KMG CHEMICALS INC
Form 10-K
October 01, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark one)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended July 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 001-35577

KMG CHEMICALS, INC.

(Exact name of registrant as specified in its charter)

Texas	75-2640529
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

300 Throckmorton Street

Fort Worth, Texas 76102

(Address of principal executive offices, including zip code)

(817) 761-6100

(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE EXCHANGE ACT:

Title of Each Class	Name of each Exchange on which Registered
Common Stock, $.01 par value	The New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE EXCHANGE ACT:

Title of Each Class	Name of each Exchange on which Registered

None

Indicate by a check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by a check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	Accelerated Filer
Non-Accelerated Filer	Smaller Reporting Company
	Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant computed by reference to the closing price of $60.75 on The New York Stock Exchange as of the last business day of our most recently completed second fiscal quarter (January 31, 2018) was $877.7 million.

As of September 28, 2018, there were 15,553,484 shares of the registrant's common stock, par value $0.01, per share outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

As permitted by General Instruction G of Form 10-K, the information required by Part III of this Form 10-K is incorporated by reference, and will be included either in a definitive proxy statement or an amendment to this Form 10-K, which must be filed with the SEC no later than 120 days after the end of the fiscal year covered by this Form 10-K.

TABLE OF CONTENTS

PART I

ITEM 1. BUSINESS

Company Overview

We were incorporated in 1992 as a Texas corporation and are headquartered in Fort Worth, Texas. From our facilities in North America, Europe and Asia, we produce and distribute specialty chemicals and performance materials for the semiconductor, industrial wood preservation and pipeline and energy markets. We operate three business platforms within two segments: electronic chemicals and performance materials. In our electronic chemicals segment, we are the leading global supplier of high-purity process chemicals, serving semiconductor manufacturers in the United States, Europe and Asia. We formulate, purify and blend acids, solvents and other wet chemicals used to etch and clean silicon wafers in the production of semiconductors, photovoltaics (solar cells) and flat panel displays. Our performance materials segment includes our pipeline performance and wood treating chemicals business platforms. In our pipeline performance platform, we are a leading global provider of products, services and solutions for optimizing pipeline throughput and maximizing performance and safety. Our pipeline performance products include drag-reducing agents, valve lubricants, cleaners and sealants, and related equipment supporting the pipeline and oilfield energy markets. We also provide routine and emergency maintenance services and training for pipeline operators worldwide. Our wood treating chemicals, based on pentachlorophenol, or penta, are sold to industrial customers who use these products to extend the useful life of wood utility poles and crossarms. Unless the context requires otherwise, references in this Annual Report on Form 10-K to “KMG”, “the Company”, “we”, “us”, and “our” refer to KMG Chemicals, Inc. and its wholly owned subsidiaries on a consolidated basis.

For the year ended July 31, 2018, we generated revenues of $465.6 million and net income of $64.8 million. On July 31, 2018, we had total long-term debt, net of current maturities, of $306.1 million, cash and cash equivalents of $24.4 million and total stockholders’ equity of $416.1 million.

Merger

On August 14, 2018, we entered into an Agreement and Plan of Merger (“Merger Agreement”) with Cabot Microelectronics Corporation, a Delaware corporation (“Cabot Microelectronics”), and Cobalt Merger Sub Corporation, a Texas corporation and wholly owned subsidiary of Cabot Microelectronics (“Merger Sub”), providing for the acquisition of KMG by Cabot Microelectronics. The Merger Agreement provides that, upon the terms and subject to the satisfaction or valid waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into KMG (the “Merger”), with KMG continuing as the surviving corporation and a wholly owned subsidiary of Cabot Microelectronics.

If the Merger is completed, each outstanding share of our common stock will automatically be converted into the right to receive $55.65 in cash and 0.2000 shares of common stock of Cabot Microelectronics, par value $0.001 per share (the “Merger Consideration”), at the effective time of the Merger. Immediately prior to closing, each restricted stock unit award relating to our shares of common stock granted prior to August 14, 2018 will vest and be cancelled in exchange for the Merger Consideration in respect of each share of our common stock underlying the applicable award. Each restricted stock unit award granted on or following August 14, 2018 will be converted into a corresponding award relating to shares of Cabot Microelectronics common stock and continue to vest post-closing in accordance with the terms of the applicable award agreement.

