections for Houghton constructed by Houghton management without taking into account any projected Synergies. As with the Management Case, The Valence Group calculated a range of terminal values for Houghton at the end of the projection period by applying terminal growth rates ranging from 2.5% to 3.5%. The unlevered free cash flows and the range of terminal values were then discounted to present values using discount rates ranging from 8.5% to 9.0%.

The discounted cash flow analysis indicated implied enterprise value ranges for Houghton of $1.20 billion to $1.47 billion under the Management Case, and $1.24 billion to $1.57 billion under the Illustrative Upside Case.

The Valence Group also evaluated the unlevered free cash flows that the Company was projected to generate as a result of the Synergies during calendar year 2017 through calendar year 2021, including the cost to achieve such

Synergies. The Valence Group applied a terminal growth rate, based on The Valence Group s professional judgment given the nature of Houghton, its business and its industry, of 0.0%. The unlevered free cash flows projected to be generated as a result of the Synergies were then discounted to present values using discount rates ranging from 8.5% to 9.0%, which are the same discount rates employed in the discounted cash flow analyses described above. The discounted cash flow analysis of the Synergies indicated an implied additional enterprise value range for Houghton of $305 million to $325 million as a result of such Synergies. The discounted cash flow analysis indicated implied enterprise value (including Synergies) ranges for Houghton of $1.51 billion to $1.79 billion under the Management Case, and $1.55 billion to $1.89 billion under the Illustrative Upside Case.

Pro Forma Transaction Analysis

The Valence Group also reviewed an analysis prepared by Company management of certain potential pro forma effects of the Combination, which incorporated the management case discussed below. This analysis indicated that:

- the Combination is expected to be accretive to the Company s earnings per share by the first full year after the Closing, as calculated on both a cash and a GAAP basis, including Synergies and excluding any non-recurring cost of Synergies; and

- on a pro forma basis, the Company management s financial model projected substantial deleveraging from the Closing Date through calendar year 2021 and, as a result, a reversion toward the pre-Combination capital structure.

The Valence Group also prepared an analysis that calculated a range of pro forma Company share prices both on the basis of multiples of projected pro forma 2017 EBITDA and on the basis of multiples of projected pro forma 2018 cash earnings per share. Based on such analysis, the Combination is expected to be accretive to the Company s share price as compared to the price of the Company Common Stock as of March 30, 2017.

Miscellaneous

The foregoing summary of financial analyses does not purport to be a complete description of the analyses or data presented by The Valence Group. The preparation of a fairness opinion is a complex process and is not necessarily susceptible to partial analysis or summary description. The Valence Group has advised the Company that the foregoing summary and its analyses must be considered as a whole and that selecting portions of the foregoing summary and these analyses, without considering all of its analyses as a whole, could create an incomplete view of the processes underlying the analyses and its opinion. As a result, the ranges of valuations resulting from any particular analysis or combination of analyses described above were merely utilized to create points of reference for analytical purposes and should not be taken to be the view of The Valence Group with respect to the actual value of Houghton or the Company. The order of analyses described does not represent the relative importance or weight given to those analyses by The Valence Group. In arriving at its opinion, The Valence Group did not attribute any particular weight to any analyses or factors considered by it and did not form an opinion as to whether any individual analysis or factor (positive or negative), considered in isolation, supported or failed to support its opinion. Rather, The Valence Group considered the totality of the factors and analyses performed in determining its opinion.

Analyses based upon forecasts of future results are inherently uncertain, as they are subject to numerous factors or events beyond the control of the parties and their advisors. Accordingly, forecasts and analyses used or made by The Valence Group are not necessarily indicative of actual future results, which may be significantly more or less

favorable than suggested by those analyses. Moreover, The Valence Group s analyses are not and do not purport to be appraisals or otherwise reflective of the prices at which businesses actually could be acquired or sold. Because these analyses are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of the parties or their respective advisors, none of the Company, The Valence Group or any other person assumes responsibility if future results are materially different from those forecast. No company or

transaction used in the above analyses as a comparison is directly comparable to Houghton or the Combination. These analyses necessarily involve complex considerations and judgments concerning differences in financial and operational characteristics of the companies involved and other factors that could affect the companies compared to Houghton and the transactions compared to the Combination.

The Valence Group was paid a fixed fee of $1,500,000 for rendering its written opinion, $250,000 of which was paid as a non-refundable retainer, $100,000 of which was paid as a creditable retainer and the remainder of which was paid upon the delivery of its opinion to the Company. No portion of such fee was contingent upon the conclusions reached by The Valence Group or upon the completion of the Combination or any alternate transaction. The Company also agreed to reimburse The Valence Group for its reasonable travel and other expenses and to indemnify The Valence Group in respect of certain liabilities that might arise out of its engagement. In the past two years, in addition to rendering its opinion in connection with the Combination and receiving fees therefor, The Valence Group has served as the Company s financial advisor in connection with a separate possible transaction involving the Company. To date, The Valence Group has not received any compensation in connection with such engagement, but in the future The Valence Group may become entitled to receive fees of up to $1,250,000. Except for the foregoing matters, none of The Valence Group or any of its affiliates has, in the past two years, been engaged to provide any financial advisory or investment banking services to, participated in any financings involving, or otherwise had any material relationship with, the Company, the Sellers, Houghton or any of the Company s sources of financing in connection with the Combination, and no such material relationship is mutually understood to be contemplated. The Valence Group may seek to provide such persons or their respective affiliates with certain financial advisory, investment banking, or other financial services unrelated to the Combination in the future and, in connection with such services, may receive compensation.

Certain Projected Financial Information

Houghton and the Company do not as a practice make public projections as to future revenues, earnings or other results. However, in connection with our Board s consideration of the Combination and The Valence Group s financial analysis of Houghton described under Opinion of the Company s Financial Advisor, Houghton management provided to the Company its non-public, five-year internal financial forecast regarding Houghton s anticipated future operations for the years ending December 31, 2017 through December 31, 2021, which the Company subsequently provided to The Valence Group with certain adjustments made by Company management, which were based on the Company s due diligence of Houghton and extrapolations from Houghton s financial forecasts for the year ending December 31, 2017 (and as adjusted by Company management to include estimated interest expense from the anticipated financing in connection with the Combination). The Company has included the below summary information from such financial forecasts to give its shareholders access to certain previously non-public information because such information was considered by the Board of the Company for purposes of evaluating the Combination and by our financial advisor, The Valence Group, for purposes of rendering its fairness opinion. Inclusion of summary information regarding the financial forecasts in this proxy statement is not intended to influence your decision whether to vote for the Issuance.

The unaudited prospective financial information was not prepared with a view toward public disclosure, nor was it prepared with a view toward complying with the published guidelines of the Securities and Exchange Commission and the guidelines established by the American Institute of Certified Public Accountants with respect to the preparation and presentation of prospective financial information, but, in the view of the Company s management, was prepared on a reasonable basis, and presents, as of the date prepared, a reasonable expectation of Houghton s estimated future financial performance for the periods indicated. However, this information is not fact and should not be relied upon as being necessarily indicative of future results, and readers of this proxy statement are cautioned not to place undue reliance on the prospective financial information.

Furthermore, the unaudited prospective financial information does not take into account any circumstances or events occurring after the date it was prepared. The prospective financial information was prepared treating

Houghton on a stand-alone basis, without giving effect to the Combination or any other potential acquisitions, except for the anticipated financing in connection with the Combination and the repayment of Houghton s existing indebtedness. None of the prospective financial information provided herein should be relied upon as being necessarily indicative of future results, and readers of this proxy statement are cautioned not to rely on the prospective financial information.

The accompanying prospective financial information includes financial measures that were not calculated in accordance with GAAP, namely EBITDA. EBITDA is defined as net income prior to interest income, interest expense and other expense, net and income taxes, and depreciation and amortization. EBITDA is a non-GAAP financial measure and should not be considered as an alternative to operating income or net income as measures of operating performance or cash flows or as measures of liquidity. Non-GAAP measures are not necessarily calculated the same way by different companies and should not be considered a substitute for or superior to GAAP results.

The assumptions and estimates underlying the prospective financial information are inherently uncertain and are subject to a wide variety of significant business, economic and competitive risks and uncertainties that could cause actual results to differ materially from those contained in the prospective financial information, including, among others, risks and uncertainties set forth under Risk Factors and Forward-Looking Statements contained elsewhere in this proxy statement. Accordingly, there can be no assurance that the prospective results are indicative of the future performance of the Company or Houghton, or that actual results will not differ materially from those presented in the prospective financial information. Inclusion of the prospective financial information in this proxy statement should not be regarded as a representation by any person that the results contained in the prospective financial information will be achieved.

Considering that the our special meeting will be held several months after the date the unaudited prospective financial information was prepared, as well as the uncertainties inherent in any forecasted information, shareholders are cautioned not to rely on the unaudited prospective financial information. This information constitutes forward-looking statements and actual results likely will differ from it and the differences may be material. See Forward-Looking Statements.

The Company and Houghton have not updated, and do not intend to update or otherwise revise, the prospective financial information to reflect circumstances existing since its preparation, including any changes in general economic or industry conditions, or to reflect the occurrence of subsequent events. None of the Company, Houghton or any of their respective representatives or advisers makes any representation to any person with regard to the ultimate performance of the Company or Houghton.

A summary of the five-year consolidated financial forecast information regarding Houghton s anticipated future operations for the years ending December 31, 2017 through December 31, 2021, which were based on the Company s due diligence of Houghton and extrapolations from Houghton financial forecasts for the year ending December 31, 2016 (as adjusted by Company management to include estimated interest expense from the financing) and provided by the Company to The Valence Group in connection with The Valence Group s opinion and related financial analyses, is presented below. The prospective financial information included in this preliminary proxy statement has been prepared by, and is the responsibility of, the Company s management. PricewaterhouseCoopers LLP has neither examined, compiled nor performed any procedures with respect to the accompanying prospective financial information and, accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto. The PricewaterhouseCoopers LLP reports included in and incorporated in this preliminary proxy statement relate to the Company s and Houghton s

Table of Contents

historical financial information. They do not extend to the prospective financial information and should not be read to do so.

(dollars in millions; all amounts are approximate)	Year Ending December 31,				
(unaudited)	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Management Case					
Revenue	$ 786.2	$ 808.3	$ 834.6	$ 863.3	$ 893.4
EBITDA (as adjusted) (2)	115.8	117.8	121.5	126.0	130.7
Capital expenditures (1)	15.0	12.1	12.5	12.9	13.4

(1) Capital expenditures consist of cash used for the purchase of property and equipment.
(2) The Illustrative Upside Case, which assumed lower costs associated with labor and overhead, and selling, general and administrative than the Company s management anticipated post-Closing, projected EBITDA growing to $125.3 million, $132.8 million, $139.7 million, and $147.0 million in the years from 2018 through 2021, respectively, with the same revenue and capital expenditures in those years.

Share Purchase Agreement

The following is a summary of selected provisions of the Share Purchase Agreement, pursuant to which the Company has agreed to acquire the Shares. While the Company believes this description covers the material terms of the Share Purchase Agreement, it may not contain all of the information that is important to you and is qualified in its entirety by reference to the Share Purchase Agreement, which was filed as an exhibit to our current report on Form 8-K filed on April 5, 2017 and as Annex D to this proxy statement, and is incorporated by reference into this proxy statement. We urge you to read the entire Share Purchase Agreement carefully.

Consideration

The Company agreed to purchase the Shares from the Sellers for an aggregate purchase price (subject to adjustment as provided in the Share Purchase Agreement) of: (1) $172,500,000 in cash; and (2) a number of shares (the **Consideration Shares**) of Common Stock, comprising 24.5% of the Common Stock outstanding immediately after the Closing, which based on the closing stock price of shares of our Common Stock on the New York Stock Exchange on the Record Date, had a value of approximately $626,344,715. There can be no assurance as to what the market value will be of the shares to be issued to the Sellers at Closing. In addition, effective as of the Closing, the Company anticipates refinancing substantially all of Houghton s consolidated indebtedness, which as of March 31, 2017 was approximately $700 million in the aggregate, net of cash. If the proposed Charter Amendment, as described elsewhere in this proxy statement, is not approved by the Company s shareholders at the Meeting, the Company will instead issue, as the Consideration Shares, a number of shares of a new series of voting preferred stock of the Company (the **Preferred Stock**) having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. A portion of the cash consideration and the Consideration Shares, initially totaling in the aggregate $100,000,000 will at the Closing be placed in escrow to secure against breaches of the Sellers representations, warranties and covenants in the Share Purchase Agreement.

The cash and shares to be held in escrow will be held in escrow for a period of 12 months following the Closing Date to secure the indemnity obligations of the Sellers, at which time half of the escrow amount, less any amounts paid

with respect to any indemnification obligations or subject to ongoing claims, would be released to the Sellers. The remaining portion of the cash and shares held in escrow would be released to the Sellers 18 months following the Closing Date, less any amounts paid with respect to any indemnification obligations or subject to ongoing claims.

Preferred Stock

As noted above, if the Charter Amendment is not adopted, the Company intends instead to issue a new series of Preferred Stock as Consideration Shares. The Preferred Stock, par value $1.00 per share, will, in the aggregate,

have the same voting power as the Common Stock that would have been issued if the Charter Amendment had been approved, that is, as of the Closing Date, the Preferred Stock will have 24.5% of the combined voting power of the Preferred Stock and the Common Stock voting together as a single class (after giving effect to votes cast by holders of shares of Common Stock having ten-vote voting rights). Except as otherwise required by applicable law, the Preferred Stock will vote as a single class with the Common Stock on all matters that come before the Common Stock. The Preferred Stock will automatically convert into the number of shares of Common Stock as would have the same dividend and other economic rights of the Preferred Stock being converted (i) upon the sale, transfer or other disposition of such Preferred Stock to a person that is not an affiliate of the holder of such Preferred Stock, provided that no person that was a beneficial owner (or affiliate thereof) of the Preferred Stock immediately before such sale, transfer or disposition is a beneficial owner (or affiliate thereof) of the shares of Common Stock being issued in such conversion, or (ii) at any time the Company s Charter is amended to provide that holders of Common Stock are entitled to one vote per share of Common Stock, regardless of how long such shares have been held.

The conversion rate of the Preferred Shares will be adjusted to account for stock splits, combinations, mergers and reorganizations; however, no other modifications to the conversion rate, or otherwise to the terms of the Preferred Stock, will be taken to preserve its 24.5% voting power. Whether the Consideration Shares consist of Preferred Stock or Common Stock, if the Company issues shares or repurchases outstanding shares after the Closing, the aggregate voting power of the Consideration Shares, as a percentage of the Company s total outstanding voting power, will fluctuate in the same way. The Preferred Stock will not have any preferred dividend, liquidation or other special rights, and will be the functional equivalent of Common Stock, without the escalation in voting power that currently inures to the Common Stock if held by the same shareholder for three years.

Assumption of Houghton Indebtedness

The Combination will include the assumption of Houghton s debt, which as of March 31, 2017 was approximately $700 million in the aggregate, net of cash. In connection with the Combination, the Company has entered into a Commitment Letter, described elsewhere in this proxy statement, that relates to proposed financing that would be used for (i) the payment of the consideration in respect of the Combination, (ii) the repayment of existing indebtedness of the Company and its subsidiaries, (iii) the repayment of indebtedness of Houghton and its subsidiaries at the Closing, and (iv) the payment of fees and expenses incurred in connection with the foregoing.

Representations and Warranties

The Share Purchase Agreement contains representations and warranties made by the Company and Sellers as of specific dates. The representations and warranties contained in the Share Purchase Agreement were negotiated with the principal purpose of establishing the circumstances in which the Company (or Sellers) may have an action for breach of warranty (and potentially the ability to recover damages), or in which the Company (or Sellers) may have the right to terminate the Share Purchase Agreement, rather than establishing matters as facts. Some of these representations and warranties are subject to specified exceptions and qualifications, including exceptions and other information contained in the confidential Disclosure Letter that the parties exchanged in connection with signing the Share Purchase Agreement, which are not included in this proxy statement. In addition, some of these representations and warranties are qualified as to materiality or by knowledge. Moreover, information concerning the subject matter of such representations and warranties may change after the date of the Share Purchase Agreement, which subsequent information may or may not be fully reflected in the Company s public disclosures. The Company will provide additional disclosure in its public reports to the extent it becomes aware of the existence of any material facts that are required to be disclosed under federal securities law and that might otherwise contradict the representations and warranties contained in the merger agreement and will update such disclosure as required by federal securities laws.

Table of Contents

The representations and warranties by the Sellers and by the Sellers and Houghton (each a **Sellers Warranty** and collectively, **Sellers Warranties**) relate to a number of matters, including the following:

Warranties of Sellers

Organization and good standing of certain of the Sellers;

The right, requisite power and authority of each Seller to sell the Shares and enter into the Share Purchase Agreement and the documents related thereto and the enforceability of the Share Purchase Agreement and the documents related thereto against such Seller;

That the Combination will not conflict with the organizational documents of certain of the Sellers or Houghton, result in a violation of Law, require a consent (except as specified), or create an encumbrance (as defined in the Share Purchase Agreement);

Each Seller s ownership of the Shares;

Absence of legal proceedings that might prevent or delay the Combination;

Warranties of Sellers and Houghton

The capitalization of Houghton and its subsidiaries;

The disclosure and accuracy of Houghton s constituent and corporate documents;

Compliance with laws and regulations;

Financial statements of Houghton and its subsidiaries;

Absence of certain undisclosed liabilities;

Absence of certain changes and events since December 31, 2016;

Material contracts of Houghton and its subsidiaries;

- Title of Houghton and its subsidiaries to their assets and real property;
- The condition and sufficiency of the assets of Houghton and its subsidiaries;
- The intellectual property and information technology of Houghton and its subsidiaries;
- The accounts receivable of Houghton and its subsidiaries;
- The customers and suppliers of Houghton and its subsidiaries;
- The insurance policies of Houghton and its subsidiaries;
- Disputes or investigations involving Houghton and its subsidiaries;
- Compliance with environmental laws;
- Employment and employee benefits matters;
- Tax matters;
- Transactions between Houghton and its affiliates; and
- Books and Records of Houghton and its subsidiaries.

The representations and warranties by the Company relate to a number of matters, including the following:

- Organization and good standing of the Company;
- Corporate power and, subject to receiving Company Shareholder Approval, authority to enter into the Share Purchase Agreement and the documents related thereto and the enforceability of the Share Purchase Agreement and the documents related thereto against the Company;

Table of Contents

The authorization and issuance of the Consideration Shares upon receiving Company Shareholder Approval;

That the Combination will not conflict with the organizational documents of Company, result in a violation of Law, require a consent (except as specified), or create an Encumbrance (as defined in the Share Purchase Agreement);

Compliance with laws and SEC filing requirements;

Financial statements of the Company and its Subsidiaries;

The capitalization of the Company and its subsidiaries;

The Company s financing with respect to the Combination;

Compliance with laws and regulations;

Absence of certain changes and events since December 31, 2016; and

Books and Records of the Company and its subsidiaries.

Covenants

The Sellers agreed that, unless the Share Purchase Agreement is terminated, from the date of the Share Purchase Agreement until the Closing Date, Houghton s business will be conducted in the ordinary course of business consistent with past practice before the date of the Share Purchase Agreement. The Sellers also agreed that, unless the Share Purchase Agreement is terminated, from the date of the Share Purchase Agreement until the Closing Date, except as specifically allowed under the Share Purchase Agreement, Houghton and its subsidiaries will, among other things:

Preserve and maintain their material permits;

Pay their indebtedness, taxes and similar obligations when due;

Maintain their properties and assets in substantially the same condition as they were on the date of the Share Purchase Agreement, subject to reasonable wear and tear;

Continue in full force and effect without modification all insurance policies;

Defend and protect their material properties and assets from infringement and usurpation;

Perform in all material respects their obligations under all material contracts relating to or affecting their material properties, assets or business;

Maintain their books and records in accordance with all laws and past practice;

Comply in all material respects with all applicable laws;

Obtain certain consents and make certain notifications;

Not, except (i) as required by any written agreements existing as of the date of the Share Purchase Agreement or as required by Law or (ii) as done in the ordinary course of business consistent with past practice (to the extent that such action does not increase Houghton s consolidated compensation expense over a certain threshold), (A) grant any bonuses, whether monetary or otherwise, or increase any wages, salary or other compensation or benefits (except as permitted in the Share Purchase Agreement) in respect of its current or former manager-level employees, officers, directors or members, (B) take any action to accelerate the vesting or payment of any compensation or benefit (except as permitted in the Share Purchase Agreement) for any current or former employee, officer, director, member or manager or (C) adopt, modify or terminate any employment agreement with any current or former employee, officer or director (other than terminations of the employment of at-will employees);

Not, except as required by any written agreements existing as of the date of the Share Purchase Agreement or as required by Law, increase any severance, pension or similar benefits in respect of its current or former manager-level employees, officers, directors or members;

Not, except as required by any written agreements existing as of the date hereof or as required by Law, adopt, modify or terminate any: (i) severance, change in control, retention or other similar agreement with any current or former employee, officer, director or member, (ii) Benefit Plan or (iii) collective bargaining or other agreement with a Union, in each case, whether written or oral;

Not adopt, sponsor or maintain any new employee benefit plan or agreement, subject to certain exceptions, which would require payment of benefits or compensation after the 12-month anniversary of the Closing; and

Not take any action or make any payments, or permit any Company Subsidiary to take any action or make any payments, that, if made immediately before the date of the Share Purchase Agreement, would require disclosure as an affiliate transaction under the Share Purchase Agreement.

The Sellers also agreed that they will not take certain actions regarding Houghton s and its subsidiaries employees and Houghton s and its subsidiaries liabilities. The Sellers have also agreed to notify the Company of certain pertinent occurrences or information relating to Houghton s and its subsidiaries business.

The Company agreed that from the date of the Share Purchase Agreement until the Closing Date, the Company s business will be conducted in the ordinary course of business consistent with past practice before the date of the Share Purchase Agreement. The Company has also agreed that from the date of the Share Purchase Agreement until the Closing Date, except as specifically allowed under the Share Purchase Agreement, the Company will:

Preserve and maintain all of its material permits;

Pay its indebtedness, taxes and similar obligations when due;

Defend and protect its material properties and assets from infringement and usurpation;

Perform in all material respects its obligations under all material contracts relating to or affecting its material properties, assets or business;

Maintain its books and records in accordance with all laws and past practice;

Not, except as required by law or the rules of the NYSE (or as contemplated by the Share Purchase Agreement), amend its articles of incorporation; and

Comply in all material respects with all applicable laws.

The Company and the Sellers agreed to use their respective reasonable best efforts to take all reasonable actions to consummate the Combination, including obtaining regulatory approvals. In furtherance thereof, the Company and the

Sellers have agreed to work cooperatively in connection with obtaining required regulatory approvals, including by consulting with each other regarding written submissions to governmental authorities. The Company also agreed that, for six years following the Closing, the Company will cause the organizational documents of Houghton and its subsidiaries to contain provisions no less favorable, subject to certain qualifications, with respect to indemnification, advancement of expenses and exculpation of directors and officers than such documents contain as of the date of the Share Purchase Agreement. In addition, the Share Purchase Agreement allows Houghton to purchase a directors and officers liability insurance policy covering actions or omissions that occur prior to the Closing Date, provided that such policy provides equivalent coverage to the coverage maintained by Houghton on December 31, 2016.

The Company agreed that, for the one-year period following the Closing, it will cause the individuals employed by Houghton or one of its subsidiaries immediately before the Closing Date, and who continue to be so employed during such period, to be provided (i) certain annual compensation no less than that provided to such employees immediately prior to the Closing Date, (ii) certain specified severance benefits and (iii) other retirement, welfare and fringe benefits substantially comparable in the aggregate to the benefits provided to such employees immediately prior to the Closing Date. The Company has also agreed to assume and honor, during such one-year period, certain of Houghton s employment, retention, termination and change in controls plans and agreements

that are in effect as of the Closing Date and to provide Houghton employees with service credit, for eligibility and vesting purposes, under certain benefits plans.

Indemnification and Limitations on Seller s Liability

Subject to certain limitations, from and including the Closing Date, the Company and Sellers each undertake to indemnify the other, against certain losses that arise directly or indirectly in connection with breaches of representations, warranties or covenants.

The Company may not make a claim against the Sellers unless the Company provides notice of such claim to the Sellers before (i) the expiration of the applicable statute of limitations in the case of claims for breach of certain fundamental representations and warranties, (ii) the third anniversary of the Closing Date in the case of claims for breach of tax or environmental representations and warranties, and (ii) 18 months after the Closing Date in the case of claims for breach of any other representations and warranties of the Sellers. In general, the Company may not make a claim against the Sellers for a breach of a covenant unless the Company provides notice of such claim within one year of the date on which such covenant was to be performed. Subject to certain exceptions, both the Company s and the Sellers liability under the Share Purchase Agreement are subject to an aggregate cap equal to the purchase price, and the Company s and the Sellers liability with respect to breaches of representations and warranties is limited to the amount held in escrow at the Closing, other than fundamental representation and warranties, the liability for which is limited to the purchase price, and representations and warranties related to tax matters, the liability for which is limited to an aggregate of $100 million. The Sellers liability in respect of claims arising from the breach of the Sellers representations and warranties (other than certain fundamental representations and warranties) is also subject to a threshold of $5 million.

Shareholders Meeting

The Share Purchase Agreement requires the Company to take all action necessary to cause a meeting of its shareholders to be duly called and held for the purpose of approving of the Issuance. The Company is required to deliver the Board s recommendation of the Issuance and the Charter Amendment to the Company s shareholders and to use reasonable best efforts endeavors to obtain such approval.

Conditions to Closing of the Combination

The Closing is conditioned on the following conditions, among others, having been satisfied or waived in accordance with the Share Purchase Agreement:

All necessary and material filings and notices required to be made before Closing under the applicable antitrust and competition laws (the **Antitrust Laws**) shall have been made and any applicable and mandatory waiting period or other time periods (including any extensions thereof) under such legislation or regulation in any such jurisdiction shall have expired or been terminated, all other material obligations under the Antitrust Laws having been complied with in each case in connection with the transactions contemplated by the Share Purchase Agreement, and all material authorizations, consents or approvals necessary under the Antitrust Laws in any jurisdiction for or in respect of the transactions contemplated by the Share Purchase Agreement shall have been obtained from all appropriate governmental authorities in each such jurisdiction and all such authorizations, consents or approvals shall remain in full force and effect and there shall be no notice of any intention to revoke, suspend, or adversely restrict or modify any of the same;

No governmental authority shall have enacted, issued, promulgated, enforced or entered any Order which is in effect and has the effect of making the transactions contemplated by the Share Purchase Agreement illegal, otherwise restraining or prohibiting consummation of such transactions or causing any of the transactions contemplated hereunder to be rescinded following completion thereof;

Table of Contents

The representations and warranties of each Seller and the Company contained in the Share Purchase Agreement, the other transaction documents and any certificate or other writing delivered pursuant to such agreement must have been true and correct in all material respects as of the date of the Share Purchase Agreement and in all material respects as of the Closing Date (except for representations and warranties made as of a specified date, which must have been true and correct as of the specified date); *provided*, *that* certain fundamental representations and warranties must be true and correct as of the Closing Date in all respects;

Each Seller and the Company must have duly performed and complied in all material respects with all agreements, covenants and conditions required by the Share Purchase Agreement and each of the other transaction documents to be performed or complied with by them before or on the Closing Date;

No Action shall have been commenced by any Governmental Authority against the Company, or against any Seller or Houghton or any subsidiary and be pending, which would prevent the Closing. No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any transaction contemplated hereby;

All other required consents shall have been received;

From the date of the Share Purchase Agreement, there shall not have occurred any material adverse effect (as defined therein), nor shall any event or events have occurred that, individually or in the aggregate, with or without the lapse of time, could reasonably be expected to result in a material adverse effect; and

The ancillary agreements, including the Escrow Agreement, the Shareholder Agreement, the Non-Competition and Non-Solicitation Agreement, the Option Termination Agreements and the SAR Termination Agreements, shall have been fully executed.

Termination of the Share Purchase Agreement

The Share Purchase Agreement may be terminated at any time before Closing of the sale and purchase of the Shares in accordance with the Share Purchase Agreement if any of the following occurs:

a Seller has (subject to certain cure rights) breached a representation, warranty or covenant that would give rise to the failure of a closing condition and the Company gives notice to the Seller to terminate the Share Purchase Agreement;

the Company has (subject to certain cure rights) breached a representation, warranty or covenant that would give rise to the failure of a closing condition and the Sellers give notice to the Company to terminate the Share Purchase Agreement;

any of the Conditions has not been satisfied or waived in accordance with the Share Purchase agreement by April 4, 2018; or

in order to comply with the conditions to Closing, the Company is required to divest assets with greater than $80 million, in the aggregate, of pro forma combined 2016 net sales, unless the Company agrees to proceed with such divestiture.

Non-Competition and Non-Solicitation Agreement

The Company, Houghton, Gulf Oil International Limited, a company incorporated in the Cayman Islands (**Gulf International**), and GOCL Corporation Limited, a public limited company incorporated in India (**Gulf Oil**) have each agreed to enter into a Non-Competition and Non-Solicitation Agreement in connection with the Closing. The following is a summary of selected provisions of the Non-Competition and Non-Solicitation Agreement. The description of the Non-Competition and Non-Solicitation Agreement in this proxy statement has been included to provide you with information regarding its terms. While the Company believes this description covers the material terms of the Non-Competition and Non-Solicitation Agreement, it may not contain all of the

Table of Contents

information that is important to you and is qualified in its entirety by reference to the Non-Competition and Non-Solicitation Agreement, the form of which is an exhibit to the Share Purchase Agreement, which in turn is filed as Exhibit 10.1 to our current report on Form 8-K filed on April 5, 2017 and as Annex E to this proxy statement, and incorporated by reference into this proxy statement. We urge you to read the entire Non-Competition and Non-Solicitation Agreement carefully.

Under the Non-Competition and Non-Solicitation Agreement Houghton, Gulf International and Gulf Oil each agree that it will not, for a period of two years from the Closing Date, other than solely through its direct or indirect ownership of the Company s capital stock or any other interests in the Company, directly, or indirectly, including through or on behalf of a subsidiary, anywhere in the world, excluding India: (i) own, manage, operate or control any business which competes with the Company (as combined with Global Houghton) or (ii) be or become a shareholder, partner, member or owner of any Person who is engaged in any such business; provided, however that nothing in the agreement will:

(i) prohibit or restrict such party, directly or indirectly, from owning, as a passive investor, not more than five percent (5%) collectively and in the aggregate of any class of outstanding publicly traded securities of any person so engaged in such business;

(ii) prohibit or restrict such party, directly or indirectly, from engaging in such party s business as conducted on the Effective Date (as defined in the Share Purchase Agreement) and reasonable extensions thereof, which may include routine, day-to-day transactions with any entity; or

(iii) apply to or restrict any business of which such party acquires control after the Closing Date provided that the acquired business did not receive more than $25,000,000 of its aggregate net sales (as measured during the 12 full calendar months prior to such acquisition) from product lines included within the definition of Company Business (as defined in the Non-Competition and Non-Solicitation Agreement).

As provided in the agreement, neither Gulf Oil nor Gulf Oil Lubricants India, Ltd. may, during such two-year period, acquire businesses that compete with the business of the Company (as combined with Houghton) from a certain company.

In addition, the agreement provides that, for a three-year period after the Closing Date, none of Houghton, Gulf International or Gulf Oil will directly or indirectly: (i) induce, solicit, recruit or attempt to persuade any employee of the Company (as combined with Houghton) to terminate his or her employment with the Company or any of its subsidiaries, or (ii) solicit the employment of any of the employees of the Company or any of its subsidiaries (as combined with Houghton). Notwithstanding the above, such parties shall not be restricted from (1) soliciting for employment or hiring former employees of the Company or Houghton (including their respective subsidiaries) whose employment was terminated by the Company or Houghton (including their respective subsidiaries) at least six months prior to such initial solicitation by such party, or (2) soliciting employees of the Company or Houghton (including their respective subsidiaries) by means of a general solicitation through a public medium or general or mass mailing that is not specifically targeted at employees or former employees of the Combined Business; provided, however, that no such party (notwithstanding clause (2)) shall be permitted to hire any such employees during such three-year period.

Shareholder Agreement

In connection with the Share Purchase Agreement, the Company will, at or before the Closing, enter into the Shareholder Agreement with the Seller, Gulf, Gulf International and Gulf Oil (each of Gulf International and Gulf Oil, a **Beneficial Shareholder** and together with Gulf, each a **Shareholder** and together, the **Shareholders**). The following is a summary of selected provisions of the Shareholder Agreement. The description of the Shareholder Agreement in this proxy statement has been included to provide you with information regarding its terms. While the Company believes this description covers the material terms of the Shareholder Agreement, it may not contain all of the information that is important to you and is qualified in its entirety by reference to the Shareholder Agreement, the form of which is an exhibit to the Share Purchase

Agreement, which in turn is filed as Exhibit 10.1 to our current report on Form 8-K filed on April 5, 2017 and as Annex E to this proxy statement, and incorporated by reference into this proxy statement. We urge you to read the entire Shareholder Agreement carefully.

Board Composition

Under the terms and subject to the conditions of the Shareholder Agreement, including the satisfaction of the eligibility standards established by the New York Stock Exchange and the Company s Nominating and Corporate Governance Committee, following the Closing the Shareholders will have the right to nominate three directors to the Board consisting of 12 members, each to serve in a different class of the Board. None of the Shareholders nominees have yet been identified, and are not required to be identified before the Closing. The Shareholders will: (i) retain the right to nominate three directors so long as their beneficial ownership of the Common Stock exceeds 19%, (ii) have the right to nominate two directors so long as their beneficial ownership of the Common Stock exceeds 14% and (iii) have the right to nominate one director so long as their beneficial ownership of the Common Stock exceeds 10%. As long as any nominee of the Shareholders serves on the Board, a nominee of the Shareholders will also have right to serve on each committee of the Board, subject to eligibility qualifications. Upon the mutual agreement of the Company and the Sellers, Gulf may instead be provided with the right to nominate two persons to a nine-member board, in which case the parties will agree to alternative percentages.

Each of the Shareholders agrees to vote all of the Consideration Shares held by it for all of the nominees on the slate of directors recommended for election by the Board until such time that is six months after the first day on which no individuals nominated or designated by Gulf to serve as members of the Board are serving as members of the Board.

Participation Rights

During the period from the Closing Date until six months after the first day on which no individuals nominated or designated by Gulf serve as members of the Board, on the terms and subject to the conditions specified in the Shareholder Agreement, if the Company proposes to offer or sell any new securities, the Company will, subject to certain exceptions, first make an offering of such new securities to Gulf and Gulf will have the right to subscribe for a portion of such new securities equal to its percentage beneficial ownership of the Common Stock. The Company may sell any new securities not subscribed for by Gulf, on terms no more favorable than those offered to Gulf, within 90 days of the offer to Gulf.

Restrictions on Purchases and Sales

Purchases. From the Closing Date until the date that is two years after the Closing Date, except as otherwise permitted in the Shareholder Agreement, no Shareholder may acquire, directly or indirectly (including by acquiring beneficial ownership thereof), any equity securities of the Company.