The Merger Agreement and the Merger have been unanimously approved by our board of directors and the board of directors of Cabot Microelectronics. The consummation of the Merger is subject to customary closing conditions, including the adoption of the Merger Agreement by our shareholders.

Business Strategy

We seek to build long-term shareholder value through smart and efficient management of our existing operations, and through the effective integration and optimization of acquired businesses. Our actions are guided by our core values, which emphasize a passion for excellence, the value of our people, and that character and teamwork are critical. Three fundamental principles are at the core of our growth strategy:

- Operate. We seek to maximize cash flow by managing our plants efficiently and driving continual improvement throughout our global operations. We enhance the value of our operations by concentrating on customer satisfaction and efficient management of our resources to increase our profitability and cash flows.
- Acquire. The cash flows generated by the businesses that we operate provide us with the ability to pursue further acquisitions in order to build on our existing segments, and to establish new business platforms for future growth. We employ a methodical approach to identify and evaluate potential acquisitions, only pursuing those that meet our financial and strategic criteria. Our discipline throughout the acquisition process maximizes the potential for long-term success and value creation.

1

- Integrate. We have consistently improved our ability to integrate progressively larger and more complex acquisitions. Our focus is to maintain reliable service to our customers during the integration period, realize operational and commercial synergies, and efficiently absorb acquired businesses. An effective integration strategy is an essential precondition for our operational success.

Our growth strategy focuses on niche segments of larger markets where we can establish leading market positions through consolidation and organic growth. We seek to acquire and operate unique businesses with value-added products that provide essential performance enhancements or provide important safety benefits, yet represent a minimal portion of the end product cost. We focus on purchasing product lines and businesses that operate in segments of the specialty chemical industry that meet our specific financial and strategic criteria including:

- unique products with higher value applications;
- barriers to entry;
- proven management team with a track record of performance; and
- strong cash flow.

Business Segments

Electronic Chemicals. Our electronic chemicals platform sells high-purity process chemicals to semiconductor manufacturers in the United States, Europe and Asia. We formulate, purify and blend acids, solvents and other wet chemicals used to etch and clean silicon wafers in the production of semiconductors, photovoltaics (solar cells) and flat panel displays. Our electronic chemicals business accounted for 64.9% of our net sales in fiscal year 2018, 83.0% in fiscal year 2017 and 87.8% in fiscal year 2016.

The electronic chemicals business was acquired initially in December 2007 from Air Products and Chemicals, Inc., and expanded with our purchases in March 2010 and in May 2013 of similar businesses from General Chemical Performance Products LLP and OM Group, Inc., respectively. On April 4, 2016, we completed the acquisition of Nagase Finechem Singapore (Pte) Ltd., a Singapore-based manufacturer of electronic chemicals. Our products include sulfuric, phosphoric, nitric and hydrofluoric acids, ammonium hydroxide, hydrogen peroxide, isopropyl alcohol, other specialty organic solvents and various blends of chemicals. We operate our electronic chemicals business through KMG Electronic Chemicals, Inc. in North America and through KMG Italia, S.r.l. and KMG Electronic Chemicals Luxembourg Holdings S.a.r.l. (and its subsidiaries) in Europe and Asia and have facilities in the United States, the United Kingdom, France, Italy and Singapore. Our customers rely on us to provide products with very low levels of contaminants and particles, in some cases at less than 100 parts per trillion levels. We purchase raw material chemicals from various suppliers and blend, package and purify them for distribution to our customers. We are responsible for product purity levels and analytical testing. Our products are sold in bulk and in containers, including bottles, drums and totes. This purification and distribution process is largely accomplished at our facilities in the United States, Europe and Singapore.

Performance Materials. Our performance materials segment includes our pipeline performance business and our wood treating chemicals business. Our performance materials segment constituted about 35.1% of our net sales in fiscal year 2018, 17.0% in fiscal year 2017 and 12.2% in fiscal year 2016.

In our pipeline performance business, we supply drag-reducing agents, industrial valve lubricants, cleaners and sealants, and related services and equipment, including routine and emergency valve maintenance services and training, to the pipeline and oilfield energy markets. Our pipeline performance products and services provide value-added specialty products that optimize pipeline efficiency, lower operating costs and enhance safety. The pipeline performance business was established with the acquisition of Valves Incorporated of Texas in May 2015, and expanded with the acquisition of the assets of Sealweld Corporation in February 2017 and the acquisition of Flowchem LLC (“Flowchem”) in June 2017. We operate our performance materials business through KMG Val Tex, LLC (“Val-Tex”), Sealweld (USA), Inc. and Flowchem (and its subsidiaries) in the United States, and through KMG Industrial Lubricants Canada, Inc. in Canada. We operate facilities for the manufacture, formulation and distribution of our pipeline performance products in the United States and Canada.

In our wood treating chemicals business, we supply penta to industrial customers who use this preservative to pressure treat wood products, primarily utility poles and crossarms, to extend their useful life by protecting against insect damage and decay. Our penta products include solid blocks and concentrated solutions. We manufacture solid penta blocks at our facility in Matamoros, Mexico through KMG de Mexico S.A. de C.V., a Mexican corporation which is a wholly owned subsidiary of KMG Bernuth, Inc. We sell penta products in the United States, Canada and Mexico. We also sell hydrochloric acid, which is a byproduct of penta production for use in the steel and oil well service industries.

Suppliers

In our electronic chemicals segment, we rely on a variety of suppliers for our raw materials, some of which we purchase on open account and others which we purchase under supply contracts. The number of suppliers is often limited, particularly as to the specific grade of raw material required by us to supply high purity products to our customers.

In our performance materials segment, our pipeline performance products and wood treating chemicals depend on outside suppliers for all of the raw materials needed to produce our products, and are subject to fluctuations in the price of those materials. The principal raw materials used are olefin and catalysts for our drag-reducing agents and chlorine, phenol and co-solvent for our penta products, each of which we purchase from a limited number of suppliers.

No assurance can be given that the loss of a supplier would not have a material adverse effect on our financial position or results of operations.

Customers

One of our electronic chemicals customers, Intel Corporation, accounted for 10% or more of our revenue in fiscal years 2018, 2017 and 2016. No other customer accounted for 10% or more of our revenue in fiscal years 2018, 2017 or 2016. The loss of the Intel business would have a material adverse effect on sales of our electronic chemicals.

Marketing

We sell to our electronic chemicals customers through a combination of an internal sales force and distributors organized by geographic region. Our performance materials are sold through an internal sales force, distributors and independent agents.

Geographical Information

Sales made to customers in the United States were 55.3% of total revenues in fiscal year 2018, 54.0% in 2017 and 54.5% in 2016. Sales made outside of the United States were primarily electronic chemicals sold in Europe, Israel and Singapore. As of the end of fiscal year 2018, our property, plant and equipment were allocated, based on net book value, 59.8% in the United States and 40.2% elsewhere.

Competition

There are competitors spread geographically that compete with us in the sale of electronic chemicals in various regions. There are only a few firms competing with us in the sale of our drag-reducing agents and wood treating chemical products. For our industrial lubricants products, we compete with many other firms. We compete by selling our products at competitive prices and maintaining a strong commitment to product quality and customer service.

In electronic chemicals in North America, we believe that we have a significant market share, and our principal competitors include Honeywell, Kanto Corporation and Avantor (formerly Mallinckrodt Baker). Internationally, we compete in Europe primarily with BASF, Technic and Honeywell, and in Asia with BASF, Kanto Corporation and others. We believe our market share in Europe is comparable to our competitors, and we do not participate materially in the market in Asia outside of Singapore.

In our electronic chemicals business, our customers demand that each of their suppliers and each product used to make their semiconductors go through a rigorous qualification process. Once a customer has qualified one or more suppliers and their products for one of its fabrication facilities, there is often reluctance to switch to suppliers who are not qualified.

In our pipeline performance business, we have two primary competitors in the manufacture of drag-reducing agents in the United States, LiquidPower Specialty Products Inc. and Baker Hughes, a GE company. For our industrial lubricants products, competitors include over twenty other businesses that serve the oil and gas storage, pipeline and gas distribution markets, none of which have a dominant market position. Our principal competitors for industrial lubricants include Flowserve Corporation and JetLube, Inc.

The principal wood preserving chemicals for industrial applications are penta, creosote and chromated copper arsenate, or CCA. We supply customers in the United States with penta, but not creosote or CCA. We are the only manufacturer of penta-based preservatives in North America. Penta is used primarily to treat electric, telephone and other utility poles, to protect them from insect damage and decay, extending their useful life by many years. We estimate that approximately four million treated wood utility poles are purchased each year by utility companies in the United States. Of that amount, we estimate approximately 45% are treated with penta. The remaining poles are treated primarily with creosote or CCA.