Six-Month Lockup. From the Closing Date until the date that is six months after the Closing Date, no Shareholder may offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any Consideration Shares; *provided*, *however*, that any Shareholder may offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any such Consideration Shares: (i) in a transaction approved by a majority of the independent directors serving on the Board, (ii) in connection with a transaction approved by a majority of the Board and/or (iii) to an Affiliate of a Shareholder, provided that such Affiliate agrees in writing to be bound by all of the obligations of such Shareholder under the Shareholder Agreement and such Shareholder continues to be bound by its obligations under the Shareholder Agreement.

Two-Year Limitation on Private Block Trades. From the Closing Date until the date that is two years after the Closing Date, the Shareholders may not directly or indirectly sell or transfer any Consideration Shares representing more than 7% of the then outstanding Common Stock in a private transaction or series of related transactions to the same person or group; provided, however, that, subject to the restrictions set forth in the prior

paragraph, any Shareholder may sell or transfer any Consideration Shares: (i) in a transaction that has been approved by a majority of the independent directors serving on the Board; (ii) if the Shareholders collectively own less than 10% of the outstanding Common Shares and do not have the right to appoint directors to the Board immediately prior to such Sale, (iii) in a transaction that is approved by a majority of the Board, (iv) that is registered for sale in an offering pursuant to the Shareholder Agreement and/or (v) to an Affiliate of a Shareholder, provided that such Affiliates agrees in writing to be bound by all of the obligations of such Shareholder hereunder and such Shareholder continues to be bound by its obligations under the Shareholder Agreement. Any Shareholder may also pledge any Consideration Shares so long as the pledgee agrees that such Consideration Shares remain subject to the restrictions in the Shareholder Agreement.

Negative Covenant Regarding Hostile Activity

From the Closing Date until such time that is six months after the first day on which no individuals nominated or designated by Gulf serve as members of the Board, each Shareholder may not, without the prior written consent of the Board and then only to the extent written consent has been obtained: directly or indirectly, solicit proxies, become a participant in a solicitation (as such terms are defined under Regulation 14A under the Exchange Act), publicly support, knowingly facilitate, initiate, vote in favor of or sell or tender into any change in control transaction or proposal that has not been approved by a majority of the Board or by a majority of the independent directors serving on the Board.

Registration Rights

Demand Registration Rights. After the six-month anniversary of the Closing Date, Gulf may request (a **Demand Registration Request**) that the Company register under the Act at least 8% of the registrable securities then owned (or beneficially owned) by Gulf (or a lesser percent if the anticipated aggregate offering price, net of any underwriting discounts and selling commissions, would exceed $50 million). Upon such a request, the Company has agreed to use reasonable efforts to cause the offering and sale to be registered pursuant to the Securities Act, subject to customary limitations. The Company will not be obligated to effect, or to take any action to effect, any Demand Registration: (i) after the Company has effected two underwritten offerings pursuant to Demand Registrations or (ii) more than once in any 12-month period.

Piggyback Registration. Gulf also will have piggyback registration rights, if the Company proposes registration under the Act of a public offering of Common Stock, subject to customary limitations.

Each of the Company and the Shareholders has agreed to certain indemnification provisions as set forth in the Shareholder Agreement with respect to actions regarding untrue statement of material fact or material omissions if such party provided that information (or omission) in materials to be used in preparing any registration statements.

Regulatory Approvals and Regulatory Notifications To Be Obtained in Connection with the Combination

Closing of the Combination is subject to the following principal regulatory approvals and regulatory notifications:

Under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the **HSR Act**), certain transactions, including the Combination and the issuance of the Consideration Shares, may not be completed until notifications have been given and information furnished to the Antitrust Division of the Department of Justice (the **Antitrust Division**) and the Federal Trust Commission (the **FTC**) and all statutory waiting

period requirements have been satisfied. Completion of the Combination is subject to the expiration or termination of the applicable waiting period under the HSR Act. Both the Company and Houghton filed their respective Notification and Report Forms with the Antitrust Division and the FTC. On July 3, 2017, the Company and Houghton each received a formal request for additional information pursuant to 16 C.F.R. § 803.20 (a **Second Request**). The effect of a Second Request is to extend the waiting period until 30 calendar days following the date both companies have substantially complied with the Second Request, unless the waiting period is terminated earlier by the

FTC, or extended by agreement of the companies or court order. The parties intend to respond to the Second Request as quickly as practicable, and to continue to work cooperatively with the FTC in connection with its review. Completion of the Combination and issuance of the Consideration Shares remains subject to receipt of certain required or recommended regulatory approvals, including notification, clearance and/or approval in the European Union and Australia. The parties intend to continue to work cooperatively with regulators in each of these jurisdictions to facilitate the resolution of their respective reviews. China s regulatory authority notified the parties on July 17, 2017 that it approved the Combination.

The Company s compliance with applicable United States federal and state securities laws and the New York Stock Exchange (**NYSE**) Listing Rules in connection with the Issuance. The rules of the NYSE require shareholder approval before the issuance of securities in connection with the acquisition of the stock or assets of another company if the issuance would constitute more than 20% of the total number of shares of common stock outstanding before the issuance. We are seeking shareholder approval of the Issuance to satisfy these rules.

Financing Associated with the Combination

In connection with entering into the Share Purchase Agreement and the transactions contemplated thereby, the Company on April 4, 2017 also entered into a Senior Secured Credit Facilities Commitment Letter (together with all exhibits thereto, the **Commitment Letter**) with Bank of America, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Deutsche Bank AG New York Branch and Deutsche Bank Securities Inc. (collectively, the **Commitment Parties**). Pursuant to the Commitment Letter and subject to the terms and conditions set forth therein, the Commitment Parties have committed to provide senior secured credit facilities of up to $1.15 billion consisting of (i) a $575 million senior secured term loan to the Company on the Closing Date, (ii) a senior secured term loan in Euros in an amount equal to $175 million to certain European subsidiaries of the Company (collectively, the **Foreign Borrowers**) on the Closing Date, and (iii) a $400 million revolving facility available to the Foreign Borrowers or the Company (collectively, the **Financing**). The proceeds of the term loans and a portion of the revolving credit loans are expected to be used at the Closing for the purpose of funding (i) the payment of $172.5 million of the consideration to be paid in cash in respect of the Combination, (ii) the repayment of an estimated amount of approximately $66 million of existing indebtedness of the Company and its subsidiaries, (iii) the repayment of an estimated amount of approximately $752 million of indebtedness of Houghton and its subsidiaries, and (iv) the payment of an estimated amount of approximately $50 million of fees and expenses incurred in connection with the foregoing. It is also expected that the remainder of the revolving facility would remain available to provide liquidity for the Company after the Closing for general corporate purposes. The commitment to provide the Financing is subject to certain terms and conditions, including the negotiation of definitive documentation and other customary closing conditions consistent with the Share Purchase Agreement and Commitment Letter. We have negotiated the terms of the credit agreement and the form of the guaranty agreement (neither of which have yet become effective and both of which need some additional information and/or schedules before they are complete) and expect to complete the negotiation of the remainder of the definitive agreements governing the Financing and finalize the documentation before the Closing.

Impact of the Issuance on Existing Shareholders

The Issuance will significantly dilute the Common Stock ownership percentages of our existing shareholders. As of the Record Date, there were 13,309,643 shares of Common Stock issued and outstanding. When the Combination is completed, the Common Stock owned by the Sellers will represent, in the aggregate, 24.5% of the issued and outstanding shares of Quaker s Common Stock immediately after the Closing, or a number of shares of voting Preferred Stock having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. Each Seller will be entitled to that portion

of the Consideration Shares represented by its ownership interest in Houghton as of the Closing. The issuance of the Consideration Shares will have a dilutive effect on the holdings of existing shareholders, with shareholders having, as a practical matter, 75.5% of the voting power that they had immediately prior to the Issuance as compared to the total votes outstanding (subject to the effects of the Charter Amendment, if adopted).

As a result of the Issuance, Gulf will become our largest shareholder with substantial influence over matters submitted to a vote of our shareholders, including the election of directors, amendment of our organizational documents, acquisitions or other business combinations involving Quaker, and potentially the ability to prevent extraordinary transactions such as a takeover attempt.

Quaker Board of Directors following the Combination

As a result of the Combination, Gulf will initially be entitled to representation on our Board, the size of which we expect to be increased from nine to twelve members at or before the Closing, resulting in three vacancies in the Board. Under the terms and subject to the conditions of the Shareholder Agreement, three individuals designated by Gulf, who have not yet been identified, will be appointed to the Board at the Closing to fill those vacancies, each to serve on one of our Board s three separate director classes; provided that such individuals satisfy the eligibility standards established by the New York Stock Exchange and the Company s Nominating and Corporate Governance Committee. Gulf will thereafter have the right, at the annual meetings of our shareholders, to nominate to our Board (i) three directors so long as its beneficial ownership of the Common Stock (or Common and Preferred Stock, considered as a single class, if Preferred Stock is issued as Consideration Shares) exceeds 19%, (ii) two directors so long as its beneficial ownership of the Common Stock (or Common and Preferred Stock, considered as a single class, if Preferred Stock is issued as Consideration Shares) exceeds 14% and (iii) have the right to nominate one director so long as its beneficial ownership of the Common Stock (or Common and Preferred Stock, considered as a single class, if Preferred Stock is issued as Consideration Shares) exceeds 10%. Upon the mutual agreement of the Company and the Sellers, Gulf may be entitled to two of nine directors, instead of three of twelve directors.

Dissenters or Appraisal Rights of Existing Shareholders

Under applicable Pennsylvania law, the Company s shareholders do not have dissenters or appraisal rights in connection with the Issuance, and we do not plan to independently provide shareholders with any such rights.

Registration of Certain Shares of Quaker Common Stock issued in the Combination

The shares of Quaker Common Stock issued to Sellers in the Combination will not be registered under the Securities Act of 1933, (as amended, the Securities Act), and will be subject to various restrictions and limitations on transfer under U.S. securities laws. The Company has agreed to register the shares of Gulf upon certain term and conditions as set forth in the Shareholder Agreement, described above. The Company has also agreed upon certain terms and conditions to register the Consideration Shares issued to the individual stockholders of Houghton, within thirty days of the Closing.

Anticipated Accounting Treatment of the Combination

Quaker prepares its financial statements in accordance with accounting principles generally accepted in the United States of America (referred to as GAAP). The Combination will be accounted for by Quaker using GAAP. Quaker expects to allocate the purchase price being paid by it to the fair value of Houghton s tangible and intangible assets as of the Closing Date, with the excess purchase price, if any, being recorded as goodwill.

Material U.S. Federal Income Tax Consequences of the Combination

The Combination will not result in any taxable gain or loss for U.S. federal income tax purposes to Quaker or to any Quaker shareholder in his, her or its capacity as a Quaker shareholder. Quaker shareholders who are also Sellers, if any, should consult their own tax advisors as to the tax consequences of participating in the Combination with respect

to their Houghton stock, or the shares of Quaker Common Stock (or Preferred Stock) they may be entitled to receive in the Combination.

Table of Contents

Vote Required and Recommendation of the Board

With respect to the proposal for the approval of the Issuance, you may vote in favor of the proposal, against the proposal or abstain from voting on the proposal. Approval of the proposal requires the affirmative vote of the holders of a majority in voting power of the shares of stock present or represented and voting on the proposal (so long as a quorum is present at the Meeting). Abstentions, failures to vote and broker non-votes, if any, are not considered votes cast and will therefore have no effect on the outcome of the vote on this proposal.

The Board evaluated the Combination and consulted with our management and financial and legal advisors. The Board:

Determined that the Combination, including the Issuance, is advisable and in the best interests of the Company and unanimously approved the Combination; and

Determined to recommend that our shareholders approve the Issuance.

In reaching these decisions, the Board consulted with its financial advisors and legal counsel and with management, and considered many factors, including without limitation the following, each of which the Board believed supported its decision:

The Issuance is required to complete the Combination;

The Combination will increase scale in the Company s operations;

The Combination will diversify the Company s global footprint and position the combined company as a top provider in several key global markets;

The Combination is expected to lead to further diversification of the Company s product portfolio;

The Combination is expected to provide a number of financial benefits, including cost synergies, a positive impact on the Company s earnings, and the potential for further revenue growth through cross-selling of complementary products and services;

Our ability to use our Common Stock as currency, compared to the cost of capital that would be required for us to achieve the same expansion of our business through additional indebtedness or internal growth;

Historical and current information concerning the Company s and Houghton s respective businesses, including trends in financial performance, financial condition, operations and competitive position. The Board also considered the historic financial performance and condition of Houghton, as well as certain projections for Houghton, in light of the Company s due diligence review of Houghton.

The terms and conditions of the Share Purchase Agreement, including the purchase price;

Our prospects if the Combination is not completed;

The opinion of The Valence Group provided to the Board; and

The Company s historical stock price and the price at which the Common Stock may be issued to the Sellers in connection with the Combination.

In the course of its deliberations, the Board also considered a variety of risks and other potentially negative factors concerning the Combination, including the following:

The substantial dilution to the Company s shareholders as a result of the Issuance;

The risk that regulatory authorities might require divestitures in order to grant approval of the Combination, though these risks are partially mitigated by (i) the potential adjustment to purchase price that may be triggered by such divestitures, and (ii) the ability of the Company to abandon the Combination if the divestitures required exceed a certain threshold.

-60-

Table of Contents

The risk that the Combination is not conditioned on the Company s ability to obtain financing and the risk that the financing expected pursuant to the Commitment Letter will not be concluded on favorable terms, or at all.

The risk that the Combination might not be completed in a timely manner or at all due to failure to satisfy the closing conditions, a number of which are outside of the Company s control;

If the Combination is not completed, the potential adverse effect of the public announcement of the termination of the Combination on our business;

The possible volatility, at least in the short term, of the trading price of the Common Stock resulting from the announcement and pendency of the Combination and the Issuance;

The fact that under the Shareholder Agreement, a previously unrelated party will become our most significant shareholder with the right to nominate up to three directors to the Board of the Company, one in each class, and that the Company will increase the size of the Board by three members to add Gulf s director designees to the Board (although in some cases, Gulf would instead nominate two directors out of nine);

The fact that the Sellers large ownership stake may make it more difficult and expensive for a third party to pursue a strategic transaction with the Company in the future, including a change of control of the Company, even if such a transaction would generally benefit the Company s shareholders;

The possibility that the financial and strategic benefits expected to be achieved by the Combination might not be obtained on a timely basis or at all, which would have a detrimental effect on our results of operations; and

The risks and costs that could be borne by us if the Combination is not completed, including the diversion of management and employee attention supporting the Combination, the potential adverse effect on our business and the requirement that the Company reimburse Houghton and the Sellers for their documented out-of-pocket transaction expenses, up to $10 million, if the Sellers terminate the Share Purchase Agreement due to the Company s failure to obtain our shareholders approval of the Issuance.

The Board also considered a number of risks involved with the Combination which are described under the section entitled Risk Factors in this proxy statement.

The foregoing discussion of the information considered by the Board is not exhaustive, but includes the material factors that the Board considered in approving the Combination and related agreements, and recommending approval of the Issuance by the Company s shareholders. In view of the wide variety of factors considered by the Board in connection with its evaluation of the Combination and the complexity of these factors, the Board did not consider it practical to, nor did it attempt to, quantify, rank or otherwise assign any specific or relative weights to the specific factors that it considered in reaching its decision. In considering the factors described above, individual directors may have assigned different weights to different factors. The Board did not reach any specific conclusion on each factor

considered, but instead conducted an overall analysis of the totality of the benefits and risks relating to the Combination. The Board discussed the factors described above, including asking questions of senior management and legal and financial advisors, and determined that the Combination was advisable and in the best interests of the Company and its shareholders.

After careful consideration, the Board unanimously recommends that the Company s shareholders vote FOR Proposal 2 to approve the Issuance.

PROPOSAL 3 APPROVAL OF THE ADJOURNMENT OR POSTPONEMENT OF THE MEETING

Adjournment or Postponement

If there are insufficient votes at the time of the Meeting to approve Proposals 1 and 2, we may propose to adjourn the Meeting for the purpose of soliciting additional proxies to approve Proposals 1 and 2. We currently do not intend to propose adjournment at the Meeting if there are sufficient votes to approve Proposals 1 and 2. The Board believes this proposal to be advisable and in the best interests of the Company s shareholders because it gives the Company the flexibility to solicit the vote of additional holders of the Company s voting securities to vote on matters the Board deems important to the Company.

Vote Required and Board Recommendation

The affirmative vote of a majority of votes cast by the Company s shareholders at the meeting is required for approval of this Proposal 3. Abstentions, failures to vote and broker non-votes, if any, will have no effect.

The Board unanimously recommends that you vote FOR approval of the proposal to adjourn or postpone the Meeting if there are insufficient votes at the time of the Meeting, represented in person or by proxy, to approve Proposals 1 and 2.

Table of Contents

SELECTED FINANCIAL DATA OF QUAKER

The following tables set forth selected historical financial information derived from Quaker s (i) audited financial statements as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 incorporated by reference elsewhere in this proxy statement, (ii) audited financial statements as of December 31, 2014, 2013 and 2012 and for the years ended December 31, 2013 and 2012 not included in this proxy statement and (iii) unaudited financial statements incorporated by reference elsewhere in this proxy statement as of March 31, 2017 and for the three months ended March 31, 2017 and 2016. You should read the following selected financial information in conjunction with the section entitled Quaker Management s Discussion and Analysis of Financial Condition and Results of Operations and Quaker s financial statements and the related notes appearing elsewhere in this proxy statement, or incorporated herein by reference.

(in thousands, except dividends and per share data):	**2016 pro forma (combined) (2)(9)**	**2016 (2) actual**	**Year Ended December 31, 2015 (3)(7) (re-cast) actual**	**2014 (4)(7) (re-cast) actual**	**2013 (5)(7) (re-cast) actual**	**2012 (6)(7) (re-cast) actual**
Summary of Operations:						
Net sales	$ 1,513,471	$ 746,665	$ 737,555	$ 765,860	$ 729,395	$ 708,226
Income before taxes and equity in net income of associated companies	52,473	84,009	70,230	78,293	72,826	62,948
Net income attributable to Quaker Chemical Corporation	39,238	61,403	51,180	56,492	56,339	47,405
Per share:						
Net income attributable to Quaker Chemical Corporation Common Shareholders basic	$ 2.26	$ 4.64	$ 3.84	$ 4.27	$ 4.28	$ 3.64
Net income attributable to Quaker Chemical Corporation Common Shareholders diluted	$ 2.25	$ 4.63	$ 3.84	$ 4.26	$ 4.27	$ 3.63
Dividends declared	1.355	1.355	1.260	1.150	0.995	0.975
Dividends paid	1.33	1.33	1.24	1.10	0.99	0.97
Financial Position						
Working capital (7)		$ 249,057	$ 233,517	$ 218,982	$ 191,222	$ 163,870
Total assets (7)		692,028	680,727	664,376	583,642	535,790
Long-term debt		65,769	81,439	75,328	17,321	30,000
Total equity		412,606	381,243	365,135	344,696	289,676

(in thousands, except dividends and per share data):	Three Months ended March 31 Pro forma 2017 (combined) (1)(8)	Three Months ended March 31 2017 (actual) (1)	Three Months ended March 31, 2016 (actual)
Summary of Operations:			
Net sales	$ 391,531	$ 194,909	$ 178,077
Income before taxes and equity in net income of associated companies	22,224	13,520	19,547
Net income attributable to Quaker Chemical Corporation	16,833	6,992	12,946
Per share:			
Net income attributable to Quaker Chemical Corporation Common Shareholders basic	$ 0.96	$ 0.53	$ 0.98
Net income attributable to Quaker Chemical Corporation Common Shareholders diluted	$ 0.96	$ 0.52	$ 0.98
Dividends declared	0.345	0.345	0.320
Dividends paid	0.345	0.345	0.320
Financial Position			
Working capital (7)	$ 352,218	$ 255,688	
Total assets (7)	2,711,246	709,006	
Long-term debt	930,417	65,649	
Total equity	1,015,232	421,975	

Notes to the above tables:

(1) Net income attributable to Quaker Chemical Corporation in the three months ended March 31, 2017 includes equity income from a captive insurance company of $0.6 million after tax; offset by $9.1 million of Houghton combination-related expenses including certain legal, regulatory, environmental, financial and other advisory and consultant costs incurred with the strategic evaluation of, diligence on, and execution of the definitive agreement to combine with Houghton; and $0.3 million of charges related to a cost streamlining initiative associated with the Company s corporate staff.

(2) Net income attributable to Quaker Chemical Corporation in 2016 includes equity income from a captive insurance company of $1.7 million after tax; and $0.4 million of a credit related to the Company s 2015 global restructuring program; offset by $1.5 million of Houghton combination-related expenses; and an after-tax charge of $0.1 million related to a currency conversion charge at the Company s 50% owned equity affiliate in Venezuela.

(3) Net income attributable to Quaker Chemical Corporation in 2015 includes equity income from a captive insurance company of $2.1 million after tax; offset by an after-tax charge of $2.8 million related to a currency conversion charge at the Company s 50% owned equity affiliate in Venezuela; $2.8 million of Verkol s transaction-related expenses; $0.2 million of charges related to cost streamlining initiatives in the Company s South American segment; $0.3 million of charges related to certain U.S. customer bankruptcies; and $6.8 million of charges related to the Company s 2015 global restructuring program.

(4) Net income attributable to Quaker Chemical Corporation in 2014 includes equity income from a captive insurance company of $2.4 million after tax; offset by an after-tax charge of $0.3 million related to a currency conversion charge at the Company s 50% owned equity affiliate in Venezuela; $1.2 million of charges related to cost streamlining initiatives in the Company s EMEA and South American segments; a $0.9 million charge related to a U.K. pension plan amendment; and $0.8 million of charges related to certain customer bankruptcies.

(5) Net income attributable to Quaker Chemical Corporation in 2013 includes equity income from a captive insurance company of $5.5 million after tax; an increase to other income of $2.5 million related to a mineral oil excise tax refund; and an increase to other income of $0.5 million related to a change in an acquisition-related earnout liability; partially offset by an after-tax charge of $0.4 million related to a currency conversion charge at the Company s 50% owned equity affiliate in Venezuela; $1.4 million of charges

related to cost streamlining initiatives in the Company s EMEA and South American segments; and a $0.8 million net charge related to a non-income tax contingency.

(6) Net income attributable to Quaker Chemical Corporation in 2012 includes equity income from a captive insurance company of $1.8 million after tax; and an increase to other income of $1.7 million related to a change in an acquisition-related earnout liability; partially offset by a charge of $1.3 million related to the bankruptcy of certain customers in the U.S.; and a charge of $0.6 million related to CFO transition costs.

(7) The working capital and total assets for the years ended December 31, 2015, 2014, 2013 and 2012, respectively, have been re-cast to reflect the Company s early adoption in 2016 of an accounting standard update regarding the classification of deferred taxes on the balance sheet. The update requires that all deferred tax assets and liabilities, along with any related valuation allowances, be classified as noncurrent on the balance sheet.

(8) Net income attributable to Houghton in the three months ended March 31, 2017 includes approximately $0.9 million of transaction-related fees associated with this Combination, $0.3 million of costs related to past streamlining initiatives, a $0.2 million non-income related tax charge and $0.3 million of management fees paid to its owners.

(9) Net income attributable to Houghton in the twelve months ended December 31, 2016 includes approximately $1.8 million of restructuring expenses, a $40.9 million goodwill and intangible asset impairment loss, $3.4 million of transaction-related fees, largely associated with this Combination, $2.2 million of costs related to past streamlining initiatives, a $1.0 million expense related to the settlement of a past legal case, a $2.0 million non-income related tax charge and $3.0 million of management fees paid to its owners.

Table of Contents

SELECTED FINANCIAL DATA OF HOUGHTON

The following table sets forth selected historical financial information derived from Houghton s (i) audited financial statements as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 included elsewhere in this proxy statement, (ii) audited financial statements as of December 31, 2014, 2013 and 2012 and for the years ended December 31, 2013 and 2012 not included in this proxy statement and (iii) unaudited financial statements included elsewhere in this proxy statement as of March 31, 2017 and for the three months ended March 31, 2017 and 2016. You should read the following selected financial information in conjunction with the section entitled Houghton Management s Discussion and Analysis of Financial Condition and Results of Operations and Houghtons s financial statements and the related notes appearing elsewhere in this proxy statement.

	Three Months Ended March 31,		Year ended December 31,				(unaudited) Pro Forma Year ended December 31,	December 20 to December 31,
ds, except dividends and ata):	2017	2016	2016	2015	2014	2013	2012	2012
of Operations Data								
	$ 196,622	$ 186,376	$ 766,806	$ 781,792	$ 840,787	$ 829,678	$ 837,780	$ 14,860
me before income taxes n net income of investee	(4,335)	(699)	(51,054)	(14,047)	(8,793)	(22,569)	(1,961)	(20,602)
ncome attributable to ghton Ltd.	(2,135)	1,423	(36,563)	(35)	(5,367)	(16,641)	(4,693)	(15,624)
ings per share, basic	(0.69)	0.46	(11.74)	(0.01)	(1.72)	(5.33)	N/A	(5.08)
ings per share, diluted	(0.69)	0.46	(11.74)	(0.01)	(1.72)	(5.33)	N/A	(5.08)
leclared	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
aid	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
verage Shares g	3,114	3,114	3,114	3,095	3,074	3,074	N/A	3,074
eet Data								
pital	134,570		127,758	143,304	153,555	45,209		153,189
s	1,091,655		1,057,242	1,121,456	1,260,022	1,368,724		1,406,335
debt	705,487		703,035	706,114	737,047	960,733		1,085,066
holders equity	103,212		102,211	165,031	216,878	(33,898)		(14,826)

On December 19, 2012, Gulf Oil International acquired Houghton International. As a result of the Gulf Transaction and in accordance with U.S. GAAP, the statements of operations and cash flows for 2012 are presented as two periods: the Predecessor Period from January 1, 2012 through December 19, 2012, which relates to the 353-day period immediately preceding the Gulf Transaction, and the twelve-day Successor Period from December 20, 2012 through December 31, 2012. In order to provide readers with data regarding results of operations for the full year 2012 for purposes of comparison with other full year periods, there have been included in the tables a comparison of results of operations for years 2013 through 2016 in accordance with U.S. GAAP against results of operations for the full year 2012 on a pro forma basis after giving effect to the Gulf Transaction and related financing as if such transactions had occurred on January 1, 2012. The 2012 pro forma data are provided for illustrative and comparison purposes only, do not necessarily reflect what actual results of operations would have been if the Gulf Transaction and related financings

had occurred on January 1, 2012 and may not be indicative of results of operations in the future.

Table of Contents

UNAUDITED PRO FORMA CONDENSED COMBINED

FINANCIAL STATEMENTS

On April 4, 2017, Quaker Chemical Corporation (the **Company**) entered into a Share Purchase Agreement (the **Share Purchase Agreement**) with Global Houghton Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Houghton**), Gulf Houghton Lubricants, Ltd., an exempted company incorporated under the laws of the Cayman Islands (**Gulf**), certain current and former members of the management of Houghton (collectively with Gulf, the **Sellers**) and Gulf as representative for the Sellers (in this capacity, the **Sellers Representative**).

The following unaudited pro forma condensed combined balance sheet as of March 31, 2017 is based on the historical consolidated financial statements of the Company, the historical financial statements of Houghton and the impact of the Combination on the Company s financial position. The unaudited pro forma condensed combined statements of operations present the combined results of the Company s operations with Houghton as if the Combination had occurred for the three months ended March 31, 2017 and for the twelve months ended December 31, 2016, respectively and include adjustments that are directly attributable to the Combination which are expected to have a continuing impact on the combined results, and are factually supportable. The unaudited pro forma condensed combined financial statements are not necessarily indicative of what our financial position or results of operations actually would have been had we completed the Combination at the dates indicated. In addition, the unaudited pro forma condensed combined financial information does not purport to project the future financial position or operating results of the Company after the Closing.

These Unaudited Pro Forma Condensed Financial Statements should be read in conjunction with the:

- Separate historical financial statements of the Company as of and for the year ended December 31, 2016, which is incorporated by reference to its Annual Report on Form 10-K for the year ended December 31, 2016;

- Separate historical financial statements of Houghton as of and for the year ended December 31, 2016 included elsewhere in this proxy statement beginning on page F-1;

- Separate historical financial statements of the Company as of and for the three months ended March 31, 2017, which is incorporated by reference to its Quarterly Report on Form 10-Q for the three months ended March 31, 2017; and

- Separate historical financial statements of Houghton as of and for the three months ended March 31, 2017 included elsewhere in this proxy statement beginning on page F-51.

Table of Contents

Quaker Chemical Corporation

Unaudited Pro-Forma Condensed Combined Balance Sheet

As of March 31, 2017

(In Thousands)

	Quaker Chemical Corporation	Houghton	Pro Forma Adjustments	Pro Forma Footnotes	Pro Forma Condensed Combined
Assets					
Current Assets					
Cash and cash equivalents	$ 90,593	$ 50,988	$		$ 141,581
Accounts receivable, net	201,929	144,212	7,470	A	353,611
Inventories, net	87,117	81,723	10,498	B	179,338
Prepaid expenses and other assets	15,237	21,110	(7,870)	A	28,477
Total Current Assets	394,876	298,033	10,098		703,007
Property, plant, and equipment, net	85,233	75,543	47,239	C	208,015
Goodwill	81,683	259,164	283,107	D	623,954
Other intangible assets, net	71,850	396,672	570,141	E	1,038,663
Investment in associated companies	24,063	48,510			72,573
Non-current deferred tax asset	22,460	13,483			35,943
Other assets	28,841	250			29,091
Total Assets	$ 709,006	$ 1,091,655	$ 910,585		$ 2,711,246
Liabilities and Equity					
Current liabilities					
Current portion of long term debt	$	$ 22,593	$ 14,907	F	$ 37,500
Short term borrowing	726	6,965	(7,691)	F	
Accounts and other payable	90,215	89,242			179,457
Accrued compensation	13,754	14,655			28,409
Accrued restructuring	530				530
Other current liabilities	33,963	30,008	40,922	G	104,893
Total Current Liabilities	139,188	163,463	48,138		350,789
Long-Term Debt	65,649	705,487	159,281	F	930,417
Non-current deferred tax liabilities	12,101	48,895	219,758	I	280,754
Other non-current liabilities	70,093	63,961			134,054
Total Liabilities	287,031	981,806	427,177		1,696,014

Mezzanine Equity					
Redeemable Stock Purchase Shares		6,637	(6,637)	H	
Equity					
Common Stock	13,291	31	4,282	H	17,604
Capital in excess of par value	112,838	305,414	302,715	H	720,967
Retained Earnings (accumulated deficit)	366,819	(76,830)	57,645	H	347,634
Treasury Stock		(796)	796	H	
Accumulated other comprehensive loss	(81,961)	(124,607)	124,607	H	(81,961)
Total Shareholder Equity	410,987	103,212	490,045		1,004,244
Non-controlling interest	10,988				10,988
Total Equity	421,975	103,212	490,045		1,015,232
Total Liabilities and Equity	$ 709,006	$ 1,091,655	$ 878,908		$ 2,679,569

The accompanying notes are an integral part of the unaudited pro-forma condensed combined financial statements.

Table of Contents

Quaker Chemical Corporation

Unaudited Pro-Forma Condensed Combined Statement of Operations

Twelve months ended December 31, 2016

(In Thousands, except per share data)

	Quaker Chemical Corporation	Houghton	Pro Forma Adjustments	Pro Forma Footnotes	Pro Forma Condensed Combined
Net Sales	$ 746,665	$ 766,806	$		$ 1,513,471
Cost of goods sold	467,072	499,934	1,256	C/K	968,262
Gross Profit	$ 279,593	$ 266,872	$ (1,256)		$ 545,209
Selling, general, and administrative expenses	196,981	218,246	(2,483)	C/K/G/E	412,744
Restructuring	(439)	1,797			1,358
Goodwill and intangibles impairment loss		40,922			40,922
Other operating expense		1,780			1,780
Operating income	$ 83,051	$ 4,127	$ 1,227		$ 88,405
Other income (expense), net	1,810	(4,869)			(3,059)
Interest income	2,037	176			2,213
Interest expense	(2,889)	(50,488)	18,291	F	(35,086)
Income (loss) before taxes and equity	$ 84,009	$ (51,054)	$ 19,518		$ 52,473
Taxes	23,226	(5,188)	5,120	I	23,158
Income (loss) before equity	$ 60,783	$ (45,866)	$ 14,398		$ 29,315
Equity in net income of associated companies	2,256	9,255			11,511
Net Income (loss)	$ 63,039	$ (36,611)	$ 14,398		$ 40,826
Net Income (loss) attributable to non-controlling interest	1,636	(48)			1,588
Net Income (loss) attributable to Quaker-Houghton	$ 61,403	$ (36,563)	$ 14,398		$ 39,238
Weighted average common shares:					
Basic	13,136		4,263		17,399
Diluted	13,160		4,263		17,423

Earnings per share:				
Basic	$	4.64	$	2.26
Diluted	$	4.63	$	2.25

The accompanying notes are an integral part of the unaudited pro-forma condensed combined financial statements.

Table of Contents

Quaker Chemical Corporation

Unaudited Pro-Forma Condensed Combined Statement of Operations

Three months ended March 31, 2017

(In Thousands, except per share data)

	Quaker Chemical Corporation	Houghton	Pro Forma Adjustments	Pro Forma Footnotes	Pro Forma Condensed Combined
Net Sales	$ 194,909	$ 196,622	$		$ 391,531
Cost of goods sold	124,022	129,190	78	C/K	253,290
Gross Profit	$ 70,887	$ 67,432	$ (78)		$ 138,241
Selling, general, and administrative expenses	48,054	58,627	473	C/K/G/E/J	107,154
Combination-related costs	9,075		(9,075)	G	
Restructuring		103			103
Other operating expense		199			199
Operating income	$ 13,758	$ 8,503	$ 8,524		$ 30,785
Other (expense) income, net	(105)	(397)	168	J	(334)
Interest income	523	22			545
Interest expense	(656)	(12,463)	4,347	F	(8,772)
Income (loss) before taxes and equity	$ 13,520	$ (4,335)	$ 13,039		$ 22,224
Taxes	6,865	36	1,063	I	7,964
Income (loss) before equity	$ 6,655	$ (4,371)	$ 11,976		$ 14,260
Equity in net income of associated companies	959	2,236			3,195
Net Income (loss)	$ 7,614	$ (2,135)	$ 11,976		$ 17,455
Net income (loss) attributable to non-controlling interest	622				622
Net Income (loss) attributable to Quaker-Houghton	$ 6,992	$ (2,135)	$ 11,976		$ 16,833
Weighted average common shares:					
Basic	13,176		4,276		17,452
Diluted	13,221		4,276		17,497
Earnings per share:					
Basic	$ 0.53				$ 0.96
Diluted	$ 0.52				$ 0.96

The accompanying notes are an integral part of the unaudited pro-forma condensed combined financial statements.

Table of Contents

NOTES TO THE UNAUDITED PRO FORMA CONDENSED

COMBINED FINANCIAL STATEMENTS

Note 1: Description of transaction and basis of presentation

On April 4, 2017, the Company entered into the Share Purchase Agreement with Houghton, Gulf, certain members of the management of Houghton and Gulf as the Sellers Representative.