Our wood treating chemicals must be registered prior to sale under United States law. See "Environmental and Safety Matters — Licenses, Permits and Product Registrations." As a condition to registration, any company wishing to manufacture and sell these products must provide substantial scientific research and testing data regarding the chemistry and toxicology of the products to the U.S. Environmental Protection Agency ("EPA"). This data must be generated by the applicant, or the applicant must purchase access to the information from other data providers. We believe that the cost of satisfying the data submission requirement serves as an impediment to the entry of new competitors, particularly those with lesser financial resources. While we have no reason to believe that the product registration requirement will be materially modified, we cannot give any assurances as to the effect of such a discontinuation or modification on our competitive position.

Employees

As of the end of fiscal year 2018, we had a total of 750 full-time employees. We employed 489 employees in our electronic chemicals segment, 193 employees in our performance materials segment, and 68 employees in administration and corporate.

Environmental and Safety Matters

Our operations are subject to extensive federal, state and local laws, regulations and ordinances in the United States and abroad relating to the protection of the environment, human health and safety, including those pertaining to chemical manufacture and distribution, waste generation, storage and disposal, discharges to waterways, and air emissions and various other health and safety matters. Governmental authorities have the power to enforce compliance with their regulations, and violators may be subject to civil, criminal and administrative penalties, injunctions or both. We devote significant financial resources to ensure compliance with safety and environmental laws. See "Item 1A. Risk Factors."

We anticipate that the regulation of our business operations under federal, state and local environmental laws in the United States and abroad will increase and become more stringent over time. We cannot estimate the impact of increased and more stringent regulation on our operations, future capital expenditure requirements or the cost of compliance.

Available Information

We make available free of charge on our Internet website www.kmgchemicals.com, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and amendments to such filings, as soon as reasonably practicable after each are electronically filed with, or furnished to, the United States Securities and Exchange Commission (the "SEC"). Information about our members of the Board of Directors, standing committee charters, and our Code of Business Conduct are also available through our website, free of charge.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, available at www.sec.gov. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street NE., Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our stock trades under the ticker symbol "KMG" on the New York Stock Exchange. Except for portions of our proxy statement to be filed with the SEC, no information from either the SEC's website or our website is incorporated herein by reference.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below, together with all of the other information included in this report. We believe the risks and uncertainties described below are the most significant we face. The occurrence of any of the following risks could materially harm our business, financial condition or results of operations. In that case, the trading price of our common stock could decline, and you may lose all or part of your investment.

Risks Relating to our Pending Merger with Cabot Microelectronics

Because the exchange ratio is fixed for the stock portion of the Merger Consideration and the market price of Cabot Microelectronics common stock has fluctuated and will continue to fluctuate, you cannot be sure of the value of the Merger Consideration you will receive.

Upon completion of the Merger, shares of our common stock will be converted into the right to receive $55.65 in cash, plus 0.2000 shares of Cabot Microelectronics common stock, in each case, without interest and less any applicable withholding taxes. The implied value of the per share Merger Consideration will fluctuate as the market price of Cabot Microelectronics common stock fluctuates because a portion of the per share Merger Consideration is payable in a fixed number of shares of Cabot Microelectronics common stock. The value of the stock portion of the Merger Consideration has fluctuated since the date of the announcement of the Merger Agreement and will continue to fluctuate to the date of the special meeting to approve the Merger and the date the Merger is completed and thereafter. Accordingly, at the time of the special meeting, our shareholders will not know or be able to determine the market value of the Merger Consideration they would receive upon completion of the Merger. Stock price changes may result from a variety of factors, including, among others, general market and economic conditions, changes in our and Cabot Microelectronics' respective businesses, operations and prospects, market assessments of the likelihood that the Merger will be completed, the timing of the Merger and regulatory considerations. Many of these factors are beyond our and Cabot Microelectronics' control.

Completion of the Merger is subject to the conditions contained in the Merger Agreement and if these conditions are not satisfied or waived, the Merger will not be completed.