The Company anticipates completing the Combination during the fourth quarter of 2017 or the first quarter of 2018. At the Closing, the shares of Houghton will be sold for an aggregate purchase price (subject to adjustment as provided in the Share Purchase Agreement) of: (1) $172,500,000 in cash; and (2) Consideration Shares of Common Stock, comprising 24.5% of the Common Stock outstanding immediately after the Closing, which based on an estimated $142 closing stock price of shares of our Common Stock on the New York Stock Exchange, would have a value of approximately $612.5 million. There can be no assurance as to what the value of the Consideration Shares will be at the Closing. If the proposed Charter Amendment is not approved by the Company s shareholders at the Meeting, the Company will instead issue, as the Consideration Shares, shares of a new series of voting Preferred Stock of the Company having in the aggregate 24.5% of the voting rights applicable to the Company s outstanding voting securities and economic, and other rights equivalent to the Common Stock. The terms of the Share Purchase Agreement and other aspects of the Combination are more fully described elsewhere in this proxy statement.

Note 2: Purchase price

The Combination will be accounted for using the acquisition method of accounting in accordance with Accounting Standards Codification (ASC) 805, which requires, among other things, that the assets acquired and liabilities assumed be recognized at their acquisition date fair values, with any excess of the consideration transferred over the estimated fair values of the identifiable net assets acquired recorded as goodwill. In addition, ASC 805 establishes that the Common Stock issued to effect the Combination be measured at the date the Combination is completed at the then-current market price for such shares.

Given the above considerations for the Combination, the following is a preliminary estimate of the consideration to be paid by Quaker (in millions):

Cash transferred	$ 172.5
Estimated value of Quaker shares to be issued to Houghton	612.5
Total value of consideration transferred	$ 785.0

The estimated value of the consideration does not purport to represent the actual value of the total consideration that will be received by Houghton s shareholders when the Combination is completed. In accordance with GAAP, the fair value of the equity securities issued as part of the consideration will be measured at the Closing at the then-current market price. This requirement will likely result in a per share value component different from the $142 per share assumed in this calculation, and that difference may be material. For example, an increase or decrease of 10% in the price of Company s Common Stock prior to the Closing of the Combination from the price of the Company s Common Stock assumed in these unaudited pro forma condensed combined financial statements would change the value of the consideration by approximately $61.2 million, which we expect would be reflected as an equivalent increase or

decrease to goodwill.

Table of Contents

The following is a summary of the preliminary estimated fair values of the net assets acquired (in millions):

Total estimated consideration transferred	$ 785.0
Cash and cash equivalents	50.9
Accounts receivable	151.7
Inventories	92.2
Prepaid expenses and other assets	13.7
Deferred tax assets	13.6
Property, plant and equipment	122.8
Investments in associated companies	48.5
Other assets	0.3
Other intangible assets	966.8
Total Assets	$ 1,460.5
Accounts payable, accrued expenses and other current liabilities	$ 133.9
Deferred tax liabilities	268.7
Long term debt	751.2
Other non-current liabilities	64.0
Net Assets	$ 242.7
Goodwill	$ 542.3

The Company has made preliminary allocation estimates based on limited information and will not have sufficient information to make final allocations until after the completion of the Combination. The final determination of the purchase price allocation is anticipated to be completed as soon as practicable after the Closing. The Company anticipates that the valuations of the acquired assets and liabilities will include, but not be limited to, inventory, property, plant and equipment, customer relationships, formulation, tradenames, trademarks and brand names, other intellectual property, and potentially other intangible assets. The valuations will consist of physical appraisals, discounted cash flow analyses, or other appropriate valuation techniques to determine the fair value of the assets acquired and liabilities assumed.

The final Combination consideration, and amounts allocated to assets acquired and liabilities assumed in the Combination, could differ materially from the preliminary amounts presented in these unaudited pro forma condensed combined financial statements. A decrease in the fair value of assets acquired or an increase in the fair value of liabilities assumed in the Combination from those preliminary valuations presented in these unaudited pro forma condensed combined financial statements would likely result in a dollar-for-dollar corresponding increase in the amount of goodwill that will result from the Combination. In addition, if the value of the acquired assets is higher than the preliminary indication, it may result in higher amortization and depreciation expense than is presented in these unaudited pro forma condensed combined financial statements.

Note 3: Pro forma adjustments

Pro forma adjustments are necessary to reflect the financial statements of the Company and Houghton on a combined basis. The pro forma adjustments included in the unaudited pro forma condensed combined balance sheet and statements of operation are as follows:

(a) Includes a $7.5 million reclassification from prepaid expenses and other assets to accounts receivable, net to adjust Houghton s accounting policy as it relates to the classification of certain foreign financial instruments to Quaker s accounting policy and also includes a decrease to other current assets of $0.4 million to reflect the write-off of Quaker s previously capitalized financing fees as a result of entering into Senior Secured Credit Facilities to finance the Combination.

(b) Reflects the preliminary estimated fair value adjustment to inventory to be acquired in the Combination. As raw materials inventory was assumed to be at market value, the adjustment is primarily related to finished goods inventory. The preliminary fair value of finished goods inventory to be acquired in the Combination was determined based on an analysis of estimated future selling prices, costs of disposal, and gross profit on disposal costs. The audited historical condensed statements of operations and unaudited pro forma condensed combined statements of operations do not reflect the impacts on cost of sales of an increase of $10.5 million due to this estimated purchase accounting adjustment; this amount is directly related to the Combination and is not expected to have a continuing impact on the Company s operations after the acquired inventory is sold. The Company expects that the fair value adjustment to its acquired inventory will be fully reflected in its costs of goods sold within three months after the Closing.

(c) Represents the adjustment to property, plant and equipment to reflect the preliminary fair market value and the depreciation expense related to the change in fair value of property, plant and equipment recorded in relation to the Combination. The amounts assigned to property, plant and equipment, the estimated useful lives, and the estimated depreciation expense related to the property, plant and equipment acquired are as follows (in millions):

	Preliminary fair value	Estimated weighted average life (years)	Depreciation expense for the year ended December 31, 2016	Depreciation expense for the three months ended March 31, 2017
Land	$ 11.7		$	$
Buildings and improvements	37.7	25	1.5	0.4
Machinery and equipment	60.9	10	6.1	1.5
Furniture and fixtures	2.9	8	0.4	0.1
Information technology	7.0	4	1.8	0.5
Construction in progress	2.6	10	0.3	0.1
Total	$ 122.8		$ 10.1	$ 2.6
Less: Houghton historical net property, plant and equipment and depreciation expense	75.6		$ 11.2	$ 2.9
Pro forma adjustments	$ 47.2		$ (1.1)	$ (0.3)

Depreciation expense has been estimated based upon the nature of activities associated with the property, plant and equipment to be acquired. Therefore, for purposes of these unaudited pro forma condensed combined financial statements, the Company has $0.7 million and $0.4 million of estimated decreases in depreciation expense in cost of goods sold and selling, general and administrative expenses, respectively, for the year ended December 31, 2016; and $0.2 million and $0.1 million, respectively, for the three months ended March 31, 2017. With other assumptions held constant, a 10% change in the fair value for property, plant and equipment would increase or decrease annual pro forma depreciation expense by approximately $1.0 million.

(d) Reflects the preliminary estimated adjustment to goodwill as a result of the Combination. Goodwill represents the excess of the consideration transferred over the preliminary fair value of the assets acquired and liabilities assumed as described in Note 2. The goodwill will not be amortized, but instead will be tested for impairment at least annually

and whenever events or circumstances have occurred that may indicate a possible impairment exists. In the event management determines that the value of goodwill has become impaired, the Company will incur an accounting charge for the amount of the impairment during the period in which the determination is made. The goodwill is attributable to the expected synergies of the combined business operations, new growth opportunities, and the acquired assembled and trained workforce of Houghton. The goodwill is not expected to be deductible for tax purposes.

The preliminary pro forma adjustment to goodwill is calculated as follows (in millions):

Preliminary purchase price	$ 785.0
Less: Fair value of net assets to be acquired	242.7
Total estimated goodwill	542.3
Less: Houghton historical goodwill	259.2
Pro forma adjustment	$ 283.1

(e) Reflects the pro forma impact of the recognized identifiable intangible assets that are being acquired and the related amortization expense related to the change in fair value of identifiable intangible assets to be acquired. The preliminary amounts assigned to the identifiable intangible assets, the estimated useful lives, and the estimated amortization expense related to these identifiable intangible assets are as follows (in millions):

	Preliminary fair value	Estimated weighted average life (years)	Amortization expense for the year ended December 31, 2016	Amortization expense for the three months ended March 31, 2017
Customer relationships	$ 683.5	20	$ 34.2	$ 8.5
Formulations and technical know-how	193.4	15	12.8	3.2
Trade names and trademarks	67.7			
Brand names	19.3			
Non-compete agreements	2.9	2	1.5	0.4
Total	$ 966.8		$ 48.5	$ 12.1
Less: Houghton historical intangible assets and amortization expense	396.7		43.9	10.4
Pro forma adjustments	$ 570.1		$ 4.6	$ 1.7

The Company has reflected the estimated additional amortization expense of $4.6 million and $1.7 million in Selling, general and administrative expenses for the year ended December 31, 2016 and three months ended March 31, 2017, respectively. With other assumptions held constant, a 10% change in the fair value for amortizable intangible assets would increase or decrease annual pro forma amortization by approximately $4.9 million.

The estimated fair value of amortizable intangible assets was based on reasonable estimates, however, the fair values assigned should be considered preliminary and these amounts will ultimately be updated after the Closing upon a full valuation being performed on Houghton as of the Closing. The estimated fair value of the amortizable intangible assets is expected to be amortized on a straight-line basis over their estimated useful lives. The amortizable useful lives reflect the periods over which the assets are expected to provide material economic benefit. Specific to the life of the customer relationships and formulations and technical know-how, the lives were determined after consideration of

the Company s historical customer and product attrition patterns. The Company s preliminary evaluations have indicated that there is relatively low turnover in Houghton s customers and products and management does not expect that these general patterns will change in the future. The Company estimates that the lives of Houghton s trade names, trademarks and brand names reflect substantial periods over which they are expected to maintain influence in the market and, therefore, these assets were assigned indefinite lives for amortization purposes. They will not be amortized, but instead will be tested at least annually for impairment. The non-compete agreements will be amortized over the period agreed to in the Share Purchase Agreement.

(f) In connection with entering into the Share Purchase Agreement and the transactions contemplated thereby, the Company also entered into a Senior Secured Credit Facilities Commitment Letter with the Commitment Parties. The Commitment Parties have committed to provide senior secured credit facilities of up to $1.15 billion consisting of (i) a $575 million senior secured term loan to the Company on the Closing Date, (ii) a

senior secured term loan in Euros in an amount equal to $175 million to certain European subsidiaries of the Company on the Closing Date, and (iii) a $400 million revolving credit facility. The maturity date of each of these term loans and senior credit facilities will be five years from the date of the Closing, which is when the credit agreement is expected to be executed. The proceeds of the term loans and a portion of the revolving credit loans are expected to be used at the Closing for the purpose of funding (i) the payment of $172.5 million of the consideration to be paid in cash in respect of the Combination, (ii) the repayment of an estimated amount of approximately $66 million of existing indebtedness of the Company and its subsidiaries, (iii) the repayment of an estimated amount of approximately $752 million of indebtedness of Houghton and its subsidiaries, and (iv) the payment of an estimated amount of approximately $50 million of fees and expenses incurred in connection with the foregoing. It is also expected that the remainder of the revolving facility would remain available to provide liquidity for the Company after the Closing for general corporate purposes.

The preliminary adjustment to debt in connection with the Combination is as follows (in millions):

Proceeds from borrowings, net of deferred financing costs	$ 967.9
Less: Houghton s historical net debt, including deferred financing costs, debt discounts and $22.6 million of current portion and $7.0 million of short term debt	(735.1)
Less: Quaker s historical long-term debt	(66.3)
Pro forma adjustment to total debt	$ 166.5
Less: Incremental current portion of long-term debt	(14.9)
Plus: Pay back of short term debt	7.7
Pro forma adjustment to long-term debt	$ 159.3

Houghton s historical net debt of $735.1 million is net of approximately $12.2 million of deferred financing costs and $3.9 million of a discount over its fair value. Excluding these amounts, the carrying value of Houghton s total borrowings was approximately $751.2 million.

The Senior Credit Facilities have a tiered quarterly amortization. The Company estimates its current portion of long term debt, of the combined entity, will be $37.5 million at Closing. In addition, the Company does not expect to have any material short term borrowings at Closing. The principle amount of the debt at closing is expected to carry a weighted average interest rate of approximately 3%, which was used to estimate the Company s pro-forma interest expense going forward.

The Company is expected to incur $22.1 million in debt issuance costs in conjunction with the new borrowings; these debt issuance costs will be capitalized as deferred financing costs, netted against long term debt on the pro forma balance sheet, and amortized over the life of the underlying debt instrument. In addition, deferred financing costs of $12.3 million and $0.4 million related to Houghton s and Quaker s existing debt, respectively, will be written off in connection with the new acquisition financing.

Table of Contents

Given the assumed debt and estimated costs associated with such, the preliminary pro-forma adjustments reflect the estimated interest expense to be incurred by the Company as a result of the new borrowings as follows (in millions):

	Interest expense for the year ended December 31, 2016	Interest expense for the three months ended March 31, 2017
Reversal of amortization of Houghton deferred financing fees written off in pro forma adjustment	$ (4.4)	$ (1.1)
Reversal of amortization of Quaker deferred financing fees written off in pro forma adjustment	(0.3)	(0.1)
Amortization of estimated capitalized deferred financing costs related to new borrowings	4.4	1.1
Reversal of fair value adjustment related to Houghton s existing debt	(1.4)	(0.3)
Reversal of Houghton interest expense	(44.7)	(11.1)
Reversal of Quaker interest expense	(2.6)	(0.5)
Estimated interest expense on new borrowings from the Combination (1)	30.7	7.7
Pro forma adjustment	$ (18.3)	$ (4.3)

(1) A change of $\frac{1}{8}$% (12.5 basis points) in the interest rate would result in a $1.2 million change in annual interest expense.

(g) Transaction-related costs that were recorded as either Selling, general and administrative expenses or Combination-related costs during the year ended December 31, 2016 for Quaker and Houghton were $1.5 million and $3.4 million, respectively, and $9.1 million and $0.9 million for the three months ended March 31, 2017, respectively. These costs were eliminated from the unaudited pro forma statement of operations for both periods presented. In addition, the Company had approximately $9.4 million of accruals related to such acquisition costs, yet to be paid, which are reflected in other current liabilities on the March 31, 2017 unaudited pro forma condensed combined balance sheet. Also, the Company has made a pro-forma adjustment to its other current liabilities of $40.9 million, which reflects approximately $22.1 million of estimated debt issuance costs and $18.8 million of estimated additional transaction-related costs that the Company expects to incur to facilitate the Closing.

(h) Represents the elimination of Houghton s historical equity-related balances. In addition, reflects the issuance of approximately 4.3 million shares of the Company s common stock at Closing (based upon the number of shares of common stock at March 31, 2017 and an estimated share price of the Company s Common Stock of $142). Also, Houghton had mezzanine equity related to certain stock purchases considered redeemable, certain treasury shares and existing accumulated other comprehensive income, which will all be eliminated at closing and is adjusted to reflect such in the March 31, 2017 pro forma combined condensed balance sheet.

The unaudited pro forma adjustment to Common Stock is calculated as follows (in millions):

Common stock from Combination (4.3 million shares issued at par value of $1.00)	$ 4.3
Less: Houghton s historical common stock	(0.0)
Pro forma adjustment	$ 4.3

The unaudited pro forma adjustment to Additional Paid-in-Capital is calculated as follows (in millions):

Additional paid-in-capital from Combination (4.3 million shares issued at $142, less common stock)	$ 608.1
Less: Houghton s historical additional paid-in-capital	(305.4)
Pro forma adjustment	$ 302.7

The unaudited pro forma adjustment to Retained Earnings is calculated as follows (in millions):

Non-capitalized Quaker one-time estimated financing related costs, net of tax benefit	$ (19.1)
Plus: Houghton historical accumulated deficit	76.8
Pro Forma adjustment	$ 57.7

Retained earnings was reduced for Quaker s existing capitalized debt issuance costs and estimated transaction costs to be incurred prior to Closing of $19.1 million related to one-time costs. These estimated transaction costs have been excluded from the unaudited pro forma condensed combined statements of operations as they reflect charges directly attributable to the Combination that will not have an ongoing impact. Quaker expects to incur additional fees related to the Combination after Closing, which will also not have an ongoing impact and will be treated as non-GAAP due to their non-core nature.

(i) Represents the estimated deferred income tax liability to be recorded by the Company as part of the accounting for the Combination, based on the U.S. federal statutory tax rate of 35%. Such rate was multiplied by the preliminary fair value adjustments made to inventory, property, plant and equipment, and other intangible assets acquired, to derive the total incremental deferred tax liabilities. To date, Quaker has not identified any existing deferred tax assets or liabilities currently existing on Houghton s balance sheet that would need to be eliminated or adjusted to fair value, but may after continued diligence and integration efforts.

For purposes of the unaudited pro forma condensed combined statement of operations and the deferred income tax liability noted above, the U.S. federal statutory tax rate of 35% has been used in the adjustments for all periods presented. This rate does not reflect either Quaker or Houghton s current or future effective tax rate, which includes other tax items, such as state and foreign taxes, as well as other tax charges or benefits, and does not take into account any historical or possible future tax events that may impact the combined company. Fair value and other adjustments effective at the closing of the Combination could also be different based on factors including but not limited to tax rates, valuation differences, further information on taxes by jurisdiction, or other factors. In addition, the Combination-related transaction costs are considered to be non deductible for tax purposes, and the Pro-Forma Statements of operations reflect such for the three months ended March 31, 2017 and the twelve months ended December 31, 2016.

(j) The Financial Accounting Standards Board issued an accounting standard update in March 2017, to improve the presentation of net periodic pension and postretirement benefit cost. This accounting standard update required that an employer disaggregate the service cost component from the other components of net benefit cost, provides explicit guidance on how to present the service cost component and the other components of net benefit cost in the statement of operations, and allows only the service cost component of net benefit cost to be eligible for capitalization. During the first quarter of 2017, Quaker elected to early adopt the guidance within this accounting standard update. To adjust for such adoption, Quaker included a pro-forma adjustment to Houghton s historical financial statements to reflect early adoption of this accounting standard, which resulted in a reclassification to the pro forma condensed combined consolidated statement of operations for the three months ended March 31, 2017, as previously reported selling, general and administrative expense were increased by $0.2 million, with a corresponding increase of $0.2 million to other income.

(k) The twelve months ended December 31, 2016 and three months ended March 31, 2017 pro-forma condensed combined statement of operations include expenses of $1.8 million and $0.3 million that were reclassified from

selling, general and administrative costs to cost of goods sold to adjust Houghton s accounting policy related to environmental, health and safety costs to match Quaker s existing policies. To date, Quaker has not identified any other material policies, account mappings, or accounting adjustments within Houghton that required other pro-forma adjustments, but may after continued diligence and integration efforts.

Table of Contents

HOUGHTON MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS FOR THE YEARS ENDED DECEMBER 31, 2016, 2015 AND 2014

The following discussion and analysis of Houghton s financial condition and results of operations is intended to help prospective investors understand Houghton s business, results of operations, liquidity and capital resources and should be read in conjunction with Houghton s financial statements and related notes. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Houghton s actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors.

Overview

Houghton is a leading global provider of specialty chemicals and technical services for metalworking and other industrial applications. Its primary products include metalworking fluids and specialty hydraulic fluids. Metalworking fluids are chemical formulations used for a variety of metal processing applications. Houghton s specialty hydraulic fluids are designed to improve performance in critical hydraulic systems of industrial machinery, offshore drilling rigs and metal rolling applications. Houghton manufactures and markets more than 6,000 specialty chemical formulations developed over Houghton s 150-year history. Houghton s products are often customized for a customer s specific application and can provide cost savings and other benefits to a customer s manufacturing process, such as increasing machine throughput, extending tool life, reducing corrosion, bacterial growth and waste, and improving surface finishing.

To complement Houghton s extensive product portfolio, it also offers a broad range of technical services tailored. The scope of technical services Houghton provides depends on each customer s specific requirements and can range from basic product customization and on-site technical support to comprehensive chemical management service offering, Fluidcare™. Houghton s approximately 400 sales representatives work in conjunction with its approximately 200 technical specialists to address its customers technically challenging problems.

Key Factors Affecting Houghton s Business

End-Markets

Houghton s revenues are predominantly derived from the business-to-business sale of products and technical services to the industrial sector. Houghton is particularly dependent on the automotive, fabricated metal goods and machinery, steel, aluminum, offshore drilling, and aerospace end-markets. Houghton therefore believes that demand for its products is highly correlated to growth in Houghton s customers end-markets, which are generally expected to grow in line with industrial production.

Global Exposure

Houghton has a presence in over 30 countries and sells products to more than 11,000 customers across a diverse range of end-market users. It operates 15 manufacturing facilities located in 10 countries across five continents. Houghton operates in the key primary markets of: (i) Europe, the Middle East and Africa (together, EMEA), (ii) North and South America (the Americas), (iii) North Asia and (iv) South Asia, including Australia and India. Its top five countries by net sales for 2016 were the United States, China, Germany, the United Kingdom and France.

Houghton generates a portion of its net sales and incurs a portion of its expenses in currencies other than the U.S. dollar, including, but not limited to, the euro, Chinese renminbi, and the British pound. Currently, Houghton does not engage in any hedging transactions to reduce its currency exposure and fluctuations if these currencies have a significant impact on its results of operations.

Raw Materials and Commodity Prices

Houghton s performance is impacted by market price fluctuations of the raw materials and commodities it relies on, including various oils, water glycols, thickeners and additives (such as surfactants, acids, bases, caustics and defoamers). For 2016, raw materials represented 78% of Houghton s total cost of goods sold. Most of its purchased raw materials are petroleum-based and natural gas is a significant feed-stock for the processing of its raw materials. The cost of petroleum-based and other raw materials fluctuates as a result of changes in crude oil and natural gas prices, which are generally pegged to the U.S. dollar, as well as the fluctuations typical of each raw material s supply and demand characteristics, including worldwide crude oil and natural gas production and inventories, the level of drilling activity, worldwide refinery capacity, global economic activity and global weather conditions.

Pricing

Houghton s products are customarily purchased through purchase orders rather than under fixed price contracts. This approach provides Houghton the ability to maintain margins during volatile raw material environments and changing market conditions.

Historically, when Houghton has experienced increases in the cost of raw materials, it has generally been able to pass these increases onto its customers. However, changes to selling prices generally lag behind changes in the costs of key raw materials. This means that in an environment of rising costs for key raw materials, Houghton will not immediately recover its increased costs for key raw materials. Conversely, in an environment of falling prices for raw materials, the prices Houghton charges may generate higher gross margins for a period of time.

For Houghton s Fluidcare service offering, its services are generally priced to offset expenses incurred in providing these services with modest margins as it generally views these services as a distribution channel for its products. The revenue generated from these services is immaterial to Houghton s results of operations.

Sales Mix

Sales mix also significantly impacts Houghton s results of operations as the average selling prices and gross margins associated with its products varies significantly. For instance, due to the different cost structures and market prices, the selling prices and gross margins in certain of Houghton s product lines are significantly lower than selling prices and gross margins in certain other of its product lines. As a result, although Houghton may experience growth, the profitability of its operations will be dependent upon the gross margins associated with the increased sales volumes.

Acquisitions and Divestitures

On December 20, 2012, Gulf Oil International acquired Houghton from AEA Investors LP for approximately $1.0 billion (the Gulf Transaction). The allocation of the purchase price of the Gulf Transaction resulted in Houghton recording, as of the purchase date, $299.7 million of goodwill and $662.5 million in other intangible assets, including $589.3 million of customer-based intangibles with an estimated useful life of 13 years, marketing-based intangibles of $21.1 million and $1.4 million with indefinite and 20-year useful lives, respectively and technology-based intangible assets of $50.7 million with an estimated useful life of 15 years. The related amortization is included in Selling, general and administrative expense. Houghton also recorded an $11.4 million tax indemnification asset related to uncertain tax matters existing as of the date of the Gulf Transaction. This tax indemnification asset reflected the full indemnification for all uncertain tax matters occurring prior to the Gulf Transaction. The indemnification period terminated in December 2015 and the remaining tax indemnification asset was charged to Other operating expense.

In February 2014, Houghton divested a non-core professional sanitation and water treatment product business in Brazil (the   Brazilian Divestiture) for $1.3 million, resulting in a loss on the sale of $0.3 million.

Table of Contents

In March 2014, Houghton acquired Henkel AG & Co. s North American steel mill metalworking fluids business (the Henkel Acquisition) for $14.6 million, consisting of cash consideration of $10.9 million and an earn out estimate of $3.7 million. The allocation of the purchase price resulted in $1.4 million of goodwill, $10.0 million of other intangibles and $2.2 million related to the transition services agreement. Under the transition services agreement, Henkel continued to manufacture certain products for one year, and the intangible established was recognized to cost of goods sold over the contract term of one year. In 2014, the earn-out estimate was reduced by $0.8 million and in 2015 was further reduced by $0.5 million to Other income/expense. The earn-out of $2.4 million was paid during 2015.

On December 1, 2014, Houghton completed the acquisition of Envirotek Management Services, Inc. (Envirotek) in the United States (Envirotek Acquisition). Under the terms of the Envirotek Acquisition, Houghton acquired certain assets, including trade receivables, equipment and customer lists and also assumed certain liabilities for consideration of $1.7 million, net of cash acquired. The allocation of the purchase price resulted in $0.5 million of goodwill and $1.2 million of customer lists.

In March 2015, Houghton acquired Braemar UK Ltd. in the United Kingdom for $6.7 million. The allocation of the purchase price resulted in $4.0 million of goodwill and $2.1 million of other intangibles.

In July 2016, Houghton completed the acquisition of Wallover Enterprises, Inc. (Wallover Acquisition) for consideration of $39.4 million, net of cash received. The preliminary purchase price allocation resulted in $15.3 million of goodwill and $19.2 million of other intangibles.

Components of Results of Operations

Net sales include revenue derived from sales of Houghton s products and from chemical management services, including the sale of third-party products used in providing such services. Sales are reported net of discounts and other allowances.

Cost of goods sold consists of the costs of raw materials, labor, depreciation, energy and other manufacturing overhead costs related to the production and distribution of Houghton s products and the provision of chemical management services. This account includes the recognition for inventory step-up recorded in connection with purchase accounting for acquisitions. The step-up is recognized ratably over the expected turn of the inventory on hand at the time of the acquisition.

Selling, general and administrative expense (SG&A) is comprised of expenses associated with overhead and employee costs related to research and development, sales and marketing, and other corporate and administrative functions, including management fees paid to affiliated companies. SG&A expense also includes depreciation of fixed assets related to these functions, including Houghton s corporate headquarters in Valley Forge, and the amortization of intangible assets.

Restructuring expense includes termination benefits, facility closure costs and other restructuring costs that are planned and controlled by management, and materially change either the scope of the applicable business or the manner in which the business is conducted. During 2016, Houghton incurred restructuring expenses related to its Wallover Acquisition, the sale of a plant facility in EMEA, and other continuous programs initiated in EMEA in 2015. During 2015, Houghton incurred restructuring expenses in connection with programs initiated in EMEA and Americas.

Goodwill and other intangible asset impairment loss includes impairment charges recorded in consideration of the results of the annual impairment test prepared as of October 1, 2016 and the subsequent Step 2 analysis. The assets are formally reviewed for impairment annually as of October 1 or when events or circumstances indicate that the carrying amount exceeds the fair value, including potential triggering events such as decline in actual or projected operating profits. During 2016, Houghton recognized a goodwill and intangible asset impairment loss that did not occur in 2015 or 2014.

Other operating expense includes costs, expenses and charges not related to the manufacture or sale of Houghton s products or providing services, including costs such as transaction and integration costs.

Other expense, net includes foreign currency exchange gains and losses, gains and losses on the disposal of fixed assets, and other costs, such as litigation settlements, as well as an adjustment to the estimated earn out related to the 2014 acquisition of Henkel and to the AEA indemnification asset, both of which were finalized at year end 2015. Therefore, 2016 expense does not include these adjustments.

Interest expense represents interest incurred on Houghton s outstanding indebtedness (other than indebtedness owed to affiliates) at the applicable interest rates, the amortization of loan fees and debt discounts and the mark-to-market adjustments on Houghton s interest rate cap agreements. The interest rate cap agreements matured at year end 2015. Therefore, 2016 expense does not include these adjustments.

Affiliate interest expense represents amounts incurred on Houghton s outstanding indebtedness with affiliated subsidiaries of Gulf Oil International, which was incurred by its subsidiaries GHGL London Ltd and GHG Lubricants Holdings Ltd and infused as a capital contribution to GH Holdings (GH), Houghton s consolidated intermediate holding company, to fund a portion of the purchase price of the Gulf Transaction. This indebtedness was repaid in full in August 2014 in connection with Houghton s corporate reorganization.

Income tax expense (benefit) expense represents U.S. federal, state and local income tax expenses as well as income tax expenses in the foreign jurisdictions in which Houghton operates. Houghton s effective tax rate fluctuates from period to period due to changes in the mix of income or losses in jurisdictions with a wide range of tax rates, permanent differences between U.S. GAAP and local tax laws, certain one-time items including tax rate changes, goodwill impairments, benefit of foreign taxes, cost of repatriation of foreign earnings, net of U.S. foreign tax credit and adjustments related to the repatriation of unremitted earnings of foreign subsidiaries.

Equity in net income of investee represents Houghton s percentage share of net income of its non-consolidated South Korean joint venture in which it owns a 50% non-controlling equity interest.

Net loss attributable to non-controlling interest represents net income (loss) attributable to the minority owner of Houghton s 60% owned consolidated Japanese joint venture. In March 2016, Houghton purchased the remaining 40%. Therefore, future periods will not include additional minority interest activity for this joint venture.

Table of Contents

Results of Operations

Year ended December 31, 2016 versus the year ended December 31, 2015

(in millions)	Year Ended December 31, 2016	Year Ended, December 31, 2015	Change 2016 vs. 2015 $	Change 2016 vs. 2015 %
Net sales	$ 766.8	$ 781.8	$ (15.0)	(1.9)%
Cost of goods sold	499.9	516.2	16.3	3.2%
Gross profit	266.9	265.6	1.3	0.5%
Selling, general and administrative expense	218.3	211.2	(7.1)	(3.3)%
Restructuring	1.8	5.1	3.3	64.7%
Goodwill and intangibles impairment loss	40.9		(40.9)	(100.0)%
Other operating expense	1.8	5.4	3.6	66.7%
Operating income	4.1	43.9	(39.8)	(90.7)%
Other expense, net	(4.9)	(7.6)	2.7	35.5%
Interest expense	(50.3)	(50.3)		0.0%
Loss before income taxes and equity in net income of Investee	(51.1)	(14.0)	(37.1)	(265.0)%
Income tax (benefit) expense	(5.2)	(6.0)	(0.8)	(13.3)%
Net loss before equity in net income of Investee	(45.9)	(8.0)	(37.9)	(473.7)%
Equity in net income of investee	9.3	7.8	1.5	19.2%
Net loss	(36.6)	(0.2)	(36.4)	(18,200.0)%
Net loss attributable to non-controlling interest	(0.1)	(0.2)	0.1	50.0%
Net loss attributable to Global Houghton Ltd.	$ (36.5)	$ 0.0	$ (36.5)	(100.0)%

Net sales

Net sales for the year ending December 31, 2016 were $766.8 million compared to $781.8 million for the year ending December 31, 2015. Net sales for 2016 decreased $15.0 million, or 1.9%, from 2015.

The decrease in sales was primarily due to a $28.0 million unfavorable impact on foreign exchange rates, coupled with a $6.6 million decrease due to sales mix, including service revenue, and the impact within the offshore drilling and steel industries. These decreases were partially offset by additional sales from acquisitions of $15.2 million and a $4.4 million increase in volumes. Foreign currency exchange changes reflected the continued weakening of many currencies against the U.S. dollar, including the Chinese renminbi, British pound, Mexican peso, Argentine peso, and the Brazilian real.

Cost of goods sold

Cost of goods sold was $499.9 million for the year ending December 31, 2016, compared to $516.2 million for the year ending December 31, 2015. Cost of goods sold for 2016 decreased $16.3 million or 3.2% from 2015.

Cost of goods sold decreased, primarily due to favorable material costs variances of $9.9 million and foreign exchange, partially offset by a $2.8 million impact from the increase in volumes, $0.6 million in depreciation and added costs from acquisitions.

Gross profit

Gross profit was $266.9 million for the year ending December 31, 2016, compared to $265.6 million for the year ending December 31, 2015. Gross profit for 2016 increased $1.3 million, or 0.5%, from 2015, with gross

margin increasing to 34.8% from 34.0% for the years ending December 31, 2016 and 2015, respectively, primarily due to the reduction in material costs from 2015 to 2016.

Selling, general and administrative expense

SG&A expense was $218.3 million for the year ending December 31, 2016, compared to $211.2 million for the year ending December 31, 2015. This 2016 increase of $7.1 million, or 3.3%, was primarily due to $4.1 million in compensation-related expenses, including a $3.6 million increase in bonus and incentive programs as results exceeded targets, $3.3 million increase in salaries and benefits related to headcount investments to support strategic growth initiatives, $2.6 million increase due to normal annual wage inflation and $0.2 million increase in stock compensation expense offset by $5.7 million of savings from cost reduction initiatives that began in 2015. The Wallover Acquisition in July 2016, resulted in $3.6 million of SG&A costs, including $1.1 million in depreciation and amortization. Other increases included $2.9 million of transaction costs, comprised of consulting costs related to the Wallover Acquisition and other potential transactions compared to minimal activity in 2015, a $0.7 million rise in consultant fees, $0.5 million in bad debt expense related to customers within the steel industry, and $0.4 million in property taxes. All were offset by a $5.0 million loss in foreign exchange impacts driven by the same general trends that impacted sales.

Restructuring expense

Restructuring expense was $1.8 million and $5.1 million for the years ended December 31, 2016 and 2015, respectively. The $5.1 million of restructuring programs initiated in the United States and Europe in 2015 continued into the first quarter of 2016 with restructuring activities of $0.7 million from continued implementation of the 2015 plan. The integration of the Wallover Acquisition resulted in $1.1 million of restructuring expense in 2016 related to facility closures and severance accruals.

Goodwill and intangible asset impairment loss

As of October 1, 2016, Houghton performed a valuation of goodwill and indefinite-lived intangible assets to test for impairment. For 2016, fair value exceeded carrying value by 1.2% (Americas), 7.4% (EMEA), and 67.4% (North Asia). However, the South Asia reporting unit recognized a goodwill impairment loss of $15.1 million and then assessed a $25.8 million impairment related to intangible assets for South Asia customer relationships.

Other operating expense

Other operating expense was $1.8 million and $5.4 million for the years ended December 31, 2016 and 2015, respectively. The decrease of $3.6 million was primarily due to the expensing of costs associated with a potential initial public offering in 2015, which did not recur in 2016.

Other expense, net

Other expense, net was $4.9 million and $7.6 million for the years ending December 31, 2016 and 2015, respectively. This favorable variance of $2.7 million resulted from $2.7 million of lower foreign currency transaction losses, $2.6 million of tax indemnification expense in 2015, which did not recur in 2016 and a $0.5 million gain on sale of land in Bedford, Illinois. This was partially offset by a $2.1 million Brazilian VAT charge in 2016, $0.6 million recovery for the Romania indemnification in 2015, and $0.5 million favorable adjustment for the Henkel acquisition earn out in 2015, both of which did not recur in 2016.

Interest expense

Interest expense was $50.3 million for each of the years ending December 31, 2016 and 2015, respectively.

Table of Contents

Income tax expense (benefit)

Houghton s effective income tax rates for the year ended December 31, 2016 was 10.2% compared to 42.5% for the year ended December 31, 2015, respectively. The effective tax rate fluctuates from period to period due to changes in the mix of income or losses in jurisdictions with a wide range of tax rates, permanent differences between GAAP and local tax laws, and certain one-time items including goodwill impairments, tax rate changes, benefit of non-U.S. taxes, net of a U.S. foreign tax credit, and adjustments related to the repatriation of unremitted earnings of non-U.S. subsidiaries. The amortization and increased interest expense related to the Gulf Transaction reduces Houghton s profit before tax to a level where the effective tax rate is highly sensitive.

The 2016 effective tax rate was negatively impacted by the non-deductible goodwill impairment charge, the mix of income among tax jurisdictions, and the US tax cost of foreign earnings. These were partially offset by a favorable result in a tax audit and the generation of U.S. research and development tax credits.

The 2015 effective tax rate was positively impacted by tax benefit attributable to abandoned transaction costs previously treated as non-deductible. The 2015 effective tax rate was further positively impacted by decrease in unrecognized tax benefits due to tolling of statute of limitations and closure of income tax audits and impact of tax rate decreases partially offset by negative impact of reduction to indemnification asset.

Equity in net income of investee

Income from investee was $9.3 million and $7.8 million for the years ended December 31, 2016 and 2015, respectively.

Other comprehensive income

(in millions)	2016	2015
Net loss	$ (36.6)	$ (0.2)
Other comprehensive loss:		
Foreign currency translation adjustment	(23.4)	(49.3)
Pension adjustments, net of tax	(4.1)	(0.7)
Total other comprehensive loss	(27.5)	(50.0)
Comprehensive loss	$ (64.1)	$ (50.2)
Comprehensive loss attributable to non-controlling interest	2.2	(0.2)
Comprehensive loss attributable to Global Houghton Ltd.	$ (66.3)	$ (50.0)

Foreign currency translation adjustment relates to the assets and liabilities held in the functional currency of Houghton s subsidiaries and is impacted by fluctuations in those currencies against the U.S. dollar during the period compared to the corresponding exchange rates at the end of the immediately preceding period. In 2016, the $23.4 million loss from foreign currency translation resulted primarily from currency movements in all the major currencies which weakened against the U.S. dollar, most notably the euro, British pound, and Chinese renminbi, which weakened 17.9%, 4.7%, 6.9%, respectively, while the Brazilian real strengthened 19.6%

In 2015, the $49.3 million loss from foreign currency translation resulted from the strengthening of the U.S. dollar against nearly all major currencies, including the Brazilian real, euro and British pound with each weakening 31.5%, 9.7% and 4%, respectively, against the U.S. dollar.

The 2016 pension adjustment loss of $4.1 million resulted from a decrease in the discount rate on plans held in the United Kingdom. The 2015 pension adjustment loss of $0.7 million resulted from a decrease in the discount rate on plans held in the U.S. and United Kingdom.

Table of Contents

Year ended December 31, 2015 versus the year ended December 31, 2014

(in millions)	Year Ended December 31, 2015	Year Ended, December 31, 2014	Change 2015 vs. 2014 $	%
Net sales	$ 781.8	$ 840.8	$ (59.0)	(7.0)%
Cost of goods sold	516.2	561.1	44.9	8.0%
Gross profit	265.6	279.7	(14.1)	(5.0)%
Selling, general and administrative expense	211.2	212.0	0.8	0.4%
Restructuring	5.1	1.3	(3.8)	(292.3)%
Other operating expense	5.4	5.6	0.2	3.6%
Operating income	43.9	60.8	(16.9)	(27.8)%
Other expense, net	(7.6)	(11.1)	3.5	31.5%
Interest expense	(50.3)	(50.2)	(0.1)	(0.2)%
Affiliate interest expense		(8.3)	8.3	100.0%
Loss before income taxes and equity in net income of Investee	(14.0)	(8.8)	(5.2)	(59.1)%
Income tax (benefit) expense	(6.0)	2.4	8.4	350.0%
Net loss before equity in net income of Investee	(8.0)	(11.2)	3.2	28.6%
Equity in net income of investee	7.8	5.7	2.1	36.8%
Net loss	(0.2)	(5.5)	5.3	96.4%
Net loss attributable to non-controlling interest	(0.2)	(0.1)	(0.1)	(100.0)%
Net loss attributable to Global Houghton Ltd.	$ (0.0)	$ (5.4)	$ 5.4	100.0%

Net sales

Net sales for the year ending December 31, 2015 were $781.8 million compared to $840.8 million for the year ending December 31, 2014. Net sales for 2015 decreased $59.0 million, or 7.0%, from 2014. This decrease was primarily due to $78.9 million of unfavorable impacts of foreign currency exchange, partially offset by $12.0 million increase due to volume and $7.9 million increase in favorable sales mix and service revenue. Foreign currency exchange changes reflected the continued weakening of many currencies against the U.S. dollar, including the euro, Brazilian real, British pound, Canadian dollar and Mexican peso.

Cost of goods sold

Cost of goods sold was $516.2 million for the year ending December 31, 2015, compared to $561.1 million for the year ending December 31, 2014. Cost of goods sold for 2015 decreased $44.9 million or 8.0% from 2014. Cost of

goods sold decreased primarily due to $54.8 million of favorable foreign exchange movements driven by the same general trends that impacted sales. This decrease was partially offset by a $7.9 million increase in volume and by a $2.7 million increase in material costs and production mix variances.

Gross profit

Gross profit was $265.6 million for the year ending December 31, 2015, compared to $279.7 million for the ending December 31, 2014. Gross profit for 2015 decreased $14.1 million, or 5.0%, from 2014, primarily due to unfavorable impacts of foreign currency exchange, with gross margin increasing to 34.0% from 33.3% for the year ending December 31, 2015 and 2014, respectively, due to lower raw material costs.

Selling, general and administrative expense

SG&A expense was $211.2 million for the year ending December 31, 2015, compared to $212.0 million for the year ending December 31, 2014. This 2015 decrease of $0.8 million, or 0.4%, was primarily due to $18.0 million of favorable impacts of foreign currency exchange driven by the same general trends that impacted sales, which offset an increase in compensation expense of $11.3 million due to bonuses of $1.6 million as performance targets were met compared with prior year when lower bonus amounts were paid out and $9.2 million increase in salaries and wages and benefits due to an increase in headcount to meet growth initiatives. Other increases included: a $4.5 million increase in professional service fees and staff augmentation, $1.0 million related to strategic planning, $0.5 million increase in real estate taxes, $0.4 million increase in bad debt expense, $0.8 million increase in depreciation and amortization and $0.8 million attributable to stock based compensation due to new grants made during the period.

Restructuring expense

Restructuring expense was $5.1 million and $1.3 million for the year ended December 31, 2015 and 2014, respectively. The increase in 2015 was primarily associated with initiatives taken in the fourth quarter of 2015 related to new restructuring programs in Americas and EMEA.

Other operating expense

Other operating expense was $5.4 million and $5.6 million for the year ended December 31, 2015 and 2014, respectively. The decrease of $0.2 million was impacted by $0.7 million decrease in strategic headcount reductions. In addition, 2015 includes a $0.8 million fixed asset impairment related to the Genoa, Italy manufacturing facility and 2014 includes $0.4 million of employee related costs.

Other expense, net

Other expense, net was $7.6 million and $11.1 million for the year ending December 31, 2015 and 2014, respectively. This 2015 decrease of $3.5 million included a $1.6 million impact related to amounts due from an indemnification agreement that were recorded as expense during the same period in prior year, $1.4 million lower reduction of tax indemnification asset and $0.5 million reduction to the estimated earn out related to the 2014 Henkel Corporation acquisition. These decreases were offset by an increase of $0.8 million in foreign currency transaction losses.

Interest expense

Interest expense was $50.3 million and $50.2 million for the year ending December 31, 2015 and 2014, respectively. Interest expense for the year 2015 increased due to an amendment to Houghton s 2012 Senior Credit Facilities. As a result of the amendment there was a 0.25% increase in the interest rate margins on the First Lien and Second Lien Term Loans and an increase of $1.9 million in deferred debt issuance costs.

Affiliate interest expense

Affiliate interest expense was $8.3 million for the year 2014. In August of 2014, the outstanding affiliate loans were repaid, resulting in no affiliate interest expense in 2015.

Income tax expense (benefit)

Houghton s effective income tax rates for the year ended December 31, 2015 was 42.5% compared to (27.1)% for the year ended December 31, 2014, respectively. The effective tax rate fluctuates from period to period due to changes in the mix of income or losses in jurisdictions with a wide range of tax rates, permanent

differences between GAAP and local tax laws, and certain one-time items including tax rate changes, benefit of non-U.S. taxes, net of a U.S. foreign tax credit, and adjustments related to the repatriation of unremitted earnings of non-U.S. subsidiaries. The amortization and increased interest expense related to the Gulf Transaction reduces Houghton s profit before tax to a level where the effective tax rate is highly sensitive.

The 2015 effective tax rate was positively impacted by tax benefit attributable to abandoned transaction costs previously treated as non-deductible. The 2015 effective tax rate was further positively impacted by decrease in unrecognized tax benefits due to tolling of statute of limitations and closure of income tax audits and impact of tax rate decreases partially offset by negative impact of reduction to indemnification asset.

The 2014 effective tax rate was negatively impacted by non-deductible affiliate interest expense and transaction costs partially offset by positive impact of decrease in Houghton s cumulative liability for gross unrecognized tax benefits due to the expiration of the applicable statutes of limitations for certain tax years net of accrual of incremental interest.

Equity in net income of investee

Income from investee was $7.8 million and $5.7 million for the years ended December 31, 2015 and 2014, respectively.

Other comprehensive income

(in millions)	2015	2014
Net loss	$ (0.2)	$ (5.5)
Other comprehensive loss:		
Foreign currency translation adjustment	(49.3)	(40.0)
Pension adjustments, net of tax	(0.7)	(12.8)
Total other comprehensive loss	(50.0)	(52.8)
Comprehensive loss	$ (50.2)	$ (58.2)
Comprehensive loss attributable to non-controlling interest	(0.2)	(0.1)
Comprehensive loss attributable to Global Houghton Ltd.	$ (50.0)	$ (58.1)

Foreign currency translation adjustment relates to the assets and liabilities held in the functional currency of Houghton s subsidiaries and is impacted by fluctuations in those currencies against the U.S. dollar during the period compared to the corresponding exchange rates at the end of the immediately preceding period. In 2015, the $49.3 million loss from foreign currency translation resulted from the strengthening of the U.S. dollar against nearly all major currencies, including the Brazilian real, euro and British pound with each weakening 31.5%, 9.7% and 4.0%, respectively, against the U.S. dollar. In 2014, the $40.0 million loss from foreign currency translation resulted primarily from currency movements in all the major currencies which weakened against the U.S. dollar, most notably the euro, British pound and Brazilian real, which weakened 11.2%, 5.1%, 12.2%, respectively.

The 2015 pension adjustment loss of $0.7 million resulted from a decrease in the discount rate on plans held in the U.S. and United Kingdom. The 2014 pension adjustment loss of $12.8 million resulted from a decrease in the discount rate on plans held in the U.S. and United Kingdom.

Liquidity and Capital Resources

Houghton s primary sources of liquidity currently consist of cash generated from Houghton s operating activities, existing cash and cash equivalent balances, its $50.0 million Revolving Credit Facility, of which

-87-

$45.4 million was available as of December 31, 2016, and other short-term debt facilities. Houghton s ability to generate sufficient cash flows from its operating activities will continue to be primarily dependent on selling sufficient quantities of its products and services at margins sufficient to cover fixed and variable expenses. Houghton believes that its cash flows from operations and existing cash and cash equivalent balances, together with borrowing availability under its Revolving Credit Facility and short-term debt facilities, as necessary, will be sufficient to satisfy the anticipated cash requirements associated with its existing operations for the foreseeable future. Should operating activities become inadequate to meet the cash flow needs, management would modify spending in strategic areas, such as reduction in capital spending, or initiate discussions on capital contributions. In addition, Houghton s ability to pursue acquisitions is limited to its ability to generate cash through operations, borrowings or additional capital contributions.

Cash Flows

The following table summarizes Houghton s cash flows for the years ended December 31, 2016, 2015 and 2014, respectively.

(in millions)	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net cash provided by (used in)			
Operating activities	$ 43.1	$ 38.0	$ 35.0
Investing activities	(47.0)	(19.3)	(23.1)
Financing activities	3.0	(21.1)	(16.5)
Net decrease increase in cash and cash equivalents	$ (0.9)	$ (2.4)	$ (4.6)

Net cash provided by operating activities

Net cash provided by operating activities for the year ended December 31, 2016 was $43.1 million primarily related to a net loss of $36.6 million offset by $71.7 million in non-cash expenses that include items such as goodwill and intangibles impairment loss, depreciation and amortization, deferred income taxes, and debt issuance cost amortization and a source in working capital of $8.0 million. The positive change in working capital activities resulted from the increase in compensation accruals due to the achievement of results above the established performance targets in 2016, partially offset by the growth in emerging markets. Accounts receivable increased as a result of an increase in the number of days outstanding while inventory days on hand extended which also resulted in an increase in accounts payable as Houghton actively works to manage working capital.

Net cash provided by operating activities for the year ended December 31, 2015 was $38.0 million primarily related to a net loss of $0.2 million, offset by $35.5 million in non-cash expenses that included items such as depreciation and amortization, deferred income taxes, debt issuance cost amortization, and pensions benefits and a source in working capital of $2.8 million. The positive change in working capital in 2015 was due to an increased level of achievement of performance targets in 2015 resulting in an increase in bonus accruals and stock compensation liability, offset by concerted efforts to reduce days payable outstanding.

Net cash provided by operating activities for the year ended December 31, 2014 was $35.0 million primarily related to a net loss of $5.5 million, offset by $50.7 million in non-cash expenses that included items such as depreciation and amortization, deferred income taxes, debt issuance cost amortization, and pension benefits offset by a use in working capital $10.2 million. The negative change in working capital activities was primarily due to a high level of cash payments under restructuring reserves established in 2013 as well as a lesser net impact from acquisitions within the 2014 period. Accounts receivable, inventory and accounts payable increased as a result of a late December acquisition as Houghton actively works to manage the newly acquired working capital.

Table of Contents

Net cash provided by (used in) investing activities

Net cash used in investing activities of $47.0 for the year ended December 31, 2016 resulted from the Wallover acquisition for $39.4 million and purchases of property, plant and equipment of $9.2 million partially offset by the proceeds from the sale of certain assets.

Net cash used in investing activities for the year ended December 31, 2015 of $19.3 million related primarily to purchases of property, plant and equipment of $12.6 million and the cost to acquire Braemar UK Ltd. in March 2015, net of cash received, of $6.7 million. During the year, Houghton loaned and was repaid $12.0 million to an affiliate.

Net cash used in investing activities for the year ended December 31, 2014 of $23.1 million related primarily to the cost to acquire Henkel Corporation in March 2014, net of cash received, of $12.6 million and purchases of property, plant and equipment of $11.0 million.

Net cash provided by (used in) financing activities

Net cash provided by financing activities of $3.0 million for the year ended December 31, 2016 resulted from $8.0 million in net borrowings of short-term debt, offset by $4.6 million in repayments on long- term debt.

Net cash used in financing activities for the year ended December 31, 2015 of $21.1 million primarily consisted of $11.0 million of net repayments on the revolver, $4.5 million of repayment on long term debt, the earn out payment of $2.4 million related to the Henkel acquisition, the payment of debt issuance costs of $1.9 million and $0.9 million in repurchases of common stock.

Net cash used in financing activities for the year ended December 31, 2014 of $16.5 million primarily consisted of a $318.9 million repayment of affiliate loans and $24.4 million of repayments of long-term debt, partly offset by capital contributions received of $307.2 million and $11.9 million of net borrowings on the revolver.

Cash Balance and Other Liquidity

The cash balances held in the U.S. and non-U.S. subsidiaries are summarized in the following table:

(in millions)	Year Ended December 31, 2016	Year Ended December 31, 2015
Cash and cash equivalents:		
U.S	$ 4.2	$ 6.3
Non-U.S	39.8	41.4
Total	$ 44.0	$ 47.8
Restricted cash		
U.S	$	$
Non-U.S	0.1	0.9
Total	$ 0.1	$ 0.9

Generally, except if permanently reinvested in foreign subsidiaries, unrestricted cash in non-U.S. entities is available for repatriation into the U.S. The decision to repatriate such cash is based upon the operating cash requirements of the local entities as well as tax and regulatory impacts, including pension negotiations.

Table of Contents

Working capital is summarized in the following table:

(in millions)	Year Ended December 31, 2016	Year Ended December 31, 2015
Current assets	$ 270.2	$ 271.6
Current liabilities	142.4	128.3
Net working capital (1)	$ 127.8	$ 143.3

(1) Net working capital is calculated by deducting current liabilities from current assets.

Houghton manages working capital through its inventory levels, as well as appropriate customer and vendor payment terms. Houghton sells on credit to its customers, who are pre-approved using customary trade terms that generally provide for payment consistent with local business practices. Houghton monitors the credit risk and financial condition of its customers in an effort to reduce collection risk.

Houghton s short-term debt facilities and credit facilities are summarized in the following table:

(in millions)	Year Ended December 31, 2016	Year Ended December 31, 2015
Short-term debt facilities		
Capacity	$ 23.7	$ 13.9
Outstanding borrowed	$ 7.3	
Unused capacity	$ 16.4	$ 13.9
Credit facilities		
Capacity	$ 50.0	$ 50.0
Borrowings		
Letters of credit	(4.6)	(6.8)
Unused capacity	$ 45.4	$ 43.2

2012 Senior Credit Facilities

On December 20, 2012, in connection with the Gulf Transaction, HII Holding Corporation, Houghton s subsidiary and intermediate holding company, entered into new credit facilities (2012 Senior Credit Facilities), which included first and second lien facilities. The first lien facility consisted of a $455.0 million term loan facility (First Lien U.S. Term Loan), a 100.0 million term loan facility (First Lien Dutch Term Loan), and a revolving credit facility with a net availability of $50.0 million (Revolving Credit Facility). The second lien facility consisted of a $200.0 million term loan facility (Second Lien U.S. Term Loan). The net proceeds from the 2012 Senior Credit Facilities were used to fund the Gulf Transaction and to repay Houghton s 2011 Senior Credit Facility.

During July 2015, Houghton amended its 2012 Senior Credit Facilities primarily to make guarantor and certain covenant changes. In conjunction with the amendment, Houghton incurred a 0.25% increase in the interest rate margin on its First Lien and Second Lien Term Loans. Houghton also incurred approximately $1.9 million in amendment fees paid at closing to the lenders and approximately $1.1 million in attorney, arrangement and accounting fees. The other terms and conditions of the credit facilities, discussed herein, were unchanged. Houghton accounted for the amendment in accordance with accounting guidance for debt modifications and extinguishments. Houghton considered the limited changes presented by the amendment and reviewed the old and new lenders on a creditor by creditor basis and determined that the amendment was a modification. Therefore the amendment fees of $1.9 million were capitalized as debt issuance costs within Other assets with all other fees being expensed as Interest income, net. The capitalized fees will be amortized through the First Lien and Second Lien debt maturity in 2019.

Table of Contents

As of December 31, 2016 and December 31, 2015, the interest rates on Houghton s 2012 Senior Credit Facilities were as follows:

	December 31, 2016	December 31, 2015
First Lien U.S. Term Loan	4.25%	4.25%
Revolving Credit Facility	5.00%	4.20%
First Lien Dutch Term Loan	4.75%	4.75%
Second Lien U.S. Term Loan	9.75%	9.75%

In March 2017, Houghton extended the maturity date of the Revolving Credit Facility from December 2017 to September 2019. The extended facility was reduced to capacity of $41.0 million, and will take effect December 2017. No other changes were made to the terms of the agreement. Houghton paid $0.2 million in fees related to the amendment.

Houghton s First Lien U.S. Term Loan and First Lien Dutch Term Loan mature in December 2019, and are subject to nominal quarterly amortization payments through the maturity date. In addition, Houghton s first lien credit facility provides for mandatory prepayments, subject to certain exceptions, of the First Lien U.S. Term Loan and First Lien Dutch Term Loan based on certain asset sales and casualty recovery events, the net proceeds of certain debt issuances, and annual excess cash flow. The Second Lien U.S. Term Loan matures in December 2020.

The 2012 Senior Credit Facilities initially permitted HII Holding Corporation to make up to $25.0 million in dividends or distributions to its shareholder. As of December 31, 2014, HII Holding Corporation had made $22.0 million in dividends. Beyond this $25.0 million of flexibility, the 2012 Senior Credit Facilities prevent HII Holding Corporation from paying any dividends or making any distributions except to the extent of HII Holding Corporation s excess cash flow (as defined per the agreement) that is not required by the terms of the 2012 Senior Credit Facilities to be applied to the mandatory prepayment of outstanding first lien term loans under the 2012 Senior Credit Facilities and only if at such time HII Holding Corporation satisfies a first lien leverage ratio test on a pro forma basis after giving effect to such dividend or distribution.

Houghton s 2012 Senior Credit Facilities contain other financial and operating covenants. As of December 31, 2016 and December 31, 2015, Houghton was in compliance with all covenants.

Contractual Obligations

In addition to long-term debt, we are required to make payments relating to various types of obligations. The following table summarizes our minimum contractual payment requirements as of December 31, 2016.

	Payments Due by Period				
	Total	Year 1	Years 2-3	Years 4-5	More than 5 Years
	($ in thousands)				
Long-term debt (1)	$ 724,921	$ 4,550	$ 520,371	$ 200,000	$
Interest on long-term debt (2)	144,880	42,220	83,427	19,233	
Operating and capital leases	15,464	4,693	6,099	3,061	1,611
Expected pension funding (3)	3,529	3,529			

Brazilian VAT	2,096		2,096		
Long-term incentive plan (4)	7,500		7,500		
Total (5)	$ 898,390	$ 54,992	$ 619,493	$ 222,294	$ 1,611

(1) The table does not include additional payments that may be required to be made under the First Lien U.S. Term Loan and the First Lien Euro Term Loan if net proceeds from assets sales exceed $5.0 million

individually or $10.0 million cumulatively per annum. Further additional payments per annum may be required, based on an excess cash flow calculation that adjusts net income for working capital and other items, whereby 50% of such calculated amount must be used to make an additional payment on the debt.

(2) Interest expense on long-term debt included the 2012 Senior Credit Facilities calculated on the assumption that all required principal payments will be made, but with no cash sweep for principal payments assumed. The interest rates used were 4.25%, 4.75%, 9.75% and 5.00% for the First Lien U.S. Term Loan, First Lien Euro Term Loan, Second Lien U.S. Term Loan and Revolving Credit Facility, respectively. Actual interest rates may vary.

(3) Pension contributions beyond 2017 are not determinable since the amount of any contribution is heavily dependent on the future economic environment and investment returns on pension trust assets.

(4) The LTIP service period ends December 31, 2017, with a maximum payout of $7.5 million in the first quarter of 2018.

(5) As of December 31, 2016, our liability for unrecognized tax benefits amounted to $6.4 million and is reflected in Other non-current liabilities in our Statements of Financial Position. Due to the nature and timing of the ultimate outcome of these uncertain tax positions, we cannot make a reasonably reliable estimate of the amount and period of related future payments. Therefore, our liability has been excluded from the above contractual obligations table. The remaining balance within Other non-current liabilities consists primarily of compensation arrangements, for which the timing of payment cannot be reasonably determined due to uncertainty of the extent and timing of the achievement of performance targets. These arrangements have also been omitted from the table.

Capital Spending

Houghton s capital spending has historically been less than two percent of net sales and is primarily related to information technology, environmental and safety initiatives, manufacturing infrastructure and laboratory equipment. Capital spending as of December 31, 2016 totaled $9.2 million compared to $12.6 million for the year ended December 31, 2015. Houghton continually evaluates its planned capital projects to determine changes that may be required due to unanticipated increases in the cost, scope and completion time of relevant projects.

Critical Accounting Policies

Use of Estimates. The preparation of Houghton s financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Houghton bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. Houghton s critical accounting policies, which are described below, could materially affect the amounts recorded in its financial statements. Houghton s accounting policies are described in Note 1 to Houghton s audited financial statements.

Impairment of Goodwill, Intangible Assets and Other Long-Lived Assets. Goodwill and intangible assets that are not subject to amortization are reviewed for impairment annually as of October 1 or when events or circumstances indicate that the carrying amount exceeds the fair value, including potential triggering events such as decline in actual or projected operating profits. Houghton believes the estimates and assumptions used in its impairment assessments are reasonable and based on available market information, including assumptions regarding foreign currency movement, but variations in any of the assumptions could result in materially different calculations of fair value and determination of the value of impairment and whether or not an impairment is indicated.

Other long-lived assets, such as fixed assets and amortizable intangible assets subject to amortization are reviewed for impairment when events or circumstances indicate carrying value of the asset (or asset group) may not be recoverable.

Other long-lived assets are reviewed for impairment when events or circumstances indicate

that the carrying amount exceeds their fair value, such as triggers due to the completion of Step 2 analysis in conjunction with the annual goodwill impairment test and when assets are deemed to be held for sale.

Income Taxes. Houghton accounts for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. Houghton records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. The effect upon deferred tax assets and liabilities of a change in tax rate is recognized in the period that includes the enactment date. Significant judgment is required in determining income tax provisions under Accounting Standards Codification (ASC) 740 and in evaluating tax positions. Houghton established additional provisions for income taxes when, despite the belief that tax positions are fully supportable, there remain certain positions that do not meet the minimum probability threshold, defined by the applicable accounting guidance, as a tax position that is more likely than not to be sustained upon examination by the applicable taxing authority.

In the normal course of business, Houghton and its subsidiaries are examined by various U.S. federal, U.S. state and non-U.S. tax authorities. Houghton regularly assesses the potential outcomes of these examinations and any future examinations for the current or prior years in determining the adequacy of the provision for income taxes. Interest accrued related to unrecognized tax benefits and income tax related penalties are included in the income tax provision, the current tax liability and deferred taxes in the period which the facts that give rise to a revision become known.

Environmental Reserves and Expenditures. Houghton records accruals for environmental and legal matters when it determines that it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated. If no amount in the possible range of liability is considered more probable than any other amount, Houghton records the lowest amount in the range in accordance with U.S. GAAP. Estimates for accruals for environmental matters are based on a variety of potential technical solutions, governmental regulations and other factors, and are subject to a large range of potential costs for remediation and other actions. A considerable amount of judgment is required in determining the most likely estimate within the range, and the factors determining this estimate may vary over time. Assumptions utilized as of the period presented include the specific remediation activity currently applied to the site in accordance with current environmental regulations. Should this specific remediation activity fail to deliver anticipated results or become inadequate under revised environmental regulations, alternative remediation activity on a revised timeline may result in materially different environmental expense. Estimates also utilize current period currency exchange rates which can vary from the actual rates as of the date in which the expenses are incurred. Accruals are adjusted in the period that new information, impacting the estimate, becomes available. Houghton participates in certain payments in connection with environmental consent orders related to certain hazardous waste clean-up activities under the U.S. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and also have obligations to perform certain cleanup activities related to some of Houghton s non-U.S. subsidiaries. At December 31, 2016 and December 31, 2015, Houghton had accrued $1.9 million and $3.0 million, respectively, for liabilities associated with environmental liabilities.

Restructuring. Actions associated with restructuring plans include, but are not limited to, workforce reduction, plant or facility closures and sales or disposals. Costs associated with these actions may include, but are not limited to, employee severance, asset impairment and plant closures. Reserves are reviewed annually for adequacy and any necessary adjustments are recorded in the period the adjustment is determinable. Assumptions used to prepare the restructuring estimates include severance amounts and expenses related to third party service. Estimates can vary from actual costs upon subsequent negotiations in the regulatory approval process and with third party service providers. Estimates also utilize current period currency exchange rates which can vary from the actual rates as of the date in

which the expenses are incurred. Should the actual amounts differ from estimates, the amount of the restructuring costs could be materially impacted.

Pension Plans. Houghton has defined benefit plans covering certain U.S. employees (U.S. Plans), as well as certain current and former employees in the United Kingdom, France and Germany (Non-U.S. Plans). Independent actuaries perform the required valuations to determine benefit expense and the funded and unfunded status of the benefit plans. See Note 15 to Houghton s audited financial statements for a description of Houghton s employee benefit plans and the key assumptions utilized in those valuations. Critical assumptions used in the actuarial valuation include the weighted average discount rate, expected long-term rates of return on assets and rates of increase in compensation levels. If different assumptions were used, additional pension expense or charges to equity might be required. Houghton believes the current assumptions used to estimate obligations and pension expense are appropriate in the current economic environment. However, as economic conditions change, Houghton may change some of its assumptions, which could have a material impact on Houghton s financial condition and results of operations.

Stock Option Plans. On October 16, 2013, the Board of Directors of GH approved the Stock Option Plan (the GH Plan) that provided for GH, the parent holding company of Houghton international and which has since become Houghton s subsidiary as a result of its corporate reorganization, to grant stock-based compensation to their employees in the form of stock options based on service and performance vesting over a five year term. On July 16, 2014, GH amended and restated the GH Plan to authorize Houghton to grant stock appreciation rights (SARs) to employees. A SAR is the right to receive upon exercise, shares of common stock equal in value to the excess of: (i) the Fair Market Value (as of the time of exercise) of a share of common stock, over (ii) the SAR Base Value (defined as grant date fair value of a share of common stock) per share of common stock. This difference is often referred to as the spread amount or the amount by which the SAR is in the money. A SAR confers the same economic benefit and provides the same number of shares to a holder of a SAR as the net exercise of a stock option by an optionee. The service based SARs vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years.

In July 2015, Houghton conducted an exchange offer which allowed holders of GH stock options and SARs to exchange their options for a like number of share options in Houghton (Exchange Offer). In conjunction with the exchange, the Board of Directors approved the Global Houghton Ltd. Share Option and Share Appreciation Rights Plan (the Houghton Plan). The awards granted with performance vesting are deemed granted upon approval of the targets, which occurs annually, generally in the first quarter of each plan year. The number of shares of Houghton common stock that were reserved for issuance under the stock option plan at December 31, 2016 was 70,580.

Prior to the Exchange Offer, Houghton applied the accounting guidance for stock-based compensation, which required Houghton to expense the fair value of employee stock options granted. Compensation expense was measured at the grant date based on the fair value of the award on an accelerated basis. If awards contain certain performance conditions in order to vest, Houghton recognized the cost of the award when achievement of the performance condition was probable. Houghton recorded stock-based compensation expense in Selling, general and administrative expense. Stock compensation expense incurred under the GH Plan was reflected as an increase of $141 in Non-controlling interest through the date of the Exchange Offer. Upon the effective date of the Exchange Offer, the stock compensation expense accumulated in non-controlling interest was reclassified into Additional paid-in capital.

Subsequent to the Exchange Offer, Houghton demonstrated the intent for allowing net cash settlements of stock-based awards as well as the removal of the six month holding period for recipients of stock-based awards. This intent triggered liability accounting for stock-based compensation, which requires outstanding options and SARs to be classified as liability-based awards and valued at fair value. The liability is remeasured and adjusted until the options are exercised, expire, or payment is made to the employees. The stock-based compensation liability is included in Other non-current liabilities and was $5,720 and $4,525 at December 31, 2016 and December 31, 2015, respectively. Compensation expense of stock-based awards granted prior to the liability accounting modification (July 2015) is recognized over the applicable vesting period based upon the greater of

the awards grant date fair value (the Floor) or fair value at the reporting period. Corresponding fair value adjustments to the liability balance of awards subject to the Floor are recorded through Additional paid-in capital. Compensation expense of stock-based awards granted subsequent to the liability accounting modification is recognized over the applicable vesting period based upon fair value at the reporting period, and subsequent fair value adjustments to the corresponding liability recorded through compensation expense.

The service based options vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years. The awards granted contain a put option, which gives the recipient the ability to sell shares back to Houghton upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability, or retirement); initial public offering; change in control; or 10 years and 9 months from the associated option or SAR grant date. The shares put to Houghton will be valued at fair market value as of the date of the contingent event, except for the trigger related to potential termination. Contingent events triggering the ability to put the shares include the passage of time.

Houghton s estimate of the fair value of the outstanding common stock, which is an assumption in determining the fair value of options, is dependent on many factors, including its forecasted results of operations, weighted average cost of capital and market multiples. Changes in these factors can have a material impact of the stock-based compensation expense recognized over the service and performance periods.

The stock-based compensation expense is adjusted each quarter to reflect actual forfeitures and any change in the estimated number of awards that are expected to vest in case performance targets are not achieved or service vesting conditions are not met. Future stock-based compensation expense will increase when Houghton grants additional equity awards. Modifications, cancellations or repurchases of awards may require Houghton to accelerate any remaining unearned stock-based compensation expense or incur additional expense.

The awards granted contain a put option, which gives the recipient the ability to sell shares back to Houghton upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability, or retirement); initial public offering; or change in control. The shares put to Houghton will be valued at fair market value as of the date of the contingent event, except for the trigger related to potential termination. Contingent events triggering the ability to put the shares include the passage of time.

The awards granted also contain a call option, which gives Houghton the right to call shares upon employee termination. The call expires at the earliest of nine months from the employment termination date, an initial public offering, or a change in control. The shares called by Houghton will be valued at fair value as of the date of the call for any holder voluntarily terminated other than on account of retirement or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

Redeemable Stock. During the fourth quarter of 2013, 1.86% of the outstanding shares of GH were purchased from GHG Lubricants by certain members of management. In July 2015, Houghton conducted an exchange offer which allowed shareholders of GH to exchange their shares for a like number of shares in Houghton, with the same terms and conditions as the GH share agreement. As of March 31, 2017 and December 31, 2016, these shares represented 1.24% of the total outstanding shares of Houghton. These shares contain certain call and put option terms which provide Houghton with the right, but not the obligation, to call the shares upon certain events and provides the management shareholder the ability to sell shares back to Houghton upon certain events.

The put option provides each management shareholder the ability to sell shares back to Houghton upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee

termination for death, disability or retirement); initial public offering; or change in control. The shares put to Houghton will be valued at fair value as of the put date related to a voluntary termination or if no initial public offering or change in control occurs prior to December 20, 2017.

The call option provides Houghton the right to call shares upon employee termination. The call expires at the earliest of six months from the employment termination date, an initial public offering or a change in control. Shares that become callable by Houghton will be valued at fair value as of the date of the call for any holder terminated other than on account of good reason of retirement or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

The shares put to or called by Houghton will be valued at fair value. Prior to December 20, 2015, the call provision allowed Houghton to repurchase the management shares at the lessor of cost plus deemed interest or fair value. Such provision limited the management shareholder s ability to share in the risk and rewards of equity ownership, creating a vesting or service period for the management shareholder and resulting in liability classification of such shares in accordance with accounting guidance for stock-based compensation. After June 20, 2016, upon maturity of the management shares (6 months from expiration of Houghton call provision for an amount other than fair value), the management shares are classified as Redeemable stock in mezzanine equity and recorded at fair value (redemption value). As Houghton is in an accumulated deficit position, changes in fair value (redemption value) of the management shares are recognized in Additional paid-in capital at each period end.

Off-Balance Sheet Arrangements

Houghton s primary off-balance sheet commitments are letters of credit or bank guarantees. The amount of these letters of credit or bank guarantees was $4.6 million and $6.8 million as of December 31, 2016 and December 31, 2015, respectively.