Our and Cabot Microelectronics' obligations to complete the Merger are subject to the satisfaction or waiver of a number of conditions, including, among others, the approval of the Merger by our shareholders. Many of the conditions to the closing of the Merger are not within our or Cabot Microelectronics' control, and neither company can predict when or if these conditions will be satisfied. If any of these conditions are not satisfied or waived prior to February 14, 2019, which may be extended, under certain circumstances, to May 14, 2019, it is possible that the Merger Agreement will be terminated. The failure to satisfy all of the required conditions could delay the completion of the Merger for a significant period of time or prevent it from occurring. There can be no assurance that the conditions to the closing of the Merger will be satisfied or waived or that the merger will be completed.

The Merger Agreement limits our ability to pursue alternatives to the Merger and may discourage other companies from trying to acquire us.

The Merger Agreement contains provisions that make it more difficult for us to sell our business to a party other than Cabot Microelectronics. These provisions include a general prohibition on soliciting any company takeover proposal or offer for a competing transaction. In addition, upon termination of the Merger Agreement, we are required to pay Cabot Microelectronics a termination fee of $38,765,000 if the Merger Agreement is terminated in certain circumstances involving an adverse recommendation change or a willful and material breach of our non-solicitation obligations or certain obligations relating to our special meeting under the Merger Agreement.

These provisions could discourage a third party who might have an interest in acquiring all or a significant part of our business from considering or proposing that acquisition, even if that party were prepared to pay consideration with a higher per share value than the value proposed to be received or realized in the Merger. These provisions might also result in a potential competing acquirer proposing to pay a lower price than it might otherwise have proposed to pay because of the added expense of the termination fee that may become payable in certain circumstances.

The Merger Agreement subjects us to restrictions on our business activities.

The Merger Agreement subjects us to restrictions on our business activities and obligates us to generally operate our businesses in all material respects in the ordinary course. These restrictions could have an adverse effect on our results of operations, cash flows and financial position.

Our business relationships may be subject to disruption due to uncertainty associated with the Merger, which could have an adverse effect on our results of operations, cash flows and financial position and, following the completion of the Merger, the combined company.

Parties with which we, or our subsidiaries, do business may be uncertain as to the effects on them of the Merger and related transactions, including with respect to current or future business relationships with us, our subsidiaries or the combined company following the Merger. These relationships may be subject to disruption as customers, suppliers and other persons with whom we have a business relationship may delay or defer certain business decisions or might decide to terminate, change or renegotiate their relationships with us, or consider entering into business relationships with parties other than us, our subsidiaries or the combined company. These disruptions could have an adverse effect on our results of operations, cash flows and financial position, or the combined company following the completion of the Merger. The risk, and adverse effect, of any disruption could be exacerbated by a delay in completion of the Merger or termination of the Merger Agreement.

Failure to complete the Merger could negatively affect our stock price and our future business and financial results.

If the Merger is not completed for any reason, including as a result of our shareholders failing to approve the Merger, our ongoing business may be adversely affected and, without realizing any of the benefits of having completed the Merger, we could be subject to a number of negative consequences, including, among others: we may experience negative reactions from the financial markets, including negative impacts on our stock price; we may experience negative reactions from our customers and suppliers; we may experience negative reactions from our employees and may not be able to retain key management personnel and other key employees; we will have incurred, and will continue to incur, significant non-recurring costs in connection with the Merger that we may be unable to recover; the Merger Agreement places certain restrictions on the conduct of our business prior to completion of the

Merger, the waiver of which is subject to the consent of Cabot Microelectronics, which may prevent us from making certain acquisitions, taking certain other specified actions or otherwise pursuing business opportunities during the pendency of the Merger that may be beneficial to us; and matters relating to the Merger (including integration planning) will require substantial commitments of time and resources by our management, which could otherwise be devoted to day-to-day operations and other opportunities that may be beneficial to us as an independent company.

In addition, upon termination of the Merger Agreement, we are required to pay Cabot Microelectronics a termination fee of $38,765,000 if the Merger Agreement is terminated in certain circumstances involving an adverse recommendation change, a breach of our non-solicitation obligations or certain obligations relating to the special meeting under the Merger Agreement. Finally, we could be subject to litigation related to any failure to complete the Merger or related to any enforcement proceeding commenced against us to perform our obligations under the Merger Agreement. If the Merger is not completed, any of these risks may materialize and may adversely affect our business, financial condition, financial results and stock price.

Lawsuits have been and may in the future be filed against us or our directors challenging the Merger, and an adverse ruling in any such lawsuit may prevent the Merger from becoming effective or from becoming effective within the expected timeframe.