Recently Issued Accounting Standards

In July 2015, the FASB issued ASU 2015-11, S*implifying the Measurement of Inventory,* which requires inventory to be measured at the lower of cost and net realizable value. For publicly traded companies, the guidance is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted. Houghton does not expect this guidance to have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842),* which changes the accounting of lease assets and lease liabilities. For publicly traded companies, the guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. Houghton is currently evaluating ASU 2016-02 and has not determined the impact it may have on Houghton s consolidated financial statements nor decided upon the method of adoption.

In May 2014, the FASB issued ASU No. 2014-9, *Revenue from Contracts with Customers.* The objective of ASU 2014-09 is to establish a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and will supersede most of the existing revenue recognition guidance. The core principle of ASU 2014-09 is that an entity recognizes revenue at the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In applying the new guidance, Houghton must (1) identify the contract(s) with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the contract s performance obligations; and (5) recognize revenue when Houghton satisfies a performance obligation. ASU 2014-09 applies to all contracts with customers except those that are within the scope of other topics in the FASB Accounting Standards Codification.

In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers, Deferral of the Effective Date*. ASU 2015-14 is effective for interim and annual reporting periods beginning after December 15, 2017

for publicly traded companies and can be adopted by Houghton using either a full retrospective or modified retrospective approach, with early adoption prohibited.

In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers, Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which clarifies how an entity should identify the unit of accounting for the principal versus agent evaluation and how it should apply the control principle to certain types of arrangements.

In April 2016, the FASB amended ASU 2016-10, *Revenue from Contracts with Customers, Identifying Performance Obligations and Licensing*. This amended FASB s new recognition guidance on identifying performance obligations to allow entities to disregard items that are immaterial in the context of the contract, clarify when a promised good or service is separately identifiable (i.e., distinct within the context of the contract) and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost (i.e., an expense).

In May 2016, the FASB amended ASU 2016-12, *Revenue from Contracts with Customers, Narrow-Scope improvements and Practical Expedients* which amended its new revenue recognition guidance on transition, collectability, noncash consideration and the presentation of sales and other similar taxes. The amendments clarify that, for a contract to be considered completed, all (or substantially all) of the revenue must have been recognized under legacy GAAP.

In December 2016, the FASB issued ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. The amendments allow entities to not make quantitative disclosures about remaining performance obligations in certain cases and require entities that use any of the new or previously existing optional exemptions to expand their qualitative disclosures. This revenue guidance (ASU 2014-9, ASU 2015-14, ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20) is effective for interim and annual reporting periods beginning after December 15, 2017 for publicly traded companies and can be adopted by Houghton using either a full retrospective or modified retrospective approach, with early adoption prohibited. Houghton is currently evaluating this revenue guidance and has not determined the impact it may have on Houghton s consolidated financial statements nor decided upon the method of adoption.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows, Classification of Certain Cash Receipts and Cash Payments*, which clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Houghton does not expect this guidance to have a material impact on its consolidated Statement of Cash Flows.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes, Intra-Entity Transfers of Assets Other than Inventory*, which requires companies to account for the income tax effects of intercompany sales and transfers of assets other than inventory (e.g., intangible assets) when the transfer occurs. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those years. Houghton is currently evaluating ASU 2016-16 and has not determined the impact it may have on Houghton s consolidated financial statements.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows, Restricted Cash,* which requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and cash equivalents in the statement of cash flows. This guidance is effective for interim and annual reporting periods beginning after December 15, 2017 for publicly traded companies and must be adopted using a retrospective approach. Houghton is currently evaluating ASU 2016-18 and has not determined the impact it may have on Houghton s consolidated Statement of Cash Flows.

In December 2016, the FASB issued ASU 2016-19, *Technical Corrections and Improvements*, which corrects errors and makes minor improvements affecting a variety of topics in the ASC. Most of the amendments are not expected to have a significant effect on practice. Houghton does not expect this guidance to have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, *Clarifying the Definition of a Business*, to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Houghton is currently evaluating ASU 2017-01 and its impact on the accounting for future acquisitions.

In January 2017 the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*, to simplify the subsequent measurement of goodwill and eliminate the Step 2 from the goodwill impairment test. Under the amendments in this update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit s fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. A public business entity that is a U.S. Securities and Exchange Commission (SEC) filer should adopt the amendments in this update for its annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. A public business entity that is not an SEC filer should adopt the amendments in this Update for its annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2020. Houghton is currently evaluating ASU 2017-04 and will assess the impact on future goodwill impairment tests.

Table of Contents

HOUGHTON MANAGEMENT S DISCUSSION AND ANALYSIS OF

FINANCIAL CONDITION AND RESULTS OF OPERATIONS

FOR THE THREE MONTHS ENDED MARCH 31, 2017 AND 2016

The following discussion and analysis of Houghton s financial condition and results of operations is intended to help prospective investors understand Houghton s business, results of operations, liquidity and capital resources and should be read in conjunction with Houghton s financial statements and related notes included elsewhere in this proxy statement, as well as Houghton Management s Discussion and Analysis of its Financial Condition and Results of Operations for the year ended December 31, 2016. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Houghton s actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors.

Results of Operations

Three months ended March 31, 2017 versus the three months ended March 31, 2016

(in millions)	Three Months Ended March 31, 2017	Three Months Ended March 31 2016	Change 2017 vs. 2016 $	Change 2017 vs. 2016 %
Net sales	$ 196.6	$ 186.4	$ 10.2	5.5%
Cost of goods sold	129.2	121.9	(7.3)	(6.0)%
Gross profit	67.4	64.5	2.9	4.5%
Selling, general and administrative expense	58.6	52.0	(6.6)	(12.7)%
Restructuring	0.1	0.3	0.2	66.7%
Other operating expense	0.2	0.1	(0.1)	(100.0)%
Operating income	8.5	12.1	(3.6)	(29.8)%
Other expense, net	(0.4)	(0.4)		
Interest expense	(12.4)	(12.4)		
Loss before income taxes and equity in net income of investee	(4.3)	(0.7)	(3.6)	505.6%
Income tax expense		0.1	0.2	100.0%
Net loss before equity in net income of investee	(4.3)	(0.8)	(3.4)	372.5%
Equity in net income of investee	2.2	2.2		
Net (loss) income	(2.1)	1.4	(3.4)	(262.8)%

Net sales

Net sales for the three months ended March 31, 2017 were $196.6 million compared to $186.4 million for the three months ended March 31, 2016. Net sales for 2017 increased $10.2 million, or 5.5%, from 2016.

The increase in sales was mainly driven by an increase from acquisitions of $7.7 million and an $8.4 million increase in product volumes, offset by a decline in sales mix of $1.5 million. In addition, foreign currency exchange decreased sales by $4.4 million due to the continued weakening of many currencies against the U.S. dollar, including the British pound, euro, Chinese renminbi, Mexican peso, all partially offset by the strengthening Brazilian real.

Cost of goods sold

Cost of goods sold was $129.2 million for the three months ending March 31, 2017, compared to $121.9 million for the three months ending March 31, 2016. Cost of goods sold for the first quarter 2017 increased $7.3 million or 6.0% from first quarter 2016.

Table of Contents

Cost of goods sold increased, primarily due to a $6.1 million increase manufactured products volumes, $0.6 million increase in manufactured products material costs and the added costs from acquisitions, partially offset by a $1.7 million decrease in pass through products material costs and product mix and the impacts from foreign exchanges.

Gross profit

Gross profit was $67.4 million for the three months ending March 31, 2017, compared to $64.5 million for the three months ending March 31, 2016. Gross profit for the first quarter 2017 increased $2.9 million, or 4.5%, from first quarter 2016, with gross margin decreasing to 34.3% from 34.6% for the three months ending March 31, 2017 and 2016, respectively. The decrease in gross margin percentage is primarily the result of increased material costs.

Selling, general and administrative expense

SG&A expense was $58.6 million for the three months ending March 31, 2017, compared to $52.0 million for the three months ending March 31, 2016. This first quarter increase of $6.6 million, or 12.7%, was primarily due to a $4.0 million increase in stock-based compensation expense due to an increase in the estimated fair value of stock options and a $1.1 million increase due to the acquisition of Wallover in July 2016, with an additional $0.9 million increase due to normal annual wage inflation. Further increasing SG&A are transaction costs of $0.9 million related to the purchase agreement with Quaker Chemical Corporation and a $0.6 million increase in salaries and benefits related to additional commercial resources.

Restructuring expense

Restructuring expense was $0.1 million and $0.3 million for the three months ended March 31, 2017 and 2016, respectively.

Other operating expense

Other operating expense was $0.2 million and $0.1 million for the three months ended March 31, 2017 and 2016, respectively.

Other (expense), net

Other expense was $0.4 million for the three months ending March 31, 2017 and 2016, respectively.

Interest expense

Interest expense was $12.4 million for the three months ending March 31, 2017 and 2016, respectively.

Income tax expense

Houghton s effective income tax rate for the three months ended March 31, 2017 was (0.8)% compared to (12.2)%, for the three months ended March 31, 2016. Houghton s effective tax rate was primarily driven by the mix of income among tax jurisdictions and the U.S. tax consequences of non-U.S. earnings. In addition, the 2017 effective tax rate was favorably impacted by deferred tax rate change in a foreign jurisdiction. The effective income tax rate is impacted by the decreased pre-tax income (loss) which acts to magnify the impact of income tax expense adjustments.

Equity in net income of investee

Equity in net income of investee was $2.2 million for each of the three months ended March 31, 2017 and 2016, respectively.

Table of Contents

Other comprehensive income

	Three Months Ended March 31 2017	Three Months Ended March 31, 2016
Net (loss) income	$ (2.1)	$ 1.3
Other comprehensive income (loss):		
Foreign currency translation adjustment	13.5	8.2
Pension adjustments, net of tax		
Total other comprehensive income	13.5	8.2
Comprehensive income	$ 11.4	$ 9.5
Comprehensive (loss) attributable to non-controlling interest		2.2
Comprehensive income attributable to Global Houghton Ltd.	$ 11.4	$ 7.3

Foreign currency translation adjustment relates to the assets and liabilities held in the functional currency of Houghton s subsidiaries and is impacted by fluctuations in those currencies against the U.S. dollar during the period compared to the corresponding exchange rates at the end of the immediately preceding period. In the three months ending March 31, 2017, the $13.5 million gain from foreign currency translation resulted from the strengthening of nearly all major currencies, including the euro, British pound, Polish zloty, Australian dollar, and Brazilian real with each strengthening 2.7%, 1.7%, 7.3%, 6.4%, and 4.6% respectively, against the U.S. dollar. In the three months ending March 31, 2016, the $8.2 million gain from foreign currency translation resulted from the strengthening of nearly all major currencies in the first quarter of 2016. The euro, Brazilian real and Australian dollar each strengthening 3.1%, 7.9% and 5.4%, respectively, offset by the British pound which weakened by 3.5%.

Liquidity and Capital Resources

Houghton s primary sources of liquidity currently consist of cash generated from Houghton s operating activities, existing cash and cash equivalent balances, its $50.0 million Revolving Credit Facility, of which $27.3 million is available as of March 31, 2017, and other short-term debt facilities. Houghton s ability to generate sufficient cash flows from its operating activities will continue to be primarily dependent on selling sufficient quantities of its products and services at margins sufficient to cover fixed and variable expenses. Houghton believes that its cash flows from operations and existing cash and cash equivalent balances, together with borrowing availability under its Revolving Credit Facility and short-term debt facilities, as necessary, will be sufficient to satisfy the anticipated cash requirements associated with Houghton s existing operations for the foreseeable future. Should operating activities become inadequate to meet the cash flow needs, management would modify spending in strategic areas, such as reduction in capital spending, or initiate discussions on capital contributions. In addition, Houghton s ability to pursue acquisitions is limited to its ability to generate cash through operations, borrowings or additional capital contributions.

Cash Flows

The following table sets forth Houghton s cash flows for the three months ended March 31, 2017 and 2016, respectively.

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Net cash (used in) provided by:		
Operating activities	$ (7.8)	$ (6.2)
Investing activities	0.4	(0.4)
Financing activities	13.4	4.3
Net decrease in cash and cash equivalents	6.0	(2.3)

Net cash used in operating activities during the three months ended March 31, 2017 was $7.8 million primarily related to a net loss of $2.1 million offset by $20.0 million in non-cash expenses that include items such as depreciation and amortization, stock compensation expense and deferred income taxes and a use of working capital of $25.5 million. The fluctuation in working capital activities resulted from the payment of compensation accruals and taxes, as well as a prepayment of affiliate management fees and an extension of the prepaid insurance policies from a twelve month period to an eighteen month period.

Net cash used in operating activities of $6.2 million during the three months ended March 31, 2016 consisted of net income of $1.3 million plus $11.0 million in non-cash expenses that include items such as depreciation and amortization, deferred income taxes and pension benefits and a use of working capital of $18.4 million. The change in first quarter 2016 working capital was primarily due to the payment of compensation accruals and taxes.

Net cash provided by investing activities of $0.4 million for the three months ended March 31, 2017 consisted of purchases of property, plant and equipment of $1.3 million, offset by cash proceeds of $1.6 million for the sale of the Genoa, Italy facility. Net cash used in investing activities of $0.4 million for the three months ended March 31, 2016 primarily consisted of $1.5 million of purchases of property, plant and equipment partially offset by $1.1 million in proceeds, primarily from the sale of the Wuppertal, Germany manufacturing plant.

Net cash provided by financing activities of $13.4 million for the three months ended March 31, 2017 primarily consisted of $18.0 million in borrowings on the Revolving Credit Facility, offset by a $2.9 million dividend paid to shareholders and $1.1 million of repayments of long-term debt. Net cash provided by financing activities for the three months ended March 31, 2016 of $4.3 million consisted of borrowings of short-term debt of $7.6 million, offset by repayments of long-term debt of $3.2 million.

Cash Balance and Other Liquidity

The cash balances held in the U.S. and non-U.S. subsidiaries are summarized in the following table:

	March 31, 2017	December 31, 2016
Cash and Cash equivalents:		
U.S.	$ 10.6	$ 4.2
Non-U.S.	40.4	39.8
Total	$ 51.0	$ 44.0
Restricted cash:		
U.S.	$	$
Non-U.S.	0.2	0.1
Total	$ 51.0	$ 0.1

Generally, except if permanently reinvested in foreign subsidiaries, unrestricted cash in non-U.S. entities is available for repatriation into the U.S. The decision to repatriate such cash is based upon the operating cash requirements of the local entities as well as tax and regulatory impacts, including pension negotiations.

Working capital is summarized in the following table:

	March 31, 2017	December 31, 2016
Current assets	$ 298.1	$ 270.2
Current liabilities	163.5	142.4
Net working capital (1)	$ 134.6	$ 127.8

(1) Net working capital is calculated by deducting current liabilities from current assets.

Houghton manages working capital through its inventory levels, as well as appropriate customer and vendor payment terms. Houghton sells on credit to its customers, who are pre-approved using customary trade terms that generally provide for payment consistent with local business practices. Houghton monitors the credit risk and financial condition of its customers in an effort to reduce collection risk.

Houghton s short-term debt facilities and credit facilities are summarized in the following table:

	March 31, 2017	December 31, 2016
Short-term debt facilities		
Capacity	$ 24.0	$ 23.7
Outstanding borrowed	$ 7.0	7.3
Unused capacity	$ 17.0	$ 16.4
Credit facilities		
Capacity	$ 50.0	$ 50.0
Borrowings	(18.0)	
Letters of credit	(4.7)	(4.6)
Unused capacity	$ 27.3	$ 45.4

2012 Senior Credit Facilities

On December 20, 2012, in connection with the Gulf Transaction, HII Holding Corporation, Houghton s subsidiary and intermediate holding company, entered into new credit facilities (2012 Senior Credit Facilities), which included first and second lien facilities. The first lien facility consisted of a $455.0 million term loan facility (First Lien U.S. Term Loan), a 100.0 million term loan facility (First Lien Dutch Term Loan), and a revolving credit facility with a net availability of $50.0 million (Revolving Credit Facility). The second lien facility consisted of a $200.0 million term loan facility (Second Lien U.S. Term Loan). The net proceeds from the 2012 Senior Credit Facilities were used to fund the Gulf Transaction and to repay Houghton s 2011 Senior Credit Facility.

During July 2015, Houghton amended its 2012 Senior Credit Facilities primarily to make guarantor and certain covenant changes. In conjunction with the amendment, Houghton incurred a 0.25% increase in the interest rate margin on its First Lien and Second Lien Term Loans. Houghton also incurred approximately $1.9 million in amendment fees paid at closing to the lenders and approximately $1.1 million in attorney, arrangement and accounting fees. The other terms and conditions of the credit facilities, discussed herein, were unchanged. Houghton accounted for the amendment in accordance with accounting guidance for debt modifications and extinguishments. Houghton considered the limited changes presented by the amendment and reviewed the old and new lenders on a creditor by creditor basis and determined that the amendment was a modification. Therefore the amendment fees of $1.9 million were capitalized as debt issuance costs with all other fees being expensed as Interest income, net. The capitalized fees will be amortized through the debt maturity in 2019.

In March 2017, Houghton amended its 2012 Revolving Credit Facilities to extend the maturity date from December 2017 to September 2019. The extended facility was reduced to a total capacity of $41.0 million and will take effect December 2017. No other changes were made to the terms of the agreement. In connection with this amendment, Houghton paid fees of $0.2 million. Houghton accounted for the amendment in accordance with accounting guidance for debt modifications and extinguishments. Houghton considered the limited changes presented by the amendment and reviewed the old and new lenders on a creditor by creditor basis and determined that the amendment was a modification. Accordingly, amendment fees of $0.2 million were capitalized as debt issuance costs. Capitalized fees will be amortized through the debt maturity in 2019.

	March 31, 2017	December 31, 2016
First Lien U.S. Term Loan	4.25%	4.25%
Revolving Credit Facility	4.78%	5.00%
First Lien Euro Term Loan	4.75%	4.75%
Second Lien U.S. Term Loan	9.75%	9.75%

As of March 31, 2017 and December 31, 2016, the interest rates on Houghton s 2012 Senior Credit Facilities were as follows:

Houghton s 2012 Revolving Credit Facility matures in September 2019. Houghton s First Lien U.S. Term Loan and First Lien Dutch Term Loan mature in December 2019, and are subject to nominal quarterly amortization payments through the maturity date. The Second Lien U.S. Term Loan matures in December 2020. In addition, Houghton s first lien credit facility provides for mandatory prepayments, subject to certain exceptions, of the First Lien U.S. Term Loan and First Lien Dutch Term Loan based on certain asset sales and casualty recovery events, the net proceeds of certain debt issuances, and annual excess cash flow.

The 2012 Senior Credit Facilities permitted HII Holding Corporation to make up to $25.0 million in dividends or distributions to its shareholder Houghton. As of March 31, 2017, HII Holding Corporation had paid approximately $25.0 million in dividends to its shareholders. Beyond this flexibility, the 2012 Senior Credit Facilities prevent HII Holding Corporation from paying any dividends or making any distributions except to the extent of HII Holding Corporation s excess cash flow (as defined per the agreements) that is not required by the terms of the 2012 Senior Credit Facilities to be applied to the mandatory prepayment of outstanding first lien term loans under the 2012 Senior Credit Facilities and only if at such time HII Holding Corporation satisfies a first lien leverage ratio test on a pro forma basis after giving effect to such dividend or distribution.

Houghton s 2012 Senior Credit Facilities contain other financial and operating covenants. As of March 31, 2017 and December 31, 2016, Houghton was in compliance with its financial covenants. Houghton also pledged as collateral to its lenders substantially all U.S. assets, specific Non-U.S. assets and stock of certain subsidiaries.

Capital Spending

Houghton s capital spending has historically been less than two percent of net sales and is primarily related to environmental and safety initiatives, information technology, manufacturing infrastructure and laboratory equipment. Capital spending as of March 31, 2017 totaled $1.3 million compared to $1.5 million for the three months ended March 31, 2016. Houghton continually evaluates its planned capital projects to determine changes that may be required due to unanticipated increases in the cost, scope and completion time of relevant projects.

Critical Accounting Policies

Stock-based Compensation On October 16, 2013, the Board of Directors of Houghton s subsidiary, GH Holdings Inc. (GH), approved the Stock Option Plan (the GH Plan) that provided for Houghton to grant stock-based compensation to its employees in the form of stock options based on service and performance vesting over a five year term. On July 16, 2014, GH amended and restated the Plan to authorize Houghton to

Table of Contents

grant stock appreciation rights (SARs) to employees. A SAR is the right to receive upon exercise, shares of Houghton common stock equal in value to the excess of: (i) the Fair Market Value (as of the time of exercise) of a share of Houghton common stock, over (ii) the SAR Base Value (defined as grant date fair value of a share of Houghton common stock) per share of common stock. This difference is often referred to as the spread amount or the amount by which the SAR is in the money. A SAR confers the same economic benefit and provides the same number of shares to a holder of a SAR as the net exercise of a stock option by an optionee. The service based SARs vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years.

In July 2015, Houghton conducted an exchange offer which allowed holders of GH stock options and SARS to exchange their options for a like number of share options in Houghton (Exchange Offer). In conjunction with the exchange, the Board of Directors approved the Global Houghton Ltd. Share Option and Share Appreciation Rights Plan (the Houghton Plan). The awards granted with performance vesting are deemed granted upon approval of the targets, which occurs annually, generally in the first quarter of each plan year. The number of shares of Houghton common stock that were reserved for issuance under the Houghton plan at March 31, 2017 was 85,039.

Prior to the exchange offer, Houghton applied the accounting guidance for stock-based compensation, which required it to expense the fair value of employee stock options granted. Compensation expense was measured at the grant date based on the fair value of the award on an accelerated basis. If awards contain certain performance conditions in order to vest, Houghton recognized the cost of the award when achievement of the performance condition was probable. Houghton recorded stock-based compensation expense in Selling, general and administrative expense. Stock compensation expense incurred under the GH Plan was reflected as an increase in Non-controlling interest through the date of the Exchange Offer. Upon the effective date of the Exchange Offer, the stock compensation expense accumulated in non-controlling interest was reclassified into Additional paid-in capital.

Subsequent to the Exchange Offer, Houghton demonstrated the intent for allowing net cash settlements of stock-based awards as well as the removal of the six month holding period for recipients of stock-based awards. This intent triggered liability accounting for stock-based compensation, which requires outstanding options and SARS to be classified as liability-based awards and valued at fair value. The liability is remeasured and adjusted until the options are exercised, expire, or payment is made to the employees. The stock-based compensation liability is included in Other non-current liabilities and was $14,746 and $5,720 at March 31, 2017 and December 31, 2016, respectively. Compensation expense of stock-based awards granted prior to the liability accounting modification (July 2015) is recognized over the applicable vesting period based upon the greater of the awards grant date fair value (the Floor) or fair value at the reporting period. Corresponding fair value adjustments to the liability balance of awards subject to the Floor are recorded through Additional paid-in capital. Compensation expense of stock-based awards granted subsequent to the liability accounting modification is recognized over the applicable vesting period based upon fair value at the reporting period, and subsequent fair value adjustments to the corresponding liability recorded through compensation expense.

The service based options vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years. The awards granted contain a put option, which gives the recipient the ability to sell shares back to Houghton upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability, or retirement); initial public offering; change in control; or 10 years and 9 months from the association option or SAR grant date. The shares put to Houghton will be valued at fair market value as of the date of the contingent event, except for the trigger related to potential termination. Contingent events triggering the ability to put the shares include the passage of time.

The awards granted also contain a call option, which gives Houghton the right to call shares upon employee termination. The call expires at the earliest of nine months from the employment termination date, an initial

public offering, or a change in control. The shares called by Houghton will be valued at fair value as of the date of the call for any holder voluntarily terminated other than on account of good reason or retirement, or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

Redeemable Stock. During the fourth quarter of 2013, 1.86% of the outstanding shares of GH were purchased from GHG Lubricants by certain members of management. In July 2015, Houghton conducted an exchange offer which allowed shareholders of GH to exchange their shares for a like number of shares in Houghton, with the same terms and conditions as the GH share agreement. As of March 31, 2017 and December 31, 2016, these shares represented 1.24% of the total outstanding shares of Houghton. These shares contain certain call and put option terms which provide Houghton with the right, but not the obligation, to call the shares upon certain events and provides the management shareholder the ability to sell shares back to Houghton upon certain events.

The put option provides each management shareholder the ability to sell shares back to Houghton upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability or retirement); initial public offering; or change in control. The shares put to Houghton will be valued at fair value as of the put date related to a voluntary termination or if no initial public offering or change in control occurs prior to December 20, 2017.

The call option provides Houghton the right to call shares upon employee termination. The call expires at the earliest of six months from the employment termination date, an initial public offering or a change in control. Shares that become callable by Houghton will be valued at fair value as of the date of the call for any holder terminated other than on account of good reason of retirement or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

The shares put to or called by Houghton will be valued at fair value. Prior to December 20, 2015, the call provision allowed Houghton to repurchase the management shares at the lessor of cost plus deemed interest or fair value. Such provision limited the management shareholder s ability to share in the risk and rewards of equity ownership, creating a vesting or service period for the management shareholder and resulting in liability classification of such shares in accordance with accounting guidance for stock-based compensation. After June 20, 2016, upon maturity of the management shares (6 months from expiration of Houghton call provision for an amount other than fair value), the management shares are classified as Redeemable stock in mezzanine equity and recorded at fair value (redemption value). As Houghton is in an accumulated deficit position, changes in fair value (redemption value) of the management shares are recognized in Additional paid-in capital at each period end.

Off-Balance Sheet Arrangements

Houghton s primary off-balance sheet commitments are letters of credit or bank guarantees. The amount of these letters of credit or bank guarantees was $4.7 million and $4.6 million as of March 31, 2017 and December 31, 2016, respectively.

Recently Issued Accounting Standards

In February 2017, the FASB issued ASU 2017-05, *Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20)*. This guidance clarifies the scope and application of ASC 610-20, which was issued with the new revenue recognition standard, on the sale or transfer of nonfinancial assets to noncustomers. This guidance applies to nonfinancial assets, including real estate, ships and intellectual property. The new guidance, like the new revenue standard, is effective for public entities for annual reporting periods beginning after December 15, 2017, and interim periods, therein. The new revenue standard and ASC 610-20 must be adopted concurrently. Houghton is currently

evaluating ASU 2017-05 and has not determined the impact it may have on its condensed consolidated financial statements.

In March 2017, the FASB issued ASU 2017-06, *Compensation Retirement Benefits, Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This guidance requires that employers that sponsor defined benefit pension and/or other postretirement benefit plans will present the service cost component of net periodic benefit cost in the same income statement line item(s) as other employee compensation costs arising for services rendered during the period. Only the service cost component will be eligible for capitalization in assets. Other components of net periodic benefit cost will be presented separately from the line item(s) that include service cost and outside of any subtotal of operating income, if one is presented. This guidance is effective for public companies for annual periods beginning after December 15, 2017 and interim periods therein. Early adoption is permitted. Houghton is currently evaluating ASU 2017-06 and has not determined the impact it may have on its condensed consolidated financial statements.

Table of Contents

STOCK OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Certain Beneficial Owners

The following table shows how much of the Company s common stock is beneficially owned by each person known to us to be the beneficial owner of more than 5% of the Company s common stock as of December 31, 2016. Each beneficial owner has sole voting and sole dispositive power for the shares listed, except as noted.

Name and Address	Number of Shares Beneficially Owned	Approximate Percent of Class	Number of Votes (5)
BlackRock, Inc. (1) 55 East 52nd Street New York, NY 10055	1,459,067	11.0	1,459,067
Eagle Asset Management, Inc. (2) 880 Carillon Parkway St. Petersburg, FL 33716	1,137,312	8.58	1,137,312
Royce & Associates, LLC (3) 745 Fifth Avenue New York, NY 10151	955,336	7.21	955,336
The Vanguard Group (4) 100 Vanguard Boulevard Malvern, PA 19355	1,094,493	8.25	1,094,493

(1) As reported in Schedule 13G/A filed on January 17, 2017 by BlackRock, Inc. with the SEC. BlackRock, Inc. has the sole power to vote or to direct to vote 1,428,296 shares and the sole power to dispose of or to direct the disposition of 1,459,067 shares.
(2) As reported in Schedule 13G/A filed on March 3, 2017 by Eagle Asset Management, Inc. with the SEC.
(3) As reported in Schedule 13G/A filed on January 18, 2017 by Royce & Associates, LP with the SEC.
(4) As reported in Schedule 13G/A filed on February 13, 2017 by The Vanguard Group with the SEC. The Vanguard Group has the sole power to vote or direct to vote 23,228 shares, shared voting power to vote or direct to vote 2,000 shares, the sole power to dispose of or to direct the disposition of 1,069,965 shares and shared power to dispose or to direct the disposition of 24,528 shares.
(5) These shares, which are held in street name, are presumed under Article 5 of the Company s Articles of Incorporation to be entitled to one vote per share.

Table of Contents

Management

The following table shows the number of shares of Quaker s common stock beneficially owned by each of our directors and the Named Executive Officers named in the Summary Compensation Table in the proxy statement related to our 2017 Annual Meeting and by all of our directors and executive officers as a group. The information in the table is as of June 15, 2017. Each director and executive officer has sole voting and sole dispositive power over the common stock listed opposite his or her name, unless we have indicated otherwise.

Name	Aggregate Number of Shares Beneficially Owned	Approximate Percent of Class (1)	Number of Votes
Michael F. Barry	171,016(2)	1.3	1,026,232
Donald R. Caldwell	9,631	*	9,631
Robert E. Chappell	28,467	*	241,344
William R. Cook	8,006	*	8,006
Mark A. Douglas	5,018	*	24,584
Jeffry D. Frisby	8,995	*	8,995
William H. Osborne	2,634	*	2,634
Robert H. Rock	13,244	*	13,244
Fay West	1,834	*	1,834
Mary Dean Hall	5,426	*	4,146
D. Jeffry Benoliel	97,264(2)(3)	*	679,636
Jan F. Nieman	18,839(2)	*	16,146
Joseph A. Berquist	17,055(2)	*	69,390
All directors and officers as a group (19 persons)	439,171(2)	3.3	2,157,627(4)

* Less than 1%.

(1) Based upon 13,331,711 shares outstanding, and includes in the individual s total all options currently exercisable or exercisable within 60 days of the record date by the named person or the group, as applicable.

(2) Includes the following respective numbers of shares subject to options that are currently exercisable or exercisable within 60 days of the Record Date: 0 shares in the case of Mr. Barry; 1,280 shares in the case of Ms. Hall; 3,429 shares in the case of Mr. Benoliel; 2,693 shares in the case of Mr. Nieman; 0 shares in the case of Mr. Berquist; and 22,068 shares in the case of all directors and officers as a group.

(3) Includes 9,732 shares in an irrevocable trust of which Mr. Benoliel shares voting and dispositive power with an independent trustee and 10,000 shares held in an irrevocable trust of which his spouse has shared voting and dispositive power with an independent trustee.

(4) Represents 11.6% of all votes entitled to be cast at the meeting, based on information available on June 15, 2017.

Table of Contents

SHAREHOLDER PROPOSALS

Shareholders interested in submitting a proposal for inclusion in our proxy statement for next year s annual meeting must do so in compliance with applicable Securities and Exchange Commission rules and regulations. Under Rule 14a-8 of the Securities Exchange Act of 1934, as amended, adopted by the SEC, to be considered for inclusion in our proxy materials for our 2018 annual meeting, a shareholder proposal must be received in writing by our Corporate Secretary at our principal office at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428 no later than December 1, 2017. If the date of our 2018 annual meeting is moved more than 30 days before or after the anniversary date of this year s meeting, the deadline for inclusion of proposals in our proxy statement will instead be a reasonable time before we begin to print and mail our proxy materials next year. Any such proposals will also need to comply with the various provisions of Rule 14a-8, which governs the basis on which such shareholder proposals can be included or excluded from company-sponsored proxy materials.

If a shareholder desires to submit a proposal for consideration at the 2018 annual meeting, but not have the proposal included with our proxy solicitation materials relating to the 2018 annual meeting, the shareholder must comply with the procedures set forth in Section 2.12 of our By-Laws. This means that the written proposal must be received by our Corporate Secretary at our principal office on or before February 9, 2018 but no earlier than January 10, 2018 (except that if the date of the 2018 annual meeting of shareholders is more than 30 days before or more than 60 days after the anniversary date of the 2017 annual meeting, this notice must be received no earlier than the close of business on the 120th day before the date of the 2018 annual meeting and not later than the close of business on the later of the 90th day before the date of the 2018 annual meeting or, if the first public announcement of the date of the 2018 annual meeting is less than 100 days before the date of the meeting, by the 10th day after the public announcement). The notice to our Corporate Secretary must contain or be accompanied by the information required by Sections 2.12 and 2.13 of our By-Laws including, among other things: (i) the name and record address of the shareholder making the proposal and the beneficial owner, if any, on whose behalf the proposal is made; (ii) the class and number of shares of our stock which are directly or indirectly owned beneficially and/or of record by the shareholder making the proposal and the beneficial owner, if any, on whose behalf the proposal is made; (iii) a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest of the shareholder making the proposal and the beneficial owner, if any, on whose behalf the proposal is made, in such business; (iv) a description of any agreements, arrangements, proxies and understandings between such shareholder and beneficial owner, if any, and any other person or persons (including their names) related to the proposal; and (v) a description of any hedging or other transaction that has been entered into by or on behalf of, or any other agreement or understanding (including, without limitation, any put, short position or any borrowing or lending of shares) that has been made, the effect or intent of which is to mitigate loss to or manage risk of share price changes for, or to increase or decrease the voting power of, the shareholder or any shareholder associated person (as defined in the By-Laws) with respect to any share of our stock, as well as certain other information. This list of required information is not exhaustive. A copy of the full text of the relevant By-Law provisions, which includes the complete list of all information that must be submitted to us before a shareholder may submit a proposal at the 2018 annual meeting, may be obtained upon written request directed to our Corporate Secretary at our principal office. A copy of our By-Laws is also posted on the Investors/Corporate Governance section of our website at *https://www.quakerchem.com*. The procedures for shareholders to follow to nominate candidates for election to our Board of Directors are described in the discussion under the heading Governance Committee Procedures for Selecting Director Nominees below.

All proposals should be submitted in writing to: Quaker Chemical Corporation, One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, Attention: Corporate Secretary.

Table of Contents

Shareholder Nominations

The Company s Restated By-Laws (By-Laws) describe how shareholders may nominate candidates for election to our Board of Directors. For our 2018 annual meeting of shareholders, shareholders may nominate a candidate for election to our Board only by sending written notice to our Corporate Secretary at our principal office at One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428. This notice must be received on or before February 9, 2018, but no earlier than January 10, 2018 (except that if the date of the 2018 annual meeting of shareholders is more than 30 days before or more than 60 days after the anniversary date of the 2017 annual meeting, this notice must be received no earlier than the close of business on the 120th day before the date of the 2018 annual meeting and not later than the close of business on the later of the 90th day before the date of the 2018 annual meeting or, if the first public announcement of the date of the 2018 annual meeting is less than 100 days before the date of the meeting, by the 10th day after the public announcement).

The notice to our Corporate Secretary must contain or be accompanied by the information required by Sections 3.15 and 2.13 of our By-Laws, including, among other things: (i) the name, age, principal occupation and business and residence address of each person nominated; (ii) the class and number of shares of our stock which are directly or indirectly owned beneficially and/or of record by each person nominated; (iii) the name and record address of the shareholder making the nomination and the beneficial owner, if any, on whose behalf the nomination is made; (iv) the class and number of shares of our stock which are directly or indirectly owned beneficially and/or of record by the shareholder making the nomination and the beneficial owner, if any, on whose behalf the nomination is made; (v) a description of any direct and indirect compensation and other monetary agreements, arrangements and understandings, and any other material relationships (including any familial relationships) between the shareholder giving notice (and the beneficial owner) and the nominee and any respective affiliates, associates or others with whom any of them are acting; and (vi) a description of any hedging or other transaction that has been entered into by or on behalf of, or any other agreement or understanding (including, without limitation, any put, short position or any borrowing or lending of shares) that has been made, the effect or intent of which is to mitigate loss to or manage risk of share price changes for, or to increase or decrease the voting power of, the shareholder or any shareholder associated person (as defined in the By-Laws) with respect to any share of our stock, as well as certain other information. This list of required information is not exhaustive. A copy of the full text of the relevant By-Law provisions, which includes the complete list of all information that must be submitted to nominate a director, may be obtained upon written request directed to our Corporate Secretary at our principal office. A copy of our By-Laws is also posted on the Investors/Corporate Governance section of our website at *https://www.quakerchem.com*.

In addition to a shareholder s ability to nominate candidates to serve on our Board as described above, shareholders also may recommend to the Governance Committee a prospective nominee for its consideration. The Governance Committee will consider timely recommendations received from shareholders regarding director nominee candidates and accompanied by sufficient information to enable the Governance Committee to assess the candidate s qualifications, along with confirmation of the candidate s consent to serve as a director if elected. Such recommendations should be sent to our Corporate Secretary at our principal office. Any recommendation received from a shareholder after January 1 of any year is not assured of being considered for nomination in that year. The Governance Committee applies the same criteria in evaluating candidates nominated by shareholders as it does in evaluating candidates identified by Company sources. No shareholder or group of shareholders recommended a director nominee for election at Quaker s 2017 annual meeting of shareholders.

COMMUNICATIONS WITH THE BOARD

Shareholders or other interested parties may communicate with any of our directors, including non-management directors, by writing to them c/o Mr. Traub at the address set forth above. All communications received will be

forwarded to the Governance Committee and the addressee. The Board believes it is management s role to speak for the Company and, accordingly, any such communication received will be shared with the Chief Executive

Officer and other executive officers, as appropriate. The Company has adopted Corporate Governance Guidelines and other governance materials. Our Code of Conduct, Financial Code of Ethics for Senior Financial Officers, Corporate Governance Guidelines and Audit, Compensation/Management Development and Governance Committee Charters have been posted on and are available free of charge by accessing the Investors/Corporate Governance section of our website at *https://www.quakerchem.com* or by written request addressed to Quaker Chemical Corporation, One Quaker Park, 901 E. Hector Street, Conshohocken, Pennsylvania 19428, Attention: Victoria Gehris, Assistant Secretary. The references to our website contained in this proxy statement are for informational purposes, and the content of our website is not incorporated by such references in this proxy statement.

SOLICITATION OF PROXIES

We will pay the expenses of soliciting proxies in the form included with this proxy statement, including the cost of preparing, assembling and mailing material in connection with the solicitation. Quaker has retained Alliance Advisors to aid in the solicitation of proxies. It is estimated that the cost of their services will be approximately $10,000 plus expenses. In addition to the use of the mail, our directors, executive officers and employees of Quaker (without additional compensation) and employees of Alliance Advisors may solicit proxies by telephone, facsimile, electronic mail and personal contact. We will also reimburse brokerage houses and other custodians, nominees and fiduciaries for their reasonable out-of-pocket expenses for forwarding proxy materials to any beneficial holder of Quaker common stock.

OTHER MATTERS

The Board currently knows of no other business to be presented for consideration at the Meeting. If any other matters properly come before the Meeting, the proxies will be voted on such matters in accordance with the judgment of the persons named as proxies therein, or their substitutes, present and acting at the Meeting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC under the Exchange Act. You may read and copy such material at the SEC s Public Reference Room located at 100 F Street, NE, Washington, D.C. 20549 from 10:00 a.m. to 3:00 p.m. You may also obtain copies of such material from the SEC at prescribed rates by writing to the Public Reference Room of the SEC, 100 F Street, NE, Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. You can also find the Company s SEC filings at the SEC s website at http://www.sec.gov. You may also obtain copies of this proxy statement and any other reports or information that we file with the SEC, free of charge, by contacting Victoria Gehris, Assistant Secretary, toll-free at 1-800-523-7010, ext. 4246, or by writing to her at Quaker Chemical Corporation, Shareholder Services, One Quaker Park, 901 E. Hector Street, Conshohocken, PA 19428.

Our website is *https://www.quakerchem.com*. The references to our website contained in this proxy statement are for informational purposes, and the content of our website is not incorporated by such references in this proxy statement. The following documents are posted on the Investors/Corporate Governance section of our website, and can also be obtained from us by contacting Ms. Gehris at the toll-free number noted above or by writing to her at the address set forth above:

- Our Articles of Incorporation, as amended;

Our Restated By-Laws;

Our Corporate Governance Guidelines;

Our Code of Conduct and Guidelines;

- Our Financial Code of Ethics for Senior Financial Officers;
- Our Audit, Compensation/Management Development and Governance Committee Charters;
- Our Policy Relating to Confidentiality of Information and Insider Trading in Securities; and
- Our Statement of Policy with Respect to Related Party Transactions.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference into this proxy statement documents we file with the SEC, meaning that we are disclosing important information to you by referring you to another document filed separately with the SEC. The information that we incorporate by reference is considered to be a part of this proxy statement, and later information that we file with the SEC will update and supersede that information. We will not, however, incorporate by reference any documents or portions thereof that are not deemed filed with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports. This proxy statement incorporates by reference the documents set forth below that have been previously filed with the SEC:

- Annual Report on Form 10-K for the year ended December 31, 2016;
- Quarterly Reports on Form 10-Q for the three months ended March 31, 2017 and June 30, 2017;
- Current Reports on Form 8-K filed with the SEC on April 5, 2017 (two Current Reports filed), April 7 2017, May 5, 2017, May 11, 2017, May 15 2017, May 25, 2017 and July 27, 2017;
- Annual Report on Form 11-K for the year ended December 31, 2016, filed with the SEC on June 22, 2017;
- Proxy Statement on Schedule 14A dated March 31, 2017 (with respect only to information contained in such proxy statement that is incorporated into Part III of the Company s Annual Report on Form 10-K for the year ended December 31, 2016); and
- The description of the Company s Common Stock set forth in its Registration Statement on Form 8-A filed with the SEC on August 2, 1996, and any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference into this proxy statement additional documents that we may file with the SEC from the date of this proxy statement to the date of the Meeting. These include reports such as Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

A copy of all documents incorporated into this proxy statement by reference will be provided, without charge, upon written or oral request, by first-class mail. Requests for such documents should be directed to Victoria Gehris, Assistant Secretary, toll-free at 1-800-523-7010, ext. 4246, or by writing to her at Quaker Chemical Corporation, Shareholder Services, One Quaker Park, 901 E. Hector Street, Conshohocken, PA 19428.

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS OF QUAKER CHEMICAL CORPORATION.

Table of Contents

		Pages
	FINANCIAL INFORMATION	
Item 1.	**Financial Statements:**	
	Report of Independent Auditors	F-2
	Consolidated Statements of Operations	F-3
	Consolidated Statements of Comprehensive Loss	F-4
	Consolidated Statements of Financial Position	F-5
	Consolidated Statements of Cash Flows	F-7
	Consolidated Statements of Changes in Equity (Deficit)	F-8
	Notes to Consolidated Financial Statements	F-9
Item 2.	**Quantitative and Qualitative Disclosures About Market Risk**	F-49

Table of Contents

Report of Independent Auditors

To the Board of Directors of Global Houghton Ltd.

We have audited the accompanying consolidated financial statements of Global Houghton Ltd. and its subsidiaries, which comprise the consolidated statement of financial position as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, changes in equity (deficit) and cash flows for each of the three years in the period ended December 31, 2016.

Management s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Global Houghton Ltd. and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for share-based compensation and the manner in which it presents debt issuance costs in 2016. Our opinion is not modified with respect to this matter.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania

March 21, 2017, except for the effects of the revision discussed in Note 1 to the consolidated financial statements, as to which the date is June 5, 2017

Table of Contents

CONSOLIDATED STATEMENTS OF OPERATIONS

(Thousands of U.S. Dollars)

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net sales	$ 766,806	$ 781,792	$ 840,787
Cost of goods sold	499,934	516,166	561,061
Gross profit	266,872	265,626	279,726
Selling, general and administrative expense	218,246	211,206	212,037
Restructuring	1,797	5,161	1,285
Goodwill and intangibles impairment loss	40,922		
Other operating expense	1,780	5,425	5,623
Operating income	4,127	43,834	60,781
Other expense, net	(4,869)	(7,613)	(11,112)
Interest expense	(50,312)	(50,268)	(50,179)
Affiliate interest expense			(8,283)
Loss before income taxes and equity in net income of investee	(51,054)	(14,047)	(8,793)
Income tax (benefit) expense	(5,188)	(5,966)	2,375
Net loss before equity in net income of investee	(45,866)	(8,081)	(11,168)
Equity in net income of investee	9,255	7,815	5,700
Net loss	(36,611)	(266)	(5,468)
Net loss attributable to non-controlling interest	(48)	(231)	(101)
Net loss attributable to Global Houghton Ltd.	$ (36,563)	$ (35)	$ (5,367)

The accompanying Notes are an integral part of these Financial Statements.

Table of Contents

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(Thousands of U.S. Dollars)

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net loss	$ (36,611)	$ (266)	$ (5,468)
Other comprehensive income (loss):			
Foreign currency translation adjustment, net of tax benefit of $958, $2,088 and $1,476	(23,380)	(49,267)	(39,995)
Pension adjustments, net of tax benefit of $1,151, $627 and $6,063	(4,067)	(720)	(12,758)
Total other comprehensive loss	(27,447)	(49,987)	(52,753)
Comprehensive loss	$ (64,058)	$ (50,253)	$ (58,221)
Comprehensive income (loss) attributable to non-controlling interest	2,192	(272)	(101)
Comprehensive loss attributable to Global Houghton Ltd.	$ (66,250)	$ (49,981)	$ (58,120)

The accompanying Notes are an integral part of these Financial Statements.

F-4

Table of Contents

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Thousands of U.S. Dollars except share and per share amounts)

	December 31, 2016	December 31, 2015
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 44,001	$ 47,766
Restricted cash	61	936
Accounts receivable, net	130,731	127,870
Inventories	76,253	73,695
Prepaid expense and other assets	17,495	18,556
Assets held for sale	1,620	2,744
Total current assets	270,161	271,567
Property, plant and equipment, net	76,080	73,766
Goodwill	254,118	263,320
Customer relationships and other intangible assets, net	402,039	463,382
Investment in equity investee	42,783	39,457
Non-current deferred tax asset	11,843	9,485
Other non-current assets	218	479
TOTAL ASSETS	$ 1,057,242	$ 1,121,456

The accompanying Notes are an integral part of these Financial Statements.

Table of Contents

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Thousands of U.S. Dollars except share and per share amounts)

	December 31, 2016	December 31, 2015
LIABILITIES AND EQUITY		
Current Liabilities:		
Current portion of long-term debt	$ 4,610	$ 4,737
Short-term debt	7,318	
Accounts payable	79,758	71,251
Accrued employee related costs	25,843	22,198
Affiliate accounts payable	23	773
Other current liabilities	24,851	29,304
Total current liabilities	142,403	128,263
Long-term debt	703,035	706,114
Other non-current liabilities:		
Liability for pension benefits	35,316	35,273
Noncurrent deferred income tax liabilities	48,966	66,367
Other non-current liabilities	21,645	20,408
Total other non-current liabilities	105,927	122,048
TOTAL LIABILITIES	951,365	956,425
Commitments and Contingencies (Note 21)		
Redeemable Stock	3,666	
Equity:		
Global Houghton Ltd. shareholders equity		
Common Stock par value $0.01 per share; 5,000,000 authorized; 3,136,937 issued and 3,113,020 outstanding at December 31, 2016 and 3,125,566 issued and 3,115,420 outstanding at December 31, 2015	31	31
Additional paid-in capital	315,753	313,663
Accumulated deficit	(74,695)	(37,667)
Accumulated other comprehensive (loss)	(138,085)	(108,398)
Treasury stock at cost; 24,502 shares at December 31, 2016 and 10,146 at December 31, 2015	(793)	(522)
Total Global Houghton Ltd. shareholders equity	102,211	167,107
Non-controlling interest		(2,076)
TOTAL SHAREHOLDERS EQUITY	102,211	165,031
TOTAL LIABILITIES AND EQUITY	$ 1,057,242	$ 1,121,456

The accompanying Notes are an integral part of these Financial Statements.

Table of Contents

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Thousands of U.S. Dollars)

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (36,611)	$ (266)	$ (5,468)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	55,032	56,469	61,140
Non-cash debt discount/issuance cost amortization	5,829	5,576	5,707
Non-cash affiliate debt issuance cost amortization			1,224
Non-cash tax indemnification asset		3,073	4,467
(Gain) loss on disposal of property, plant, and equipment	(423)	89	470
Goodwill and intangibles impairment loss	40,922		
Asset impairments		951	967
Non-cash foreign exchange gains on debt			(876)
Equity in net income of investee, net of dividends received	(5,212)	(4,745)	(3,419)
Pension benefits	(3,379)	(7,015)	(8,214)
Stock compensation expense	2,848	2,638	1,762
Deferred income taxes	(23,916)	(21,059)	(12,558)
Adjustment to earn-out		(490)	
Changes in operating assets and liabilities, net:			
(Increase) decrease in due to/from affiliate	(672)	1,300	2,818
(Increase) in receivables	(4,548)	(2,236)	(5,780)
(Increase) in inventories	(2,448)	(2,333)	(7,394)
(Increase) decrease in other assets	(1,737)	3,086	(160)
Increase (decrease) in accounts payable	10,088	(9,302)	9,135
Increase (decrease) in other liabilities	7,341	12,277	(8,785)
Net cash provided by operating activities	43,114	38,013	35,036
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of property, plant and equipment	(9,201)	(12,633)	(10,991)
Cost of companies acquired, net of cash acquired	(39,363)	(6,737)	(12,637)
Lending to affiliate		(12,000)	
Repayments of affiliate short-term debt		12,000	
Proceeds from disposal of property, plant and equipment	1,517	36	533
Net cash used in investing activities	(47,047)	(19,334)	(23,095)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Net borrowings of short-term debt	7,990		
Net borrowings (repayments) on revolver	56	(11,000)	11,877

Repayments on capital lease obligations		(212)		(296)		(186)
Repayments of long-term debt		(4,551)		(4,550)		(24,358)
Borrowings of affiliate loans						7,730
Repayments of affiliate long-term debt						(318,885)
Payment of contingent consideration				(2,433)		
Debt issuance costs				(1,921)		
Proceeds from sale of common stock		11				
Net cash settlement of stock options		(7)		(56)		
Repurchase of common stock		(264)		(466)		
Repurchase of subsidiary common stock				(403)		
Capital contributions received						307,235
Net cash used in financing activities		3,023		(21,125)		(16,587)
Net decrease in cash and cash equivalents	$	(910)	$	(2,446)	$	(4,646)
Effect of exchange rate changes on cash and cash equivalents		(2,855)		(4,148)		(3,335)
BEGINNING CASH AND CASH EQUIVALENTS		47,766		54,360		62,341
ENDING CASH AND CASH EQUIVALENTS	$	44,001	$	47,766	$	54,360
Supplemental Cash Flow Information:						
Cash paid for taxes, net of refunds	$	23,487	$	15,319	$	15,675
Cash paid for interest	$	44,624	$	44,923	$	51,707
Purchased property, plant and equipment not yet paid for in cash	$	1,215	$	958	$	

The accompanying Notes are an integral part of these Financial Statements.

Table of Contents

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (DEFICIT)

(Thousands of U.S. Dollars except share and per share amounts)

	Common Stock								
	Shares	Par Value	Additional Paid-in Capital	Accumulated Income (Deficit)	Accumulated Other Comprehensive Income (Loss)	Treasury Shares	Treasury Stock	Non-controlling interests	Total
Balance at December 31, 2013	3,074,270	$ 31	3,336	(32,265)	(7,897)			2,897	$ (33,898)
Capitalization of Global Houghton Ltd			307,235						307,235
Net loss				(5,367)				(101)	(5,468)
Stock compensation								1,762	1,762
Other comprehensive loss					(52,753)				(52,753)
Balance at December 31, 2014	3,074,270	$ 31	$ 310,571	$ (37,632)	$ (60,650)		$	$ 4,558	$ 216,878
Net loss				(35)				(231)	(266)
Stock exchange	45,230		4,390					(4,390)	
Stock compensation			2,497					141	2,638
Management share market adjustment			667					85	752
Modification to stock-compensation liability			(4,876)						(4,876)
Stock-compensation liability market adjustment			351						351
Repurchase of subsidiary shares			(403)						(403)
Net cash settlement of stock options						6,066	(56)		(56)
Repurchase of management shares	(4,080)		466			4,080	(466)		
Reclassify accumulated foreign currency translation associated with NCI					2,198			(2,198)	
Other comprehensive loss					(49,946)			(41)	(49,987)

Balance at December 31, 2015	3,115,420	$ 31	$ 313,663	$ (37,667)	$ (108,398)	10,146	$ (522)	$ (2,076)	$ 165,031
Net loss				(36,563)				(48)	(36,611)
Stock compensation			626						626
Stock compensation adjustment for forfeitures			715	(465)					250
Stock compensation liability market adjustment			1,027						1,027
Redeemable stock market adjustment			(669)						(669)
Net cash settlement of stock options						11,856	(7)		(7)
Exercise of stock options	100		11						11
Repurchase of management shares	(2,500)		264			2,500	(264)		
Purchase non-controlling interest			116		(1,912)			1,796	
Other comprehensive (loss) income					(27,775)			328	(27,447)
Balance at December 31, 2016	3,113,020	$ 31	$ 315,753	$ (74,695)	$ (138,085)	24,502	$ (793)	$	$ 102,211

The accompanying Notes are an integral part of these Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Thousands of U.S. Dollars, except share and per share amounts)

1. Summary of Significant Accounting Policies

Background and Basis of Presentation

Global Houghton Ltd (the Company, Houghton, we, us or our) is a global supplier of industrial fluids and cher management services, primarily for the metalworking industry through its wholly-owned subsidiaries. The principal markets for the Company s products and services are the Americas, Europe, the Middle East and Africa (together, EMEA), North Asia and South Asia.

The Company is a Cayman Island corporation that was formed in February 2014 and is a member of the Hinduja group of companies. In August 2014, GHG London Limited (GHG), a private limited company organized under the laws of England and Wales and parent company to GHG Lubricants Ltd Holdings (GHG Lubricants), GH Holdings Inc. (GH) and Houghton International, Inc. and subsidiaries (HII), was contributed to the Company through a series of transactions. The series of transactions were deemed to be a reorganization of entities under common control. As a result, the financial statements are retroactively adjusted in accordance with United States Generally Accepted Accounting Principles (U.S. GAAP) as if the Company had acquired GHG and its wholly-owned subsidiaries for the entire period that the entities have been under common control (February 2014). For periods prior to February 2014 these financial statements reflect the activity of GHG and its wholly-owned subsidiaries.

On December 20, 2012, GHG, the wholly-owned subsidiary of the Company, acquired the outstanding equity interests of HII (Gulf Transaction). As a result of the Gulf Transaction, the assets and liabilities were adjusted to their estimated fair values as of December 20, 2012. This resulted in a significant increase in the carrying value of our identifiable intangible assets and goodwill. In addition, we revalued our pension obligations, recorded significant deferred tax liabilities and certain deferred tax assets and we incurred substantial additional indebtedness.

During the fourth quarter of 2013, certain members of Management purchased from GHG Lubricants outstanding shares of GH. These shares contain certain call and put option terms (see Note 1, Management Shareholders).

Effective June 15, 2015, the Board of Directors and stockholders of the Company approved an amendment to the Company s certificate of incorporation to effectuate a stock split of the Company s common stock. As a result of the stock split, common shares issued and outstanding was reduced from 308,839,803 at December 31, 2014 to 3,074,270 at June 30, 2015 and par value was reduced from $1.00 to $0.01 per share.

In July 2015, the Company conducted an exchange offer which allowed holders of GH common stock, stock options and stock appreciation rights to exchange their shares and options for a like number of common stock, stock options and stock appreciation rights in Houghton. As of December 31, 2016 and December 31, 2015, these shares represented 1.24% and 1.32% of the total outstanding shares of Houghton, respectively.

During July 2015, the Company amended its 2012 Senior Credit Facilities primarily to make guarantor, covenant and other verbiage changes as disclosed in Note 15. In connection with the amendment, GHG acquired the remaining 0.1% of outstanding equity interests of GHG Lubricants not already owned by GHG for $403.

Investments in entities over which the Company has the ability to exercise significant influence, but not control, are accounted for using the equity method of accounting. All significant intercompany transactions and balances have

been eliminated. Prior to acquiring the remaining 40% of its Japan joint venture in March 2016, the Company had non-controlling interests which were included in the financial statements.

The Financial Accounting Standards Board s (FASB s) guidance regarding the consolidation of certain Variable Interest Entities (VIEs) generally requires that assets, liabilities and results of the activities of a VIE

be included in the financial statements of the enterprise that is considered the primary beneficiary. The financial statements include the accounts of the Company and all of its subsidiaries in which a controlling interest is maintained and would include any VIEs if the Company was the primary beneficiary pursuant to the provisions of the applicable guidance. The Company is not the primary beneficiary of any VIEs.

The accompanying financial statements were prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). In the opinion of management, all adjustments necessary, which are of a normal recurring nature, have been made to present fairly the financial position, the results of operations and cash flows.

Investments in Unconsolidated Joint Ventures

Investments in unconsolidated joint ventures are included at cost plus its equity in undistributed earnings in accordance with the equity method of accounting and reflected as investment in equity investee in the balance sheets. The Company received dividends of $4,043 and $3,070 from the equity investee in 2016 and 2015, respectively.

Non-controlling interest

In March 2016, the Company acquired the remaining 40% of its Japan joint venture for a de minimis amount. This resulted in a reduction of Non-controlling interest and an increase in Additional paid-in capital and Accumulated other comprehensive loss.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make extensive estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates and assumptions.

Changes in Classifications

Certain reclassifications of prior period amounts have been made to conform to current period presentation.

Revisions

During 2017, management determined that certain management shareholdings should be classified as mezzanine equity (Redeemable stock) effective June 2016 and recorded a corresponding reclassification of the balance (previously presented in Other long-term liabilities) as of December 31, 2016. Such change in classification was determined to be immaterial to any period impacted, and the prior period presented has been revised to reflect this change in classification of the management shareholdings.

Revenue Recognition

Sales of products and services are recorded (i) upon shipment if title passes to the customer upon shipment, or upon delivery if title passes to the customer upon delivery or when services are rendered, (ii) when persuasive evidence of an arrangement exists with the customer, (iii) when the sales price is fixed and determinable, and (iv) when the collectability of the sales price is reasonably assured. Revenue is recognized net of discounts and allowances, which are comprised of trade allowances, cash discounts and sales returns and value added tax. Freight costs and any directly

related costs of shipping finished product to customers are recorded in Cost of goods sold. Billings to customers for shipping fees are included in net sales in accordance with ASC 605-45. Handling costs are incurred from the point the product is removed from inventory until it is provided to the

shipper. Handling costs are recorded in Cost of goods sold. For consigned inventory, revenue is recognized after the customer has consumed consignment inventory in their manufacturing process. Consigned inventory mainly relates to our Fluidcare and Metal Finishing businesses, in which our inventory is maintained at customer locations for use as needed in their manufacturing processes.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents represent cash in banks and cash equivalents, which includes highly liquid short-term investments and bank drafts with original maturities of three months or less. Bank deposits and other cash equivalents that are restricted by agreement or that have been clearly designated for a specific purpose are recorded as restricted cash. Such restriction on cash is primarily a result of certain foreign retirement benefits and social plans, taxes, security deposits, and bank drafts.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivables are reported at the gross outstanding amount adjusted for an allowance for doubtful accounts. Accounts receivable collectability is evaluated using a combination of factors, including past due status based on contractual terms, trends in write-offs, the age of the receivable, industry, country specific economics and political conditions and counterparty creditworthiness. Significant events, such as bankruptcies, are also considered. Accounts receivables are written off in the period in which the receivable is deemed uncollectible. Recoveries of accounts receivables previously written off are recorded when amounts are collected.

Inventories

The Company accounts for inventories under the first-in, first-out (FIFO) method, stated at the lower of cost or market.

Assets Held for Sale

Properties that are expected to be sold within the next 12 months and meet the other relevant held for sale criteria are classified as long-lived assets held for sale. An impairment loss is recorded when the carrying amount of the asset exceeds its fair value less costs to sell. Assets held for sale are not depreciated.

Property, Plant and Equipment

Property, plant and equipment are carried at cost, and presented net of accumulated depreciation. Significant expenditures which extend the useful lives of existing assets are capitalized. Maintenance and repair costs are charged to Cost of goods sold in the period incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets as follows:

Asset Class	Useful Lives
Land and buildings	
Buildings	10-40 years
Buildings and improvements	3-15 years
Machinery and equipment	
Manufacturing machinery and equipment	3-25 years

Furniture and fixtures	5-7 years
Leasehold improvements	Lesser of lease term or estimated useful life
Vehicles and computer equipment	3-5 years

Property, plant and equipment is tested for recoverability whenever events or changes in circumstances indicate that carrying values may not be recoverable. An impairment loss would be recognized if the carrying amount is

not recoverable and exceeds the fair value of the asset. Fair value is based on estimated future undiscounted cash flows. In connection with the annual impairment test, the Company considered the estimated fair value of property, plant and equipment determined within the Step 2 analysis prepared as of October 1, 2016. There was no impairment assessed on Property, plant and equipment.

The cost of assets and related accumulated depreciation is removed from the accounts when such assets are disposed of, and any related gains or losses are reflected in Other expense, net in the period of sale.

Goodwill, Intangible Assets and Other Long-Lived Assets

Goodwill represents the excess of the purchase price paid over the fair value of the identifiable net assets acquired in a business combination. Goodwill and other indefinite-lived intangible assets that are not subject to amortization are reviewed for impairment annually as of October 1 or when events or circumstances indicate that the carrying amount exceeds the fair value, including potential triggering events such as decline in actual or projected operating profits. Each of our operating segments represents a reporting unit.

The Company assesses goodwill for impairment by first comparing the carrying value of each reporting unit to its fair value using the present value of expected future cash flows. If the fair value is less than the carrying value, then the Company would perform a second test for that reporting unit to determine the amount of impairment loss, if any. The Company determines the fair value of its reporting units utilizing the Company s best estimate of long-term future revenues, operating expense, cash flows, market and general economic conditions, including discount rates, cost of capital long term growth rates and foreign currency movements. The Company believes these assumptions are consistent with those a hypothetical market participant would utilize given the circumstances present at the time estimates were made. When available and as appropriate, the Company uses comparative market multiples and other factors to corroborate the discounted cash flow results.

As of October 1, 2016, the Company performed a valuation of goodwill and indefinite-lived intangible assets to test for impairment. The fair value exceeded carrying value by 1.2% (Americas), 7.4% (EMEA), and 67.4% (North Asia). However, the South Asia reporting unit recognized a goodwill impairment loss of $15,116. The decline in the fair value of the South Asia reporting unit and resulting impairment charge was due to a decline in earnings since the 2012 acquisition resulting from changes in economic outlook within the region. We believe the estimates and assumptions used in the goodwill impairment assessment are reasonable and based on available market information, including assumptions regarding foreign currency movement, but variations in any of the assumptions could result in materially different calculations of fair value and determination of whether or not an impairment charge is indicated for the remaining reporting units or the value of the impairment determined for the South Asia reporting unit.

Other acquired intangible assets are initially measured based on their fair value. The Houghton trade name has been assigned an indefinite life due to the over 150 year history of the Houghton brand and considering the results of the annual impairment test prepared as of October 1, 2016, there were no events or circumstances that indicated that the carrying amount exceeded fair value. The fair value exceeded the carrying value by 2.8%. In connection with the annual impairment test and the Step 2 analysis prepared to measure the fair value of the finite-lived intangible assets, the South Asia reporting unit recorded an impairment loss of $25,806 related to customer relationships. Finite-lived intangible assets are amortized over their economic lives based on terms of the economic benefit as follows:

Intangible Asset	Useful Lives
Trade name (Houghton)	Indefinite

Trade name (Products)	2-20 years
Technological know-how	9-15 years
Customer relationships	11-13 years

Long-lived assets subject to amortization are reviewed for impairment using the relief-from-royalty method when events or circumstances indicate carrying amounts may not be recoverable. In connection with annual impairment test and the Step 2 analysis prepared to measure the fair value of the assets, there were no events or circumstances that indicated that the carrying amount exceeded fair value. If such analysis indicates that the carrying value of these assets is not recoverable, then the carrying value of such assets is reduced to fair value through a charge to the Company s Consolidated Statements of Operations.

Leases

The Company has both capital and operating leases. A lease is capitalized as a capital lease if any of the following criteria are met: transfer of ownership to the lessee by the end of the lease term; the lease contains a bargain purchase option; the lease term is equal to 75% or greater of the asset s useful economic life; or the present value of the future minimum lease payments is equal to or greater than 90% of the asset s fair market value. Capital leases are capitalized at the lower of the net present value of the total amount of rent payable under the leasing agreement (excluding finance charges) or fair market value of the leased asset. Capital lease assets are depreciated on a straight-line basis, over a period consistent with our normal depreciation policy for tangible fixed assets, but not exceeding the lease term. Operating lease expense is recognized over the life of the lease on a straight line basis.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. The effect upon deferred tax assets and liabilities of a change in tax rate is recognized in the period that includes the enactment date.

Significant judgment is required in determining income tax provisions and evaluating tax provisions under the accounting guidance for income taxes. The Company establishes additional provisions for income taxes based upon the technical merits of the tax positions using applicable accounting guidance. Unrecognized tax benefits are generated when there are differences between tax positions taken in a tax return and amounts recognized in the consolidated financial statements. Tax benefits are recognized in the consolidated financial statements when it is more-likely-than-not that a tax position will be sustained upon examination. Tax benefits are measured as the largest amount of tax benefit that is greater than 50% likely of being realized upon settlement. The Company regularly assesses the potential outcomes of these examinations and any future examinations for the current or prior years in determining the adequacy of the provision for income taxes. Interest accrued related to unrecognized tax benefits and income tax related penalties are both included as a component of the provision for taxes and adjust the income tax provision, the current tax liability and deferred taxes in the period of which the facts that give rise to a revision become known.

The Company follows the accounting guidance for income taxes that prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. In addition, the guidance provides rules on de-recognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition.

Environmental and Legal Liabilities and Expenditures

Liabilities are recorded when the Company determines that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. If no amount in the possible range of liability is considered more probable than any other amount, the Company records the lowest amount in the range. Due to the nature of the

monitoring requirements and the impact of remediation efforts, the Company has a policy of reserving monitoring costs for a period of three to five years. Any activity beyond that period cannot be reasonably estimated. Considering the magnitude of the reserves and duration of the accrual policy, liabilities are not recorded at a discount. Environmental expenditures are included in Selling, general and administrative expenses.

Asset Retirement Obligation

The Company follows the FASB s guidance regarding asset retirement obligations, which addresses the accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated retirement costs. Also, the Company follows the FASB s guidance for conditional asset retirement obligations (CARO), which relates to legal obligations to perform an asset retirement activity in which the timing and (or) method of settlement are conditional on a future event that may or may not be within the control of the entity. At December 31, 2016 and December 31, 2015, the exposure to such obligations is immaterial to the Company.

Foreign Currency Translation

Substantially all non-U.S. subsidiaries and affiliates use the local currency as the functional currency. For those operations, assets and liabilities are translated into U.S. dollars at the exchange rate end of the period and revenues and expenses are translated into U.S. dollars at the average exchange rates during the period. Such adjustments are reported, net of their related tax effects, as a component of Accumulated other comprehensive income (loss) (AOCI).

Assets and liabilities denominated in currencies other than the local currency are remeasured into the local currency prior to translation into U.S. dollars and the resultant exchange gains or losses are recorded in the period in which they occur. Gains and losses from remeasurement and foreign currency transactions are included in Other expense, net, except for those covered by net investment hedges or resulting from the dissolution of holding companies, which are recorded to AOCI.

Fair Value Measurements

The Company values certain financial and nonfinancial assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement dates (exit price). The Company uses various valuation techniques to measure the fair value of an asset or liability incorporating inputs that are observable, independent market data and unobservable data that management believes are predicated on the assumptions market participants would use to price an asset or liability.

The Company classifies fair value measurements within one of three levels on the fair value hierarchy. The level assigned to a fair value measurement is based on the lowest level input that is significant to the fair value measurement in its entirety. The three levels of the fair value hierarchy are as follows:

Level 1 quoted prices (unadjusted) in active markets for identical assets or liabilities for which quoted prices are accessible at the measurement date.

Level 2 inputs other than quoted prices included within Level 1 that are either directly or indirectly observable. These include quoted prices in active markets for similar assets or liabilities or quoted prices in inactive markets for identical assets or liabilities accessible at the measurement date.

Level 3 unobservable inputs that management believes are predicated on the assumptions market participants would use to measure the asset or liability at fair value.

The Company values pension assets, stock-based compensation liability and management shares under the fair value guidelines. The details of the fair value measurements and required disclosures are included within Note 3 Stock-based Compensation and Other Compensation Arrangements and Note 16 Employee Benefit Plans.

Credit Concentrations

Credit risk represents the accounting loss that would be recognized at the reporting date if counter-parties failed to perform as contracted. Concentrations of credit risk (whether on or off balance sheet) that arise from financial instruments exist for groups of customers or counterparties when they have similar economic characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions. Financial instruments with potential credit risk include cash and cash equivalents, accounts receivable and bank drafts.

The Company maintains cash and cash equivalents and bank drafts with various major financial institutions which provides potential credit risk exposure. The Company has not experienced losses from this activity. Concentrations of credit risk with respect to receivables are generally limited with no individual customers in excess of 5% of total revenue.

Restructuring

Actions associated with restructuring plans include, but are not limited to, workforce reduction, plant or facility closures and sales. Costs associated with these actions may include, but are not limited to, employee severance, accelerated post-employment benefits, plant deactivations and asset impairments.

Post-employment benefits accrued for workforce reduction related to restructuring activities are recorded in the period which a liability is incurred, except for one-time employee termination benefits that are incurred over time. Other restructuring costs are recorded when the costs are incurred. Restructuring reserves are included in Accrued expenses and other. Reserves are reviewed at least quarterly for adequacy and any necessary adjustments are recorded in the period the adjustment is determinable. Should the actual amounts differ from estimates, the amount of the restructuring costs could be materially impacted.

Hedges

The Company is exposed to the impact of changes in interest rates, foreign currency, commodity prices and credit risk. The Company does not currently use derivative instruments to mitigate the risks associated with changes in interest rates, foreign currency, commodity prices or credit risk but used interest rate derivative instruments to hedge the exposures to fluctuating interest rates during 2015. There are no interest rate derivative instruments at December 31, 2016. The Company does not enter into speculative derivative contracts for trading purposes.