Transactions like the Merger are frequently the subject of litigation or other legal proceedings, including actions alleging that our board of directors breached their respective fiduciary duties by entering into the Merger Agreement, by failing to obtain a greater value in the transaction for our shareholders or otherwise. We believe that any such litigation or proceedings would be without merit, but there can be no assurance that they will not be brought. If litigation or other legal proceedings are in fact brought against either us or against our board of directors, we will defend against it, but might not be successful in doing so. An adverse outcome in such matters, as well as the costs and efforts of a defense even if successful, could have a material adverse effect on the business, results of operation or financial position of ours or the combined company, including through the possible diversion of our resources or distraction of key personnel.

Further, one of the conditions to the completion of the Merger is that no injunction by any court or other tribunal of competent jurisdiction will be in effect that temporarily or permanently prohibits, enjoins or makes illegal the consummation of the Merger. As such, if any of the plaintiffs are successful in obtaining an injunction prohibiting the consummation of the Merger, that injunction may prevent the Merger from becoming effective or from becoming effective within the expected timeframe.

Risks Relating to Our Business

The industries in which we operate are competitive. This competition may affect our market share or prevent us from raising prices at the same pace as our costs increase, making it difficult for us to maintain existing business and win new business.

We operate in competitive markets. Certain of our competitors have substantially greater financial and technical resources than we do. Additionally, new competitors may enter our markets. We may be required to reduce prices if our competitors reduce prices, or as a result of any other downward pressure on prices for our products and services, which could have an adverse effect on us. In electronic chemicals, we compete with several very large, international companies. Our customers have regularly requested price decreases and maintaining or raising prices has been difficult over the past several years and will likely continue to be so in the near future. Competition in electronic chemicals is based on a number of factors, including price, freight economics, product quality and technical support. If we are unable to compete successfully, our financial condition and results of operations could be adversely affected.

The industries that we compete in are subject to economic downturns.

An economic downturn in the electronics industry as a whole or other events (e.g., labor disruptions) resulting in significantly reduced production at the manufacturing plants of our customers, could have a material adverse impact on the results of our electronic chemicals segment. Similarly, an economic downturn affecting utilities or the oil and gas industry could have a material adverse effect on demand in our performance materials segment.

A significant portion of our revenue and operating income are concentrated in a small number of customers.

We derive a significant portion of our revenues and operating income in our electronic chemicals and performance materials chemicals segments from sales of products to a small number of customers. As a result, the loss of Intel Corporation or another significant customer, or a material reduction of demand from any of those customers, could adversely affect our revenues and operating income.

We may continue to pursue new acquisitions or joint ventures, and any such transaction could result in operating or management problems that adversely affect operating results. We remain subject to the ongoing risks of successfully integrating and managing the acquisitions, such as Flowchem, and joint ventures that are completed.

The acquisitions we make expose us to the risk of integrating that acquisition. An integration effort impacts various areas of our business, including our management, production facilities, information systems, accounting and financial reporting, and customer service. Disruption to any of these areas could materially harm our financial condition or results of operations.

The Merger Agreement limits our ability to pursue new acquisitions or joint ventures. If the Merger is not completed, we may continue to pursue new acquisitions or joint ventures, a pursuit which could consume substantial time and resources. The successful implementation of our operating strategy in current and future acquisitions and joint ventures may require substantial attention from our management team, which could divert management attention from existing businesses. The businesses acquired, or the joint ventures entered into, may not generate the cash flow and earnings, or yield the other benefits anticipated at the time of their acquisition or formation. The risks inherent in any such strategy could have an adverse impact on our results of operation or financial condition.

We are dependent on a limited number of suppliers for certain key materials, the loss of any one of which could have a material adverse effect on our financial condition and results of operations.

We depend on a limited number of suppliers for certain key materials needed by our businesses, such as sulfuric, hydrofluoric and nitric acids, liquid nitrogen and olefin. Those suppliers are subject to a variety of operational and commercial constraints that can adversely impact our supply. If we were to lose suppliers for key materials, we might have difficulty securing a replacement supplier at reasonable cost, and no assurance can be given that such loss would not have a material adverse effect on our financial condition and results of operations.

We may experience increased costs and production delays if suppliers fail to deliver materials or if prices increase for raw materials and other goods and services that we purchase from third parties.