During 2015, the Company entered into a £1.95 million intercompany loan and designated the loan as a hedge against the net investment as the loan will offset the change in economic value of the investment attributable to changes in the exchange rates between the euro and Great Britain pound. The Company recognizes foreign currency fluctuations on the loan in Other comprehensive income. In December 2016, the subsidiary was dissolved, the intercompany loan was forgiven and the $470 of related cumulative foreign currency fluctuations remains in Other comprehensive income. The Company recognizes all derivatives on the balance sheet.

Employee Benefit Plans

The Company applies the recognition and disclosure provisions of the accounting rules on pensions. This standard requires employers to recognize the funded status (i.e., the difference between the fair value of the plan assets and projected benefit obligation) of all Pension Plans in the Statements of Financial Position, with corresponding adjustments to AOCI. The adjustments of AOCI at adoption represents the net unrecognized actuarial gains and

losses, prior service costs and unrecognized transition amounts which were previously netted against the plan s funded status pursuant to prior accounting provisions. This amount will be subsequently recognized as the net pension (income) expense in accordance with the Company s accounting policy for

F-15

amortizing such amounts. Further, unrecognized actuarial gains and losses, prior service costs and unrecognized transaction amounts that arise in subsequent periods and are not recognized as net pension (income) expense in the same periods will be recognized as a component of AOCI.

The Company contributes to two multi-employer defined benefit pension plans under the terms of the collective bargaining union contracts assumed through the Wallover Combination. The Company s contribution rate to the multi-employer pension plans is specified in the collective bargaining union contracts and contributions are made monthly.

Stock-based Compensation

On October 16, 2013, the Board of Directors of GH approved the Stock Option Plan (the GH Plan) that provided for GH to grant stock-based compensation to their employees in the form of stock options based on service and performance vesting over a five year term. On July 16, 2014, GH amended and restated the Plan to authorize the Company to grant stock appreciation rights (SARs) to employees. A SAR is the right to receive upon exercise, shares of common stock equal in value to the excess of: (i) the Fair Market Value (as of the time of exercise) of a share of common stock, over (ii) the SAR Base Value (defined as grant date fair value of a share of common stock) per share of common stock. This difference is often referred to as the spread amount or the amount by which the SAR is in the money. A SAR confers the same economic benefit and provides the same number of shares to a holder of a SAR as the net exercise of a stock option by an optionee. The service based SARs vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years.

In July 2015, the Company conducted an exchange offer which allowed holders of GH stock options and SARS to exchange their options for a like number of share options in Houghton (Exchange Offer). In conjunction with the exchange, the Board of Directors approved the Global Houghton Ltd. Share Option and Share Appreciation Rights Plan (the Houghton Plan). The awards granted with performance vesting are deemed granted upon approval of the targets, which occurs annually, generally in the first quarter of each plan year. The number of shares of Houghton common stock that were reserved for issuance under the stock option plan at December 31, 2016 was 70,580.

Prior to the Exchange Offer, the Company applied the accounting guidance for stock-based compensation, which required the Company to expense the fair value of employee stock options granted. Compensation expense was measured at the grant date based on the fair value of the award on an accelerated basis. If awards contain certain performance conditions in order to vest, the Company recognized the cost of the award when achievement of the performance condition was probable. The Company recorded stock-based compensation expense in Selling, general and administrative expense. Stock compensation expense incurred under the GH Plan was reflected as an increase of $141 in Non-controlling interest through the date of the Exchange Offer. Upon the effective date of the Exchange Offer, the stock compensation expense accumulated in non-controlling interest was reclassified into Additional paid-in capital.

Subsequent to the Exchange Offer, the Company demonstrated the intent for allowing net cash settlements of stock-based awards as well as the removal of the six month holding period for recipients of stock-based awards. This intent triggered liability accounting for stock-based compensation, which requires outstanding options and SARS to be classified as liability-based awards and valued at fair value. The liability is remeasured and adjusted until the options are exercised, expire, or payment is made to the employees. The stock-based compensation liability is included in Other non-current liabilities and was $5,720 and $4,525 at December 31, 2016 and December 31, 2015, respectively. Compensation expense of stock-based awards granted prior to the liability accounting modification (July 2015) is recognized over the applicable vesting period based upon the greater of the awards grant date fair value (the Floor) or

fair value at the reporting period. Corresponding fair value adjustments to the liability balance of awards subject to the Floor are recorded through Additional paid-in capital. Compensation expense of stock-based awards granted subsequent to the liability accounting modification is

recognized over the applicable vesting period based upon fair value at the reporting period, and subsequent fair value adjustments to the corresponding liability recorded through compensation expense.

The service based options vest at a rate of 20% per year while performance based options vest based on annual and cumulative targets, both awards having a contractual term of ten years. The awards granted contain a put option, which gives the recipient the ability to sell shares back to the Company upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability, or retirement); initial public offering; change in control; or 10 years and 9 months from the associated option or SAR grant date. The shares put to the Company will be valued at fair market value as of the date of the contingent event, except for the trigger related to potential termination. Contingent events triggering the ability to put the shares include the passage of time.

The awards granted also contain a call option, which gives the Company the right to call shares upon employee termination. The call expires at the earliest of nine months from the employment termination date, an initial public offering, or a change in control. The shares called by the Company will be valued at fair value as of the date of the call for any holder voluntarily terminated other than on account of good reason of retirement or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

Redeemable Stock

During the fourth quarter of 2013, 1.86% of the outstanding shares of GH were purchased from GHG Lubricants by certain members of management. In July 2015, the Company conducted an exchange offer which allowed shareholders of GH to exchange their shares for a like number of shares in Houghton, with the same terms and conditions as the GH share agreement. As of December 31, 2016 and December 31, 2015, these shares represented 1.24% and 1.32% of the total outstanding shares of Houghton. These shares contain certain call and put option terms which provide the Company with the right, but not the obligation, to call the shares upon certain events and provides the management shareholder the ability to sell shares back to the Company upon certain events.

The put option provides each management shareholder the ability to sell shares back to the Company upon certain events. The put option expires at the earliest of nine months from employee termination (15 months from employee termination for death, disability or retirement); initial public offering; or change in control. The shares put to the Company will be valued at fair value as of the put date related to a voluntary termination or if no initial public offering or change in control occurs prior to December 20, 2017.

The call option provides the Company the right to call shares upon employee termination. The call expires at the earliest of six months from the employment termination date, an initial public offering or a change in control. Shares that become callable by the Company will be valued at fair value as of the date of the call for any holder terminated other than on account of good reason of retirement or the lesser of cost or fair value as of the date of the call for any holder terminated for cause.

The shares put to or called by the Company will be valued at fair value. Prior to December 20, 2015, the call provision allowed the Company to repurchase the management shares at the lessor of cost plus deemed interest or fair value. Such provision limited the management shareholder s ability to share in the risk and rewards of equity ownership, creating a vesting or service period for the management shareholder and resulting in liability classification of such shares in accordance with accounting guidance for stock-based compensation. After June 20, 2016, upon maturity of the management shares (6 months from expiration of the Company call provision for an amount other than fair value), the management shares are classified as Redeemable stock in Mezzanine equity and recorded at fair value (redemption value). As the Company is in an accumulated deficit position, changes in fair value (redemption value) of the

management shares are recognized in Additional paid-in capital at each period end.

At December 31, 2016, the fair market value of the management shares was $94.86, resulting in an equity adjustment of $669 and no impact on expense. For the years ended December 31, 2016 and 2015 there was no compensation expense as the fair value was less than the initial purchase price. For the year ended December 31, 2014, there was $57 of compensation expense recorded. Through June 30, 2015, GH repurchased 13,000 shares from former members of management. Post stock exchange, through December 31, 2016, Houghton repurchased 6,580 shares from former members of management in accordance shareholder agreements and accounted for these shares as treasury stock.

Advertising Expense

Advertising costs are expensed in the period incurred. Advertising expense is recorded within Selling, general and administrative expense. Advertising costs for the years ended December 31, 2016, 2015 and 2014 were $2,014, $2,222 and $2,246, respectively.

Research, Development and Engineering Expense

Research, development and engineering costs are expensed as incurred. Research and development costs for the years ended December 31, 2016, 2015 and 2014 were $20,843, $19,509 and $19,598, respectively.

Long-Term Incentive Plan

Under the GH Holdings, Inc. Long-Term Incentive Plan (GH LTIP) certain members of executive management are eligible to receive a cash-based award based on achievement of certain performance targets. The performance and service periods are from January 1, 2013 through December 31, 2017 and the required service period is from January 27, 2014 through December 31, 2017. At December 31, 2016, there is no liability recorded related to this plan as the targets are not anticipated to be met.

In July 2015, the Global Houghton Ltd Long-Term Incentive Plan (LTIP) was created with the same terms and conditions as the GH LTIP, except the performance targets are established annually and the performance and service periods are from January 1, 2015 through December 31, 2017. Under the terms of both plans, the participant s award shall be forfeited in the event of participant s termination for cause as defined in the agreement or upon voluntary resignation. Also under the terms, the participants awards shall fully vest upon change in control. As the participants provide service during the required service period, the Company ratably recognizes expense within Selling, general and administrative expense, based upon the Company s estimated level of achievement. The Company records the LTIP liability in Other non-current liabilities.

Adopted Guidance

In January 2016, the Company adopted ASU 2014-15, *Presentation of Financial Statements Going Concern*, which provides guidance that explicitly requires an entity s management to assess the entity s ability to continue as a going concern. The new guidance requires an entity to evaluate, at each interim and annual period, whether there are conditions or events that raise substantial doubt about the entity s ability to continue as a going concern within one year after the date the financial statements are issued (or are available to be issued) and to provide related disclosures, if applicable. No conditions or events were identified requiring additional disclosures.

In January 2016, the Company adopted ASU 2015-03, *Simplifying the Presentation of Debt Issuance Costs*, which requires entities to present debt issuance costs in the balance sheet as a direct deduction from the carrying amount of the corresponding debt liability, consistent with the presentation of debt discounts. This guidance has been applied retrospectively. As a result, total assets and total liabilities were reduced by $17,653 at December 31, 2015.

In January 2016, the Company adopted ASU 2015-05, *Internal-Use Software, Customer s Accounting Fees Paid in a Cloud Computing Arrangement*, which clarifies how customers in cloud computing arrangements should

determine whether the arrangement includes a software license. The guidance also eliminates the existing requirement for customers to account for software licenses, which will now be accounted for as licenses of intangible assets. There was no effect to the Company s consolidated financial statements.

In January 2016, the Company adopted ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*, which requires companies to classify all deferred tax assets and liabilities, and related valuation allowances, as noncurrent on the balance sheet instead of separating into current and noncurrent. This guidance has been applied retrospectively. As a result, $6,497 of current deferred income tax assets and $70 of current deferred income tax liabilities were reclassed to non-current at December 31, 2015.

In January 2016, the Company adopted ASU 2016-09, *Compensation Stock Compensation, Improvements to Employee Share-Based Payment Accounting*, which will require entities to recognize the income tax effects of awards on the income statement when the awards vest or are settled and allows for a policy elections to recognize forfeitures as they occur. In connection with adoption, the Company did not elect the non-public practical expedient related to the expected term or intrinsic value. As a result of the adoption, the Company recognized a loss of $715, net of tax benefit of $250, in Accumulated Deficit related to prior year forfeitures during 2016. The application of the remaining transition items related to tax were not deemed to have a significant impact on the consolidated financial statements.

Recent Accounting Standards

In July 2015, the FASB issued ASU 2015-11, S*implifying the Measurement of Inventory,* which requires inventory to be measured at the lower of cost and net realizable value. For publicly traded companies, the guidance is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted. The Company does not expect this guidance to have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842),* which will increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. For publicly traded companies, the guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating ASU 2016-02 and has not determined the impact it may have on the Company s consolidated financial statements nor decided upon the method of adoption.

In May 2014, the FASB issued ASU No. 2014-9, *Revenue from Contracts with Customers.* The objective of ASU 2014-09 is to establish a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and will supersede most of the existing revenue recognition guidance. The core principle of ASU 2014-09 is that an entity recognizes revenue at the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In applying the new guidance, the Company must (1) identify the contract(s) with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the contract s performance obligations; and (5) recognize revenue when the Company satisfies a performance obligation. ASU 2014-09 applies to all contracts with customers except those that are within the scope of other topics in the FASB Accounting Standards Codification.

In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers, Deferral of the Effective Date*. ASU 2015-14 is effective for interim and annual reporting periods beginning after December 15, 2017 for publicly traded companies and can be adopted by the Company using either a full retrospective or modified retrospective approach, with early adoption prohibited.

In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers, Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which clarifies how an entity should identify the unit of accounting for the principal versus agent evaluation and how it should apply the control principle to certain types of arrangements.

In April 2016, the FASB amended ASU 2016-10, *Revenue from Contracts with Customers, Identifying Performance Obligations and Licensing*. This amended FASB s new recognition guidance on identifying performance obligations to allow entities to disregard items that are immaterial in the context of the contract, clarify when a promised good or service is separately identifiable (i.e., distinct within the context of the contract) and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost (i.e., an expense).

In May 2016, the FASB amended ASU 2016-12, *Revenue from Contracts with Customers, Narrow-Scope improvements and Practical Expedients* which amended its new revenue recognition guidance on transition, collectability, noncash consideration and the presentation of sales and other similar taxes. The amendments clarify that, for a contract to be considered completed at transaction, all (or substantially all) of the revenue must have been recognized under legacy GAAP.

In December 2016, the FASB issued ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. The amendments allow entities to not make quantitative disclosures about remaining performance obligations in certain cases and require entities that use any of the new or previously existing optional exemptions to expand their qualitative disclosures.

This revenue guidance (ASU 2014-9, ASU 2015-14, ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20) is effective for interim and annual reporting periods beginning after December 15, 2017 for publicly traded companies and can be adopted by the Company using either a full retrospective or modified retrospective approach, with early adoption prohibited. The Company is currently evaluating this revenue guidance and has not determined the impact it may have on the Company s consolidated financial statements nor decided upon the method of adoption.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows, Classification of Certain Cash Receipts and Cash Payments*, which clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company does not expect this guidance to have a material impact on its consolidated Statement of Cash Flows.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes, Intra-Entity Transfers of Assets Other than Inventory*, which requires companies to account for the income tax effects of intercompany sales and transfers of assets other than inventory (e.g., intangible assets) when the transfer occurs. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those years. The Company is currently evaluating ASU 2016-16 and has not determined the impact it may have on the Company s consolidated financial statements.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows, Restricted Cash,* which requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and cash equivalents in the statement of cash flows. This guidance is effective for interim and annual reporting periods beginning after December 15, 2017 for publicly traded companies and must be adopted using a retrospective approach. The Company is currently evaluating ASU 2016-18 and has not determined the impact it may have on the Company s consolidated Statement of Cash Flows.

In December 2016, the FASB issued ASU 2016-19, *Technical Corrections and Improvements*, which corrects errors and makes minor improvements affecting a variety of topics in the ASC. Most of the amendments are not expected to have a significant effect on practice. The Company does not expect this guidance to have a material impact on its

consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, *Clarifying the Definition of a Business*, to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should

be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. This guidance is effective for publicly traded companies for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company is currently evaluating ASU 2017-01 and its impact on the accounting for future acquisitions.

In January 2017 the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*, to simplify the subsequent measurement of goodwill and eliminate the Step 2 from the goodwill impairment test. Under the amendments in this Update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit s fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. A public business entity that is a U.S. Securities and Exchange Commission (SEC) filer should adopt the amendments in this update for its annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. A public business entity that is not an SEC filer should adopt the amendments in this Update for its annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2020. The Company is currently evaluating ASU 2017-04 and will assess the impact on future goodwill impairment tests.

2. Business Acquisitions and Divestitures

Acquisition of Wallover Enterprises, Inc.

On July 6, 2016, the Company completed the acquisition of Wallover Enterprises, Inc. (Wallover) and subsidiaries, in the United States and Canada (Wallover Acquisition). Wallover is based in Strongsville, Ohio. Wallover is a branded manufacturer of consumable, custom oil and water-based industrial lubricants and metalworking fluids which are used in a broad array of manufacturing applications. Products manufactured using Wallover s industrial lubricants and metalworking fluids include: automotive components, products for the oil & gas industries, appliances, consumer and commercial electronics, aerospace components, medical devices, and various metals. Under the terms of the Wallover Acquisition, the Company acquired certain assets, including trade receivables, equipment and customer lists and also assumed certain liabilities for consideration of $39,363 net of cash received. Management believes that the acquisition will enable the Company to strengthen our market position in the consumable, custom oil and water-based industrial lubricants, as well as metalworking fluids and will complement our services in the United States and Canada.

The Company incurred and expensed transaction costs of $800 for the year ended December 31, 2016.

The preliminary purchase price allocation is based upon the estimated fair values as of the date of the acquisition, and is summarized as follows:

Consideration	
Cash paid to the sellers, net of cash acquired	$ 39,363

Assets Acquired		Liabilities Assumed	
Trade receivables	$ 4,364	Accounts payable	$ 1,543
Inventories	3,773	Accrued expenses	210
Plant property & equipment	6,395	Deferred tax liabilities	8,722

Goodwill	15,280	Liabilities assumed	10,475
Intangible assets	19,240	Net Assets Acquired	$ 39,363
Other assets	786		
Assets acquired	$ 49,838		

Table of Contents

Of the $19,240 of acquired intangible assets, $15,000 was preliminarily assigned to customer lists with an 11 year useful life, $3,600 was assigned to technology and intellectual property with a 9 year useful life, $510 was assigned to non-compete agreements with a 5 year useful life, and $130 was assigned to trademarks with a 2 years useful life. The fair value of the identifiable intangible asset was determined based on an income approach. The excess of the purchase price over the fair value of the assets acquired was recorded as Goodwill.

Recognition of inventory fair value adjustments were $298 for the year ended December 31, 2016 and were included in Cost of goods sold. Realization of the inventory fair value adjustments related to the Wallover Acquisition were recognized ratably over the estimated inventory turnover period. Amortization of the inventory fair value adjustments related to the Wallover Acquisition was completed in September 2016.

Acquisition of Braemar UK Ltd.

On March 20, 2015 the Company completed the acquisition of Braemar UK Ltd. (Braemar) in the United Kingdom (Braemar Acquisition). Braemar is a supplier of metalworking fluids and lubricants, specializing in water based systems primarily supplying to the automotive component sector and high technology aerospace industries. Under the terms of the Braemar Acquisition, the Company acquired certain assets, including trade receivables, equipment and customer lists and also assumed certain liabilities for consideration of $6,737. Management believes that the acquisition will enable the Company to strengthen the market position in the metalworking industry and will complement our services in the United Kingdom.

The Company incurred and expensed transaction costs of $118 for the year ended December 31, 2015.

The final purchase price allocation is based upon the estimated fair values as of the date of the acquisition, and is summarized as follows:

Consideration	
Cash paid to the sellers, net of cash acquired	$ 6,737

Assets Acquired		Liabilities Assumed	
Trade receivables	$ 612	Accounts payable	$ 153
Inventories	427	Accrued expenses	170
Other current assets	384	Income taxes payable	64
Customer Relationship Intangible	2,110	Deferred income taxes	457
Goodwill	4,048	Liabilities assumed	$ 844
Assets acquired	$ 7,581	Net Assets Acquired	$ 6,737

The $2,110 acquired intangible asset was customer lists with a 13 year useful life. The excess of the purchase price over the fair value of the assets acquired was recorded as Goodwill.

Acquisition of Envirotek Management Services, Inc.

On December 1, 2014, the Company completed the acquisition of Envirotek Management Services, Inc. (Envirotek) in the United States (Envirotek Acquisition). Envirotek is a provider of chemical management services including fluid management, recycling and lubrication and filtration services to the automotive and other industries. Under the terms of the Envirotek Acquisition, the Company acquired certain assets, including trade receivables, equipment and customer lists and also assumed certain liabilities for consideration of $1,700 net of cash acquired. Management believes that the acquisition will enable the Company to strengthen the market position in the chemical management services industry and will complement our Fluidcare services in North America.

Table of Contents

The Company incurred and expensed all related transaction costs of $57 for the year ended December 31, 2014.

The final purchase price allocation is based upon the estimated fair values as of the date of the acquisition, and is summarized as follows:

Consideration	
Cash paid to the sellers, net of cash acquired	$ 1,700

Assets Acquired		Liabilities Assumed	
Trade receivables	$ 1,091	Accounts payable	$ 631
Inventories	10	Accrued expenses	56
Other current assets	2	Income taxes payable	162
Plant, property and equipment	200	Deferred income taxes	485
Customer relationship intangible	1,184	Liabilities assumed	1,334
Goodwill	547	Net Assets Acquired	$ 1,700
Assets acquired	$ 3,034		

The $1,184 acquired intangible asset was customer lists with a nine year useful life. The excess of the purchase price over the fair value of the assets acquired was recorded as Goodwill.

Acquisition of Henkel Corporation Oil and Cleaner Product Line

On March 31, 2014, the Company completed the acquisition of the Henkel Corporation (Henkel), North American Steel Mill business (Henkel Acquisition). The business manufactures products such as rolling oil, pickle oil, wet temper fluids and steel mill specific cleaners. Under the terms of the Henkel Acquisition, the Company assumed certain liabilities and acquired certain assets, including finished goods inventories, equipment, customer lists, and other intangible assets such as technology and intellectual property for consideration of $10,937 in cash and an earn-out estimated at $3,720. Management believes that the acquisition will enable the Company to strengthen the market position in the steel rolling market position in North America.

The earn-out for Henkel was based upon the cumulative revenues associated with the acquired product lines for fourteen months following the close of the transaction as defined by the purchase agreement. In 2015, the Company paid $2,433 for the earn-out. This was a $490 reduction from the $2,923 accrued as component of Other current liabilities and other as of December 31, 2014. In 2014, the Company had reduced the estimated earn out by $777 based upon an analysis of forecasted revenues and the probability of achieving the forecasted cumulative revenue target. The reductions in earn-out were recorded to Other expense, net.

The Company incurred and expensed all related transaction costs of $215 for the year ended December 30, 2014.

The purchase price allocation is based upon the estimated fair values as of the date of the acquisition, and is summarized as follows:

Consideration		Assets Acquired	
Cash paid to the sellers	$ 10,937	Inventories	$ 575
Earn-out	3,720	Other current assets	2,250
Total	$ 14,657	Property, plant and equipment	393
		Intangible assets	10,020
		Goodwill	1,419
			$ 14,657

Of the $10,020 of acquired intangible assets, $6,390 was assigned to customer lists with a 12 year useful life and $3,630 was assigned to technology and intellectual property with a 12 year useful life. The Other current asset amount of $2,250 relates to a transition services agreement. Under the transition services agreement, Henkel continued to manufacture certain products for the Company through May 2015 and the costs were recognized to cost of goods sold. The excess of the purchase price over the fair value of the assets acquired was recorded as Goodwill.

Recognition of inventory fair value adjustments were $132 for the year ended December 31, 2014 and were included in Cost of goods sold. Realization of the inventory fair value adjustments related to the Henkel Acquisition were recognized ratably over the estimated inventory turnover period. Amortization of the inventory fair value adjustment related to the Henkel Acquisition was completed in April 2014.

3. Stock-based Compensation and Other Compensation Arrangements

Stock Option Plan

Stock options have been provided under two plans. The GH Plan was in effect from October 16, 2013 through June 26, 2015, when the Company conducted an exchange offer which allowed holders of GH stock options and SARS to exchange their options for a like number of share options in Houghton. In conjunction with the exchange, the Board of Directors approved the Houghton Plan.

In 2015, the Company demonstrated the intent for allowing net cash settlements of stock-based awards as well as the removal of the six month waiting period for recipients of stock-based awards. This intent triggered a modification to liability accounting for stock-based compensation, which requires the outstanding options and SARS to be measured at fair value as of the grant date and re-measured at fair value at the end of each reporting period. Compensation expense associated with service awards is recognized over the requisite service period, while performance based options are recognized over the performance period based upon achievement of targets. Under modification accounting, the cumulative expense recognized is equal to the greater of the grant-date fair value of the equity award or the fair value of the modified liability award when it is settled, which is generally determined using the Black-Scholes method. Compensation expense associated with stock options awarded subsequent to modification accounting is measured at the fair value at the end of each reporting period.

The following weighted average assumptions were used in the pricing models to estimate the fair value of options granted:

	2016	2015	2014
Range of risk-free interest rate	1.46-1.87%	1.43-1.91%	1.72%
Range of expected term (Years)	3.52-5.55	4.24-6.53	5.39
Volatility	50%	55%	32.3%
Expected dividend yield			
Estimated fair value per option granted service	$ 23.41-29.38	$ 27.77-35.08	$ 30.97
Estimated fair value per option granted performance	$ 23.39-31.27	$ 27.72-36.78	$ 30.97

The risk-free interest rate is based on the U.S Treasury yield curve. The Company considered the contractual term and the vesting schedule of the stock options to determine the expected term. Expected volatility is based on an analysis of stock price data for guideline companies. Compensation expense recognized is net of actual forfeitures.

Table of Contents

The following table provides stock-based compensation expense for the years ended December 31,

	2016	2015	2014
Stock options	$ 1,228	$ 1,545	$ 1,144
Performance shares	1,534	997	560
Stock appreciation rights	85	96	58
Stock-based compensation	$ 2,848	$ 2,638	1,762
Deferred tax benefit	$ 631	$ 692	$ 560

The following table lists option grant activity:

	Service Based Stock Options			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining contractual life (in years)	Aggregate Intrinsic Value
Outstanding, December 31, 2014	136,443	$ 105.22	8.80	$
Granted				
Exercised	2,693	105.00		
Forfeited	6,021	105.00		
Expired	1,200	105.00		
Outstanding under GH Plan as of June 26, 2015	126,529	$ 105.24		
GH options exchanged for Houghton options	126,529	105.24		
Granted	28,800	109.00		
Exercised	3,600	105.00		
Forfeited	5,400	105.00		
Expired				
Outstanding under Houghton Plan as of December 31, 2015	146,329	$ 105.99	8.27	$
Granted	18,500	104.61		
Exercised	6,944	105.00		
Forfeited	12,150	105.62		
Expired	300	105.00		
Outstanding under Houghton Plan as of December 31, 2016	145,435	$ 105.90	7.55	$
Exercisable, December 31, 2016	100,728	$ 105.52	7.28	$

	Performance Based Stock Options			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining contractual life (in years)	Aggregate Intrinsic Value
Outstanding, December 31, 2014	135,227	$ 105.20	8.80	$
Granted				
Exercised	2,021	105.00		
Forfeited	7,912	105.00		
Expired	822	105.00		
Outstanding under GH Plan as of June 26, 2015	124,472	$ 105.22		
GH options exchanged for Houghton options	67,268	105.13		
Granted	4,667	110.02		
Exercised	2,466	105.00		
Forfeited	6,534	105.00		
Expired				
Outstanding under Houghton Plan as of December 31, 2015	62,935	$ 105.51	7.99	$
Granted	42,073	106.37		
Exercised	5,004	105.00		
Forfeited				
Expired	235	105.00		
Outstanding under Houghton Plan as of December 31, 2016	99,769	$ 105.92	7.42	$
Exercisable, December 31, 2016	53,196	$ 105.59	7.02	$

The Houghton Plan establishes performance targets for performance based stock options on an annual basis. The performance awards included 139,292 options, of which 99,769 have been granted. The remaining 39,523 options are expected to be granted as 2017 performance targets are defined, which occurs annually, generally in the first quarter of each plan year.

The weighted-average grant-date fair value of service based options granted during 2016, 2015 and 2014 was $36.56, $37.50, and $33.16, respectively. The weighted-average grant-date fair value of performance based options granted during 2016, 2015 and 2014 was $36.56, $36.73, and $33.07, respectively. The total fair value of stock options vested during 2016 was $1,189 for the service based stock options and $1,364 for the performance based stock options.

During 2016, 11,856 options were net cash settled at an exercise price of $105.00 and a fair value of $105.66. As such, $7 was paid out of the Houghton Plan and 11,856 shares were recorded as treasury stock.

As of December 31, 2016, there was approximately $732 of expected future pre-tax stock-based compensation expense related to non-vested service stock options outstanding, which is expected to be recognized over the remaining period of 1.55 years. These expected future expenses were calculated assuming no change in fair value. Given that the stock options are deemed a liability instrument, a change in fair value will result in a corresponding

change to future pre-tax stock-based compensation expense.

Table of Contents

The following table lists SARs activity:

	Service Based SARS			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining contractual life (in years)	Aggregate Intrinsic Value
Outstanding, December 31, 2014	4,500	$ 105.00	8.80	$
Granted				
Exercised				
Forfeited	400	105.00		
Expired	100	105.00		
Outstanding under GH Plan as of June 26, 2015	4,000	$ 105.00		
GH SARS exchanged for Houghton SARS	4,000	105.00		
Granted	2,100	114.30		
Exercised				
Forfeited				
Expired				
Outstanding under Houghton Plan as of December 31, 2015	6,100	$ 108.20	8.98	$
Granted				
Exercised				
Forfeited	1,200	105.00		
Expired				
Outstanding under Houghton Plan as of December 31, 2016	4,900	$ 108.99	8.08	$
Exercisable, December 31, 2016	2,420	$ 106.61	7.77	$

	Performance Based SARS			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining contractual life (in years)	Aggregate Intrinsic Value
Outstanding, December 31, 2014	4,500	$ 105.00	8.80	$
Granted				
Exercised				
Forfeited	439	105.00		

Expired	61	105.00		
Outstanding under GH Plan as of June 26, 2015	4,000	$ 105.00		
GH SARS exchanged for Houghton SARS	1,516	105.00		
Granted	466	114.30		
Exercised				
Forfeited				
Expired				
Outstanding under Houghton Plan as of December 31, 2015	1,982	$ 107.19	8.85	$
Granted	966	109.34		
Exercised				
Forfeited				
Expired				
Outstanding under Houghton Plan as of December 31, 2016	2,948	$ 107.87	7.95	$
Exercisable, December 31, 2016	1,918	$ 107.14	7.95	$

Table of Contents

The Houghton Plan establishes performance targets for performance based SARS on an annual basis. The SARS awards included 4,133 awards, of which 2,948 have been granted. The remaining 1,185 awards are expected to be granted as 2017 performance targets are defined, which occurs annually, generally in the first quarter of each plan year.

The total fair value of SARS vested during 2016 was $38 for the service based SARS and $46 for the performance based SARS.

As of December 31, 2016 there was approximately $53 of expected future pre-tax compensation expense related to nonvested service SARS outstanding, which is expected to be recognized over the remaining period of 2.18 years. These expected future expenses were calculated assuming no change in fair value. Given that the SARS are deemed a liability instrument, a change in fair value will results in a corresponding change to the future pre-tax stock-based compensation expense.

Long-Term Incentive Plan

Long-term incentive plans exist under both GH Holdings, Inc. and Global Houghton Ltd. The performance and service periods under the GH LTIP are from January 1, 2013 through December 31, 2017 and the required service period is from January 27, 2014 through December 31, 2017. The performance and service periods under the LTIP are from January 1, 2015 through December 31, 2017.

At December 31, 2016 and December 31, 2015, the Company had a liability recorded of $5,000 and $2,438, respectively, as a component of Other non-current liabilities based upon the estimated achievement of the performance goal. For the year ended December 31, 2016, LTIP expense was $2,562. For the year ended December 31, 2015, LTIP expense was $1,577, which includes $2,438 associated with the Global Houghton Ltd LTIP Plan and the reversal of $861 of expense due to performance goals not being met under the GH Holdings, Inc. LTIP Plan. For the year ending December 31, 2014, $861 of expense was recognized under the GH Holdings, Inc. LTIP Plan. LTIP expense was recognized as a component of Selling, general and administrative expenses.

4. Other Expenses

Other Operating Expense

Other operating expenses were $1,780 for year ended December 31, 2016. This primarily consisted of $1,355 related to strategic headcount reductions and the remainder related to other corporate activities.

Other operating expenses were $5,425 for year ended December 31, 2015. This primarily consisted of $3,288 in costs associated with a potential initial public offering, a fixed asset impairment of $814 related to the expected sale of the Genoa, Italy manufacturing facility adjusted for recent offers from potential buyers in declining market conditions and $521 in strategic headcount reductions. The remainder related to other corporate activities.

Other operating expenses were $5,623 for the year ended December 31, 2014. This primarily consisted of $3,206 in costs associated with a potential initial public offering, $1,180 in strategic headcount reductions and $425 in employee related costs. The remainder related to other corporate activities.

Other Expense, net

Other expense was $4,869 for the year ended December 31, 2016. This primarily related to a $2,096 claim pending with Brazilian tax authorities specific to VAT taxes, $1,537 in foreign currency transaction losses, $605 of royalties expense, $526 in other non-income related tax expense, and $332 paid to a consultant to the Board of Directors. The remainder related to other non-operating expenses and income.

Other expense was $7,613 for the year ended December 31, 2015. This primarily consisted of $4,202 in foreign currency transaction losses, $3,073 reduction of tax indemnification asset, $637 of royalties expense and $636 in non-income related tax expense, offset by $636 increase in amounts received in settlement and $490 reduction to the estimated earn out related to the 2014 acquisition of the Henkel Corporation (Henkel) North American steel mill business. The remainder related to other non-operating expenses.

Other expense was $11,112 for the year ended December 31, 2014. This primarily consisted of $4,467 related to the reduction of a tax indemnification asset for tolling of pre-acquisition statutes net of accrued interest, $3,420 in foreign currency transaction losses, $1,578 in non-income related tax expense, $893 of royalty expense and $470 loss on disposals of property, plant and equipment. The remainder related to other non-operating expenses.

5. Restructuring

During the acquisition of Wallover in July 2016, the Company made strategic decisions to close two plant facilities and reduce headcount in East Liverpool, Ohio and Hamilton, Ohio. The Company expects to complete these activities within twelve months, except for ongoing legal costs associated with employee matters connected to these activities. Also in 2016, an $815 environmental accrual related to the Genoa, Italy facility was recorded as other income as a result of the reversal of the accrual, as this property was sold in January 2017 with no further obligations.

During 2015, the Company made strategic decisions resulting in restructuring activities related to significant headcount reduction programs in the United States and Europe. The Company continues to incur ongoing legal costs associated with employee matters connected to these activities. In 2015, based on offers from potential buyers in declining market conditions, a fixed asset impairment for $136 was recorded related to the expected sale of the Rouen, France manufacturing facility, which was part of a 2013 restructuring event.

During 2014, the Company continued strategic headcount reduction programs and restructuring activities initiated in 2012 related to the Shell MWO acquisition and 2013 related to headcount reduction programs in Europe and Canada. In 2014, fixed asset impairment of $967 was recorded, of which, $398 was related to the expected sale of the Rouen, France manufacturing facility and $569 was related to the expected sale of the Genoa, Italy facility adjusted for recent offers from potential buyers in declining market conditions.