We purchase raw materials from a number of domestic and foreign suppliers. Although we believe that the raw materials we require will be available in sufficient supply on a competitive basis for the foreseeable future, increases in the cost of raw materials, including energy and other inputs used to make our products, could affect future sales volumes, prices and margins for our products. If a supplier should cease to deliver goods or services to us, we would in most cases find other sources. However, such a disruption could result in added cost and manufacturing delays. In addition, political instability, war, terrorism and other disruptions to international transit routes could adversely impact our ability to obtain key raw materials in a timely fashion, or at all.

Increases in the price of our primary raw materials may decrease our profitability and adversely affect our liquidity, cash flow, financial condition and results of operations.

The prices we pay for raw materials in our businesses may increase significantly, and we may not always be able to pass those increases through to our customers fully and timely. In the future, we may be unable to pass on increases in our raw material costs, and raw material price increases may erode the profitability of our products by reducing our gross profit. Price increases for raw materials may also increase our working capital needs, which could adversely affect our liquidity and cash flow. For these reasons, we cannot assure you that raw material cost increases in our businesses would not have a material adverse effect on our financial condition and results of operations.

We have significant indebtedness which could adversely affect our financial position and prevent us from fulfilling our obligations under such indebtedness. Our substantial indebtedness could lead to adverse consequences.

Our level of indebtedness could have important consequences, including but not limited to:

- increasing our vulnerability to general adverse economic and industry conditions;
- requiring us to dedicate a substantial portion of our cash flow from operations to make debt service payments, thereby reducing the availability of cash flow to fund working capital, capital expenditures, acquisitions and investments and other general corporate purposes;
- limiting our flexibility in planning for, or reacting to, challenges and opportunities, and changes in our businesses and the markets in which we operate;
- limiting our ability to obtain additional financing to fund our working capital, capital expenditures, acquisitions and debt service requirements and other financing needs;

- increasing our vulnerability to increases in interest rates in general because a substantial portion of our indebtedness bears interest at floating rates; and
- placing us at a competitive disadvantage to our competitors that have less debt.

Our ability to make principal and interest payments on our debt is contingent on our future operating performance, which will depend on a number of factors, many of which are outside of our control.

If we are unable to make debt payments or comply with the other provisions of our debt instruments, our lenders may be permitted under certain circumstances to accelerate the maturity of the indebtedness owed to them and exercise other remedies provided for in those instruments and under applicable law.

Restrictions in our debt agreements could limit our growth and our ability to respond to changing conditions.

Our debt agreements contain a number of covenants which affect our ability to take certain actions and restrict our ability to incur additional debt. These include covenants that prohibit certain acquisitions that are not approved by our lenders and to maintain a consolidated net leverage ratio below an agreed level. These covenants may require us to take action to reduce our debt or take some other action to comply with them.

These restrictions could limit our ability to obtain future financings, make needed capital expenditures, withstand a future downturn in our business or the economy in general or otherwise conduct necessary corporate activities. We may also be prevented from taking advantage of business opportunities that arise because of the limitations that these restrictive covenants impose on us.

A breach of any of these covenants would result in a default under the applicable debt agreement. A default, if not waived, could result in acceleration of the debt outstanding under the agreement and in a default with respect to certain of our other agreements. The accelerated debt would become immediately due and payable. If that should occur, we may not be able to pay all such debt or to borrow sufficient funds to refinance it. Even if new financing were then available, it may not be on terms that are acceptable to us.

The declaration of dividends by us is subject to the discretion of our Board of Directors, and limitations under Texas law and the Merger Agreement, and there can be no assurance that we will continue to pay dividends.

We have a history of paying quarterly dividends on our common stock. The declaration of dividends by us is subject to the discretion of our Board of Directors. Our Board of Directors takes into account such matters as general business conditions, our business strategy, our financial results, expected liquidity and capital expenditure requirements, contractual, legal or regulatory restrictions on the payment of dividends, the effect on our debt ratings and such other factors as our Board of Directors may deem relevant, and we can provide no assurance that we will continue to pay dividends on our common stock. Texas law contains certain restrictions on a company’s ability to pay cash dividends and we can provide no assurance that those restrictions will not prevent us from paying a dividend in future periods. In addition, the Merger Agreement contains certain restrictions on our ability to pay dividends.

The implementation of our enterprise resource planning system at certain of our subsidiaries could cause a financial statement error not to be detected, and could take longer and be more costly than anticipated.