The following table summarizes restructuring charges:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Severance cost	$ 2,190	$ 4,464	$ (150)
Facility closing costs	(393)	560	468
Fixed asset impairments		137	967
Total	$ 1,797	$ 5,161	$ 1,285

The following table summarizes the movements in the accrued liabilities relating to the cost categories described above:

	December 31, 2015	Provisions	Non-cash Transactions	Cash Reductions	December 31, 2016
Severance cost	$ 2,648	$ 2,190	$ (47)	$ (3,306)	$ 1,485
Facility closing costs	1,431	(393)	(50)	(557)	431
Fixed asset impairments					
Total	$ 4,079	$ 1,797	$ (97)	$ (3,863)	$ 1,916

	December 31, 2014	Provisions	Non-cash Transactions	Cash Reductions	December 31, 2015
Severance cost	$ 425	$ 4,464	$ (53)	$ (2,188)	$ 2,648
Facility closing costs	1,361	560	(131)	(359)	1,431
Fixed asset impairments		137	(137)		
Total	$ 1,786	$ 5,161	$ (321)	$ (2,547)	$ 4,079

6. Income Taxes

The provision for (benefit from) income taxes is summarized as follows:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Current:			
U.S. federal and state	$ 1,874	$ 126	$ (859)
Foreign	16,854	14,967	15,792
Total current	18,728	15,093	14,933
Deferred:			
U.S. federal and state	(9,416)	(8,178)	(4,157)
Foreign	(14,500)	(12,881)	(8,401)
Total deferred	(23,916)	(21,059)	(12,558)
Total	$ (5,188)	$ (5,966)	$ 2,375

Income (loss) before income taxes were as follows:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Domestic	$ (20,428)	$ (24,709)	$ (21,935)
Foreign	(30,626)	10,662	13,142
Pre-tax (loss) income	$ (51,054)	$ (14,047)	$ (8,793)

Table of Contents

Differences between income tax expense (benefit) at the U.S. Federal statutory rate of 35% and the Company s continuing operations effective tax rate for 2014, 2015 and 2016 were:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Tax at statutory rate	$ (17,869)	$ (4,917)	$ (3,079)
Permanent differences:			
Management fees	770	700	700
Indemnification asset		1,076	1,403
Meals & entertainment	343	323	333
Non-deductible interest expense			1,741
Non-deductible acquisition costs	535	(1,114)	20
Non-deductible foreign currency losses			761
Transfer pricing	258	113	503
Domestic production activities deduction	(250)	(360)	
Goodwill Impairment	5,291		
All other permanent differences	1,643	1,214	1,615
State tax expense (benefit) Net of federal benefit	294	490	(238)
Adjustment to the deferred tax asset valuation allowance	1,410	242	698
Foreign rate differential	1,270	(2,344)	(1,670)
R&D Credit	(932)		
Taxes on foreign earnings	3,443	2,908	3,425
Unrecognized tax benefits	(1,080)	(1,788)	(2,966)
Change in enacted tax rates	(314)	(2,509)	(871)
Change in enacted tax law			
Total	$ (5,188)	$ (5,966)	$ 2,375

As of December 31, 2016, the Company had the following federal, state and foreign net operating loss carryforwards:

Expiration	2016
2017	$ 2,183
2018	3,276
2019	2,556
2020-2034	94,201
Indefinite	12,918
Total	$ 115,134

In addition to $285 of non-US foreign tax credits which are not subject to expiration, the Company had excess U.S. foreign tax credits of $56,689 as of December 31, 2016 subject to the following expirations:

Expiration	2016
2017	2,575
2018	6,161
2019	7,072
2020-2026	40,881
Total	$ 56,689

Deferred income taxes arise due to certain items being includable in the determination of taxable income in periods different than for financial reporting purposes. The tax effect of significant types of temporary

differences and carryforwards that gave rise to the Company s deferred tax assets and liabilities as of December 31, 2016 and 2015 follow:

	December 31, 2016	December 31, 2015
Deferred tax assets:		
Accrued expenses	$ 6,948	$ 5,762
Capitalized income and expenditures	3,354	3,650
Accrued pensions and post-retirement benefits	11,271	11,503
Tax loss carry forwards	8,320	9,135
Foreign and other tax credit carryforwards	56,974	49,216
Advance royalties	5,734	8,380
Other deferred tax asset	7,175	5,783
Transaction costs	2,213	2,419
Environmental and restructuring reserves	767	849
Foreign Exchange	49	
Inventory	1,410	1,140
	104,215	97,837
Valuation allowance	(9,320)	(8,001)
	94,895	89,836
Deferred tax liabilities:		
Depreciable and amortizable assets	(121,983)	(135,162)
Investment in subsidiary	(9,927)	(11,367)
Foreign exchange difference		(55)
Other	(108)	(134)
	(132,018)	(146,718)
Net deferred tax liabilities	$ (37,123)	$ (56,882)

In assessing the realizability of deferred tax assets, management considers whether it is more-likely-than-not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities (including the impact of available carryback and carryforward periods), projected future taxable income, and tax-planning strategies and the Company s ability to implement tax planning in a timely manner when making this assessment. Based upon the level of historical taxable income, projections for future taxable income and the reversal of deferred tax liabilities over the periods in which the deferred tax assets are deductible, management believes it is more-likely-than-not that the Company will realize the benefits of these deductible differences, net of the existing valuation allowances at December 31, 2015 and 2016. The amount of the deferred tax asset considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

U.S. foreign tax credit carryforwards of $56,689 and $48,894 in 2016 and 2015, respectively, can be carried forward up to 10 years and expire through 2026 whereas non-US foreign tax credit carryforwards of $285 and $322,

respectively, are not subject to expiration. During 2016, a valuation allowance of $2,575 was recorded against foreign tax credit related deferred tax assets due to the uncertainty regarding the utilization of these credits prior to expiration. The valuation allowances of $9,320 and $8,001 at December 31, 2016 and 2015, respectively, were primarily related to federal, state and foreign net operating loss U.S. and foreign tax credit carryforwards that, in the judgment of management, are not more-likely-than-not to be realized.

The Company recognizes the tax benefits of an uncertain tax position only if those benefits are more- likely-than-not to be sustained based on existing tax law. Additionally, the Company establishes a reserve for tax

positions that are more-likely-than-not to be sustained based on existing tax law, but uncertain in the ultimate benefit to be sustained upon examination by the relevant taxing authorities. Unrecognized tax benefits are subsequently recognized at the time the more-likely-than-not recognition threshold is met, the tax matter is effectively settled or the statute of limitations for the relevant taxing authority to examine and challenge the tax position has expired, whichever is earlier.

The Company had approximately $4,444 and $5,555 of total gross unrecognized tax benefits as of December 31, 2016 and December 31, 2015 respectively. The gross unrecognized tax benefits relate primarily to state income taxes and intercompany transactions. A reconciliation of the beginning and ending amount of gross unrecognized tax benefits is presented in the following table:

	2016	2015
Gross unrecognized tax benefits at beginning of year	$ 5,555	$ 7,041
Gross increase for tax positions of prior years	585	41
Gross decrease for tax positions of prior years	(464)	(795)
Gross increase for tax positions of current year	968	1,518
Gross decreases for tax positions due to settlements	(1,935)	(411)
Gross decreases for tax positions due to lapse of statute of limitations	(265)	(1,839)
Gross unrecognized tax benefits at end of year	$ 4,444	$ 5,555

The Company accounts for interest and penalties related to income tax matters as income tax expense. The Company had accrued $1,960 and $1,843 for interest and penalties at December 31, 2016 and 2015, respectively.

The Company has operations in approximately 27 states and over 30 foreign taxing jurisdictions. The Company files income tax returns in the US federal jurisdiction and various state and local jurisdictions. The Company s number of open tax years vary by jurisdiction. Interest and penalties accrued during the year were not material as the primary change during the year related to the movement of foreign exchange rates. The Company s returns are no longer subject to US federal tax examinations for years ended before December 31, 2012 except to the extent of deductions of net operating losses originating prior to 2012.

In connection with the Gulf Transaction, the Company recognized a tax indemnification asset of $11,447 in the opening balance sheet to reflect an offsetting asset for the recorded uncertain tax liability. Pursuant to the indemnification agreement, the Company was entitled to cash proceeds in connection with any negative outcome related to uncertain tax positions within the three year period following acquisition. During the periods ended December 31, 2016, 2015 and 2014, the Company recorded charges of $0, $3,073 and $4,467, respectively, to operations related to reduction to indemnification asset for tolling of pre-acquisition statutes net of increases for accrued interest. An offsetting benefit is reflected in income tax expense. The indemnification asset of $3,989 as of December 31, 2014 fully reversed in 2015 through combination of tolling of pre-acquisition statutes and termination of tax indemnification in 2015.

The Company has not provided US deferred taxes on cumulative earnings of non-US affiliates and associated companies that have been reinvested indefinitely. These earnings relate to ongoing operations and, at December 31, 2016, were $391,734. These earnings have been reinvested in active non-US business operations and the Company does not intend to repatriate these earnings to fund US operations. Because of the availability of US foreign tax credits, it is not practicable to determine the US federal income tax liability that would be payable if such earnings

were not reinvested indefinitely. Deferred taxes have been provided for earnings of non-US affiliates and associated companies where the Company plans to remit those earnings.

7. Accounts Receivable, net

Accounts receivables at December 31, 2016 and 2015 were $137,195 and $133,113, respectively, which were offset by an allowance for doubtful accounts of $6,464 and $5,243, respectively.

Total expense related to the reserve for doubtful accounts for the year ended December 31, 2016, 2015 and 2014 were $1,547, $1,083, and $737.

8. Inventories

The Company s total inventory consists of the following:

	December 31, 2016	December 31, 2015
Raw materials	$ 26,558	$ 24,722
Work in process	374	534
Finished goods	49,321	48,439
Total	$ 76,253	$ 73,695

9. Other Current Assets

The Company s other current assets consisted of the following:

	December 31, 2016	December 31, 2015
Prepaid expenses	$ 863	$ 2,080
Total refundable taxes	3,530	3,362
Marketable securities	10,035	10,331
Current deposits	892	895
Other current assets	2,175	1,888
Total	$ 17,495	$ 18,556

10. Assets Held for Sale

Assets held for sale are reported at the lower of the carrying amount or the fair value less costs to sell. Assets held for sale were $1,620 and $2,744 as of December 31, 2016 and December 31, 2015, respectively, and represented Genoa, Italy in 2016 and both the Genoa, Italy and Wuppertal, Germany manufacturing plants in 2015. The fair value of the assets was determined by the Company based upon prices for similar assets. In 2015 a fixed asset impairment of $815 related to the expected sale of the Genoa, Italy manufacturing facility was recorded to Other operating expense based upon recent offers from potential buyers in declining market conditions. The Wuppertal, Germany site was sold during March 2016 with the gain of $56 included in Other expense, net. The Genoa property was sold in January 2017. No gain or loss was recorded as the property was sold at an amount equal to the carrying value.

11. Property, Plant and Equipment

Property, plant and equipment comprise of the following:

	December 31, 2016	December 31, 2015
Land and buildings	$ 43,875	$ 40,784
Machinery and equipment	68,069	60,445
Construction in progress	2,666	1,770
	$ 114,610	$ 102,999
Less: Accumulated depreciation	(38,530)	(29,233)
Total	$ 76,080	$ 73,766

Depreciation expense, including depreciation on assets under capital leases, are as follows:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Depreciation Expense	$ 11,175	$ 11,721	$ 13,032

The gain (loss) on disposal of property, plant and equipment are as follows:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
(Gain) loss on disposal	$ (423)	$ 89	$ 470

12. Goodwill & Intangible Assets

Goodwill

The changes in the carrying amount of Goodwill are as follows:

Balance as of December 31, 2015	$ 263,320
Wallover acquisition	15,280
South Asia impairment loss	(15,116)
Currency translation adjustments	(9,366)
Balance as of December 31, 2016	$ 254,118

In 2016, the Company recognized an impairment of goodwill in the amount of $15,116 related to the annual impairment review of its South Asia operations. The goodwill impairment loss represented substantially all of the goodwill reported in South Asia s operations.

Intangible Assets

Intangible assets are comprised of the following:

	Gross Carrying Amount		Accumulated Amortization	
	December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
Customer relationships	$ 476,869	$ 517,067	$ (140,868)	$ (119,519)
Technological know-how	57,906	54,306	(14,657)	(10,776)

Trade name (Houghton)	21,115	21,115		
Trade name (Products)	1,530	1,400	(315)	(211)
Non-Compete Covenants	510		(51)	
Total	$ 557,930	$ 593,888	$ (155,891)	$ (130,506)

In 2016, the Company recognized an impairment of customer relationships in the amount of $25,806 related to the annual impairment review of its South Asia reporting unit.

Amortization expense for the year ended December 31, 2016, 2015 and 2014 was $43,857, $44,748, and $48,302, respectively.

As of December 31, 2016, expected amortization expense for each of the next five years and thereafter was as follows:

2017	40,721
2018	40,721
2019	40,721
2020	40,721
2021	40,721
Thereafter	177,319
Total	$ 380,924

13. Investments in Equity Investee

As of December 31, 2016 the Company held a 49.99% investment in Korea Houghton Corporation (South Korea).The carrying amount of the Company s equity investment in Korea Houghton Corporation at December, 31, 2016 was $42,783.

Summarized financial information of Korea Houghton Corporation is as follows:

	December 31, 2016	December 31, 2015
Current assets	$ 98,517	$ 94,768
Non-current assets	28,490	29,080
Current liabilities	28,829	31,336
Non-current liabilities	10,720	11,489

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net sales	$ 173,087	$ 180,571	$ 196,325
Gross margin	56,421	54,688	48,406
Income before taxes	22,800	20,969	14,449
Net income	18,275	16,504	11,865

During 2016, 2015 and 2014, the company received dividend distributions from Korea Houghton Corporation of approximately $4,043, $3,070, and $2,281, which were accounted for as reductions of the Company s investment in equity investee.

At December 31, 2016 and December 31, 2015 the Company s share of undistributed earnings from Korea Houghton were $41,376 and $38,224, respectively.

Table of Contents

14. Other Current Liabilities

Other current liabilities consist of the following:

	December 31, 2016	December 31, 2015
Other accrued expense	$ 6,303	$ 5,588
Non-employee commissions	1,217	1,188
Accrued environmental costs	1,919	2,129
Accrued professional fees	2,430	1,791
Deferred revenue	2,235	1,707
Other accrued taxes	5,056	4,667
Accrued restructuring and other costs	2,776	4,931
Accrued income taxes	1,618	5,923
Other	1,297	1,380
	$ 24,851	$ 29,304

15. Financing Activities

Credit Arrangements

Credit Arrangements consists of borrowings under unsecured bank lines of credit and discounting facilities. The bank lines of credit were not collateralized and the discounting facilities were collateralized by the underlying accounts receivable. The total available under these facilities are as follows:

	December 31, 2016	December 31, 2015
Capacity	$ 23,670	$ 13,853
Outstanding borrowed	7,318	
Unused capacity	$ 16,352	$ 13,853
Weighted-average interest rate	4.07%	

Debt

Debt is comprised of the following:

	December 31, 2016	December 31, 2015
2012 Senior Credit Facilities		
First Lien U.S. Term Loans	$ 436,800	$ 441,350

First Lien Dutch Term Loans		88,121		92,511
Second Lien U.S. Term Loans		200,000		200,000
Revolving Facilities				
		724,921		733,861
Less: Debt Discounts		(4,199)		(5,629)
Less: Debt Issuance Costs		(13,147)		(17,653)
2012 Senior Credit Facilities, net		707,575		710,579
Obligations under capital leases		70		272
Total Debt		707,645		710,851
Less: Current portion of long-term debt		(4,610)		(4,737)
Total long-term debt	$	703,035	$	706,114

Fixed maturities of the Company s debt are as follows:

2017	$ 4,550
2018	4,550
2019	515,821
2020	200,000
Total	724,921

The Company incurred the following debt related expenses that are included within Interest expense:

	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Interest Expense	$ 44,661	$ 44,860	$ 44,808
Amortization of debt issuance costs	$ 4,419	$ 4,167	$ 4,105
Amortization of debt discounts	$ 1,409	$ 1,409	$ 1,440

Senior Credit Facilities

On December 20, 2012, in connection with the GH Transaction, the Company entered into credit facilities (2012 Senior Credit Facilities) which included the first and second lien facilities. The first lien consisted of $455,000 in U.S. dollar denominated Term Loans (First Lien U.S. Term Loan), 100,000 in euro-denominated Term Loans (First Lien Dutch Term Loan), and dollar and multicurrency revolving facilities with a net capacity of $50,000 (Revolving Credit Facility). The second lien facility consisted of $200,000 in U.S. Term Loans (Second Lien U.S. Term Loan).

Borrowings under the 2012 Senior Credit Facilities provide for a selection of interest rates, at the option of the Company, based upon the prevailing LIBOR or prime rate, plus applicable margin, subject to a 1.25% floor. In addition to paying interest on outstanding principal under the First Lien U.S. Term Loans, Dutch Term Loan, and Second Lien U.S. Term Loan, the Company pays a commitment fee to the lenders under the 2012 Revolving Credit Facility in respect of unutilized commitments. Commitment fees paid to the lender were $204, $172, and $168 for 2016, 2015 and 2014, respectively. The line of credit is subject to normal terms related to default and change of control.

Subject to voluntary prepayments, the Company is required to pay 0.25% of the funded initial principal balances on the First Lien U.S. Term Loans and Dutch Term Loans quarterly through the maturity date, at which time the remaining aggregate principal balance is due. The 2012 Revolving Credit Facility matures in December 2017. The First Lien U.S. Term Loan and First Lien Dutch Term Loan mature in December 2019. The Second Lien U.S. Term Loan matures in December 2020.

The net proceeds from the 2012 Senior Credit Facilities were used to repay the 2011 Senior Credit Facility, with the balance of the borrowings used to fund the GH Transaction. In conjunction with obtaining the 2012 Senior Credit Facilities, the Company capitalized debt issuance costs of $22,557 to Other non-current assets in the period ended December 31, 2012. The Company also capitalized $10,111 of debt discount, in the period ended December 31, 2012, related to the 2012 Senior Credit Facilities.

During May 2013, the Company amended the 2012 Senior Credit Facilities, which resulted in a reduction in the interest rates applicable to the First Lien U.S. and Dutch Term Loans of 1.25% and Revolving Credit Facility of 0.25%. Also, the LIBOR floor following the amendment was 1.00% in the case of the First Lien U.S. Term Loan and the First Lien Dutch Term Loan and 1.25% in the case of the Second Lien U.S. Term Loan. The Company paid fees of $6,672 in connection with this amendment. The Company accounted for the amendment in accordance with accounting guidance for debt modifications and extinguishments. Accordingly, amendment fees of $5,834 were capitalized and included in Other non-current assets, and third party fees of $838 were expensed as Interest expense. Capitalized fees will be amortized through the debt maturity in 2019.

During July 2015, the Company amended its 2012 Senior Credit Facilities primarily to make guarantor, covenant and other verbiage changes. In conjunction with the amendment, the Company incurred a 0.25% increase in the interest rate margin on its First Lien and Second Lien Term Loans. The Company also incurred approximately $1,921 in amendment fees paid at closing to the lenders and approximately $1,149 in attorney, arrangement and accounting fees. The other terms and conditions of the credit facilities, discussed herein, were unchanged. The Company accounted for the amendment in accordance with accounting guidance for debt modifications and extinguishments. The Company considered the limited changes presented by the amendment and reviewed the old and new lenders on a creditor by creditor basis and determined that the amendment was a modification. Therefore the amendment fees of $1,921 were capitalized as additional debt issuance costs within Other non-current assets with all other fees being expensed as Interest expense. Capitalized fees will be amortized through the debt maturity in 2019.

In March 2017, the Company extended the maturity date of the Revolving Credit Facility from December 2017 to September 2019. The extended facility was reduced to capacity of $41,000. No other changes were made to the terms of the agreement. The Company paid $195 in fees related to the amendment.

The Company is required to make mandatory repayments on the first and second lien loans based upon a 1% loan amortization rate. Additional payments are required if net proceeds from assets sales exceed $5,000 individually or $10,000 cumulatively per annum. Further additional payments are required per annum based on an excess cash flow calculation that adjusts net income for working capital and other items, 50% of the calculated amount must be used to make a payment on the debt. Mandatory repayments may be deferred due to voluntary prepayments. As of December 31, 2016, an excess cash flow payment is not required. Covenants include requirements for quarterly reporting to the lenders regarding compliance based upon interest and leverage ratios, reporting of environmental matters exceeding $15,000, limitation on dividend amounts, certain limitations on additional indebtedness, and restrictions on asset sales in excess of $35,000.

The Company has unused capacity under the Revolving Credit Facility of $45,410 and $43,230 net of bank letters of credit of $4,590 and $6,770 as of December 31, 2016 and December 31, 2015, respectively.

The interest rates on the 2012 Senior Credit Facilities, as amended, were as follows:

	December 31, 2016	December 31, 2015
First Lien U.S. Term Loan	4.25%	4.25%
Revolving Credit Facility	5.00%	4.20%
First Lien Dutch Term Loan	4.75%	4.75%
Second Lien U.S. Term Loan	9.75%	9.75%

As of December 31, 2016 and December 31, 2015, the Company was in compliance with its financial covenants. The Company also pledged as collateral to its lenders substantially all U.S. assets, specific Non-U.S. assets and stock of certain subsidiaries.

Long-term debt is reported at carrying value of $707,575, with a face value of $724,921. The fair value as of December 31, 2016 was $728,514.

Affiliate Debt

On December 12, 2012, in connection with the Gulf Transaction, the Company entered into a loan agreement with HGHL Holdings Limited (HGHL), an affiliated entity, to borrow $313,275 at a rate of 5.60% per annum. The terms of the loan called for repayment of the loan by December 18, 2019. Additionally, the Company incurred a debt guarantee fee of $1,500 related to the financing transaction, which was amortized over the life of the loan to affiliate interest expense.

Table of Contents

During the second quarter of 2013, Gulf International Lubricants Ltd (GILLC), a Cayman Islands corporation and an affiliate member of the Hinduja Group of companies, lent the Company $120,000 on an interest free basis

The Company repaid and re-borrowed principal amounts under these affiliate loans from time to time. During 2014, total payments of principal under these loans were $318,885 and total re-borrowings of principal under these loans were $7,730.

During the third quarter of 2014, Gulf Houghton Lubricants Limited (GHLL), a Cayman Islands exempted company and an affiliate member of the Hinduja Group of companies, made a capital contribution to the Company of $307,235. The proceeds from this capital contribution were used to repay the remaining loan balance, and accrued interest, of the HGHL and GILLC loans. Interest expense related to the HGHL loan for the year ended December 31, 2014 was $8,283. Amortization of the HGHL debt guarantee fee included within affiliate interest expense was $1,224 for the year ended 2014.

16. Employee Benefit Plans

The Company has defined benefit pension plans (Pension Plans) covering certain U.S. salaried and hourly employees (U.S. Plans) as well as certain employees in the United Kingdom, France and Germany (Non-U.S. Plans). The U.S. Plans provide benefits based on an employee s years of service and compensation received for the highest five consecutive years of earnings. The Company made the decision to freeze benefits for non-union employees as of March 31, 2009 for the U.S. Plans. The Non-U.S. Plans provide benefits based on a formula of years of service and a percentage of compensation which varies among the Non-U.S. Plans. The Company made the decision to freeze its United Kingdom Non-U.S. plan benefits as of May 1, 2013. In 2015 the Company annuitized the assets in the Canada plan in order to remove Houghton as the primary risk bearer and the annuity company now makes direct payments to the pension plan members. The Company s funding policy is consistent with funding requirements of applicable government laws and regulations.

The components of net pension expense are as follows:

	U.S. Plans		
	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net pension (income) expense:			
Expected return on net assets	$ (3,717)	$ (4,305)	$ (4,476)
Service cost-benefits earned during period	45	55	43
Interest cost on projected benefit obligation	3,389	3,234	3,397
Net amortization and deferral			(661)
Amortization of prior service cost	3	3	3
	$ (280)	$ (1,013)	$ (1,694)

	Non U.S. Plans		
	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Net pension (income) expense:			
Expected return on net assets	$ (3,259)	$ (3,536)	$ (3,696)
Service cost-benefits earned during period	65	64	57
Interest cost on projected benefit obligation	2,753	3,048	3,703
Net amortization and deferral		1	
Settlement (gain) loss			
	$ (441)	$ (423)	$ 64

F-40

Table of Contents

The Company made the following contributions to its Pension Plans:

	U.S. Plans December 31,			Non U.S. Plans December 31,		
	2016	2015	2014	2016	2015	2014
Employer contributions	$ 44	$ 1,266	$ 3,056	$ 2,614	$ 4,313	$ 3,421
Employee contributions	$	$	$	$	$	$
Benefit payments	$ (3,981)	$ (3,775)	$ (3,517)	$ (3,458)	$ (3,331)	$ (4,364)

A reconciliation of the funded status of the Company s Pension Plans to amounts recognized in the balance sheets is as follows:

	U.S. Plans December 31,		Non U.S. Plans December 31,	
	2016	2015	2016	2015
Accumulated benefit obligation	$ (83,305)	$ (82,015)	$ (84,268)	$ (83,388)
Fair value of plan assets	60,389	59,466	71,735	70,528
Projected benefit obligation	(83,305)	(82,015)	(84,268)	(83,388)
Funded status	$ (22,916)	$ (22,549)	$ (12,533)	$ (12,860)
Current liability	$ (64)	$ (64)	$ (69)	$ (72)
Non-current liability	(22,852)	(22,485)	(12,464)	(12,788)
	$ (22,916)	$ (22,549)	$ (12,533)	$ (12,860)

The amounts, net of tax, recognized in Other comprehensive income as a component of net pension income (expense) are as follows:

	U.S. and Non U.S. Plans December 31,	
	2016	2015
Unrecognized prior service cost	$ 18	$ (5)
Unrecognized net actuarial gain (loss)	4,049	725
	$ 4,067	$ 720

The amounts, net of tax, in AOCI that have not yet been recognized as a component of net pension income (expense) are as follows:

	U.S. and Non U.S. Plans December 31,	
	2016	2015
Unrecognized prior service cost	$ 38	$ 15
Unrecognized net actuarial gain (loss)	1,332	961
	$ 1,370	$ 976

Weighted average assumptions used to determine benefit obligations for years ended:

	U.S. Plans December 31,		Non U.S. Plans December 31,	
	2016	2015	2016	2015
Discount rate	4.00%	4.25%	2.57%	3.69%
Rate of compensation increase	N/A	N/A	3.00%	3.00%

Table of Contents

Weighted average assumptions used to determine net periodic benefit cost:

	U.S. Plans			Non U.S. Plans		
	December 31,			December 31,		
	2016	2015	2014	2016	2015	2014
Discount rate	4.25%	3.85%	4.75%	2.57%	3.69%	3.43%
Expected long-term return on plan assets	7.25%	7.25%	8.00%	4.23%	4.97%	4.78%
Rate of compensation increase	N/A	N/A	N/A	3.00%	3.00%	3.00%

Historical and future expected returns of multiple asset classes were analyzed to develop a risk-free real rate of return and risk premiums for each asset class. The overall rate for each asset class was developed by combining a long-term inflation component, the risk-free real rate of return, and the associated risk premium. A weighted average rate was developed based on those overall rates and the target asset allocation of the plan.

As of December 31, 2016 and 2015, the asset allocations of the Company s Pension Plans were as follows:

	December 31,			
	2016		2015	
U.S. Pension Assets	Target	Actual	Target	Actual
U.S. equity securities	40.5%	40.1%	37.5%	39.1%
International equity securities	13.5%	13.5%	12.5%	11.8%
Balanced asset allocation	0.0%	0.0%	0.0%	4.7%
Fixed income securities	40.0%	40.4%	40.0%	38.7%
Real Estate	6.0%	6.0%	10.0%	5.7%

	December 31,			
	2016		2015	
Non U.S. Pension Assets	Target	Actual	Target	Actual
Cash	16.7%	6.7%	7.5%	2.4%
Diversified equity securities	39.5%	38.1%	17.1%	41.1%
Fixed income securities	41.5%	53.5%	63.2%	52.3%
Insurance contracts	0.0%	0.2%	0.0%	3.9%
Other	2.3%	1.6%	12.2%	0.3%

U.S. and Non U.S. Plans investments are measured at fair value on a recurring basis. The following tables present the fair values of the U.S. and Non U.S. Plan investments as of December 31, 2016 and 2015.

	December 31, 2016			
U.S. Pension Assets	Level 1	Level 2	Level 3	Total
U.S. equity securities	$ 23,513	$ 710		$ 24,223
International equity securities	6,352	1,779	18	8,149
Balanced asset allocation				
Fixed income securities	4,862	19,540		24,402
Real estate	42	176	3,397	3,615

Total U.S. Pension Assets	$ 34,769	$ 22,205	$ 3,415	$ 60,389

Non U.S. Pension Assets	Level 1	Level 2	Level 3	Total
Cash	$ 4,778	$	$	$ 4,778
Diversified equity securities	11,801	,14,237	1,301	27,339
Fixed income securities	29,489	8,879		38,368
Insurance contracts		114		114
Other		1,136		1,136
Total Non U.S. Pension Assets	$ 46,068	$ 24,366	$ 1,301	$ 71,735

Table of Contents

	December 31, 2015			
U.S. Pension Assets	Level 1	Level 2	Level 3	Total
U.S. equity securities	$ 22,487	$ 758	$	$ 23,245
International equity securities	7,026	10		7,036
Balanced asset allocation	2,786			2,786
Fixed income securities	4,361	18,634		22,995
Real estate	44	60	3,300	3,404
Total U.S. Pension Assets	$ 36,704	$ 19,462	$ 3,300	$ 59,466

Non U.S. Pension Assets	Level 1	Level 2	Level 3	Total
Cash	$ 1,674	$	$	$ 1,674
Diversified equity securities	27,267	1,711	26	29,004
Fixed income securities	19,940	16,946		36,886
Insurance contracts		2,771		2,771
Other		193		193
Total Non U.S. Pension Assets	$ 48,881	$ 21,621	$ 26	$ 70,528

The Company s Pension Plans hold Level 3 assets primarily comprised of funds holding real estate and unquoted funds. Fair value is determined based upon the Company s units in the fund and net asset value of the Company s share of total fund value. The table below presents a roll forward of activity for these assets between December 31, 2014 and 2015 and December 31, 2015 and 2016:

	Real Estate Assets	Alternative Assets	Total
Balance at December 31, 2014	$ 3,190	$ 8	$ 3,198
Purchases, sales, settlements, net			
Gains (losses)	110	18	128
Currency Adjustment			
Balance at December 31, 2015	$ 3,300	$ 26	$ 3,326
Purchases, sales, settlements, net	1,344		1,344
Gains (losses)	68	(17)	51
Currency Adjustment		(5)	(5)
Balance at December 31, 2016	$ 4,712	$ 4	$ 4,716

The investment strategy is to develop an efficient, well-diversified portfolio based on a long-term, strategic outlook of the investment markets. The investment market outlook utilizes both historical-based and forward-looking return forecasts to establish future return expectations for various asset classes. These return expectations are used to develop a core asset allocation based on the needs of the plan. The core asset allocation utilizes investment portfolios of various asset classes and multiple investment managers in order to help maximize the plan s return while providing multiple layers of diversification to help minimize risk.

The Company expects to contribute $1,558 to the U.S. Plan and $1,971 to the Non U.S. Plans in 2017.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

	U.S. Plans	Non U.S. Plans
2017	$ 4,386	$ 2,469
2018	$ 4,485	$ 2,616
2019	$ 4,574	$ 2,763
2020	$ 4,723	$ 3,017
2021	$ 4,721	$ 3,069
Thereafter	$ 24,766	$ 18,060

Table of Contents

Multiemployer Benefit Plans

The Company contributes to two multiemployer defined benefit pension plans under terms of the collective bargaining union contracts acquired during the Wallover Acquisition. The Company s contribution rate to the multiemployer pension plans is specified in the collective bargaining union contracts and contributions are made to the plans based on its union employee payroll. While the Company may also have additional liabilities imposed by law as a result of its participation in multiemployer defined benefit pension plans, there is no liability as of December 31, 2016. The Employee Retirement Income Security Act of 1974, as amended by the Multi-Employer Pension Plan Amendments Act of 1980, imposes certain contingent liabilities upon an employer who is a contributor to a multiemployer pension plan if the employer withdraws from the plan or the plan is terminated or experiences a mass withdrawal. The Company has not taken any action to terminate, withdraw or partially withdraw from these plans as of December 31, 2016.

The Pension Protection Act of 2006 (the PPA) also added special funding and operational rules generally applicable to plan years beginning after 2007 for multi-employer plans that are classified as endangered , seriously endangered or critical status based on a multitude of factors (including, for example, the plan s funded percentage, cash flow position and whether the plan is projected to experience a minimum funding deficiency).

Plans in the endangered , seriously endangered or critical status classifications must adopt measures to improve their funded status through a funding improvement or rehabilitation plan which may require additional contributions from employers (which may take the form of a surcharge on benefit contributions) and/or modifications to retiree benefits. The plans to which the Company contributes are in critical status. The amount of additional funds that the Company may be obligated to contribute to these plans in the future cannot be estimated as such amounts will be likely based on future levels of work that require the specific use of those union employees covered by these plans, and the amount of that future work and the number of affected employees that may be needed cannot reasonably be estimated.

The following table contains a summary of plan information relating to the Company s participation in multiemployer defined benefit pension plans, including Company contributions for the last two years, the status under the PPA of the plans, and whether the plans are subject to a funding improvement or rehabilitation plan or contribution surcharges. The most recent PPA zone status available relates to the plan s fiscal year-end in 2015. Forms 5500 were not yet available for the plan years ending in 2016.

Pension Fund	Employer Identification Number	PPA Zone Status			FIP/RP Status	Contributions for the six months ended December 31, 2016		Expiration Date of Collective Bargaining Contracts
		2016	2015	2014				
Central States, Southeast and Southwest Areas Pension Funds	36-6044243-001	Red	Red	Red	Implemented	$	13	01/31/2019
Cleveland Bakers and Teamsters Pension Fund	34-0904419-001	Red	Red	Red	Implemented	$	52	05/01/2019

Multiemployer Health and Welfare Benefit Plan

The Company also contributes to union sponsored multi-employer health and welfare benefit plans that was adopted with the acquisition. Plan benefits include medical, sickness, prescription, dental, vision, hearing, life, and accident or disability benefits. Total contributions to these multi-employer health and welfare benefit plans were approximately $90 and $169 for the six months and years ended December 31, 2016 and 2015, respectively.

Other Benefit Plans

The Company has a Houghton International Inc. Tax Advantage Capital Accumulation Plan and Trust (the Profit Sharing/401(k) Plan) whereby regular U.S. employees of Houghton International Inc. who have

completed certain minimum service requirements can defer a portion of their income through contributions to the Profit Sharing/401(k) Plan. The Profit Sharing/401(k) Plan provides for HII contributions to the Profit Sharing/401(k) Plan, as follows: 1) matching contributions to each participant up to 50% of the first 6% of compensation contributed by the participant and 2) a discretionary non-elective contribution in an amount up to 3% of eligible compensation. The Company s contributions are subject to overall employer contribution limits and may not exceed the amount deductible for income tax purposes. The Profit Sharing/401(k) Plan may be amended or discontinued at any time by the Company.

In addition, the Company acquired a defined contribution retirement plan, during the Wallover Acquisition, that covers substantially all non-union employees in the Wallover segment and all employees of Commonwealth who meet certain age and length of service requirements. Under the plan, the Company will make a matching contribution for Wallover employees equal to 50% of the first 6% of an employee s elective deferral and matches contributions to a maximum of 2% of annual wages for Commonwealth employees. In addition to the matching contribution, the Company may make discretionary contributions.

The Company s contribution expenses for all Retirement Plans are as followed:

December 31,