We are in the process of expanding our enterprise resource planning (“ERP”) system to certain of our subsidiaries. This is a complex process, and the new system will result in changes to our internal controls over financial reporting, including disclosure controls and procedures. The possibility exists that the migration to a new ERP system could adversely affect the effectiveness of our internal controls over financial reporting. Furthermore, no assurance can be given that the effort will not take longer or be more costly than currently believed.

If we are unable to identify, fund and execute new acquisitions, we will not be able to execute a key element of our business strategy.

The Merger Agreement limits our ability to execute new acquisitions. If the Merger is not completed, we cannot give any assurance that we will be able to identify, acquire or profitably manage additional businesses and product lines, or successfully integrate any acquired business or product line without substantial expenses, delays or other operational or financial difficulties. Financing for acquisitions may not be available, or may be available only at a cost or on terms and conditions that are unacceptable to us. Further, acquisitions may involve a number of special risks or effects, including diversion of management's attention, failure to retain key acquired personnel, unanticipated events or circumstances, legal liabilities, impairment of acquired intangible assets and other one-time or ongoing acquisition-related expenses. Some or all of these special risks or effects could have a material adverse effect on our financial and operating results. In addition, we cannot assure you that acquired businesses or product lines, if any, will achieve anticipated revenues and earnings.

The consideration we pay in connection with an acquisition also may affect our financial results. If we were to proceed with one or more significant acquisitions in which the consideration included cash, we could be required to use a substantial portion of our available cash or obtain debt or equity financing. To the extent that we issue shares of our capital stock or other rights to purchase shares of our common stock as consideration for an acquisition or in connection with the financing of an acquisition, including options or other rights, our existing common shareholders may be diluted, and our earnings per share may decrease.

We are subject to extensive environmental laws and regulations and may incur costs that have a material adverse effect on our financial condition as a result of violations of or liabilities under environmental laws and regulations.

Like other companies involved in environmentally sensitive businesses, our operations and properties are subject to extensive and stringent federal, state, local and foreign environmental laws and regulations, including those concerning, among other things:

- the marketing, sale, use and registration of our chemical products, such as penta;
- the treatment, storage and disposal of wastes;
- the investigation and remediation of contaminated soil and groundwater;
- the discharge of effluents into waterways;
- the emission of substances into the air; and
- other matters relating to environmental protection and various health and safety matters.

The EPA and other federal and state agencies in the United States, as well as comparable agencies in other countries where we have facilities or sell our products, have the authority to promulgate regulations that could have a material adverse impact on our operations. These environmental laws and regulations may require permits for certain types of operations, require the installation of expensive pollution control equipment, place restrictions upon operations or impose substantial liability for pollution resulting from our operations. We expend substantial funds to minimize the discharge of hazardous materials in the environment and to comply with governmental regulations relating to protection of the environment. Compliance with environmental and health and safety laws and regulations has resulted in ongoing costs for us, and could restrict our ability to modify or expand our facilities or continue production, or require us to install costly pollution control equipment or incur significant expenses, including remediation costs. We are currently involved in investigation and remediation activities at certain sites. We have incurred, and expect to continue to incur, significant costs to comply with environmental and health and safety laws or to address liabilities for contaminated facilities. Federal, state and foreign governmental authorities may seek fines and penalties, as well as injunctive relief, for violation of the various laws and governmental regulations, and could, among other things, impose liability on us for cleaning up the damage resulting from a release of pesticides, hazardous materials or other chemicals into the environment.

The classification of pentachlorophenol as a Persistent Organic Pollutant under the Stockholm Convention may adversely affect our ability to manufacture or sell our penta products.

The Conference of the Parties (“COP”), comprising representatives from countries that have ratified the treaty known as the Stockholm Convention, met in May 2015 and considered the classification of penta as a persistent organic pollutant (“POP”). The COP accepted the recommendation of the United Nations Persistent Organic Pollutant Review Committee that the use of penta should be banned except that its use for the treatment of utility poles and crossarms could continue for an extended period of five to ten years. We supply penta to industrial customers who use it primarily to treat utility poles and crossarms. The United States is not bound by the determination of the COP because it did not ratify the Stockholm Convention treaty. Canada and Mexico are governed by the treaty. Our sole penta manufacturing facility is located in Matamoros, Mexico. As a result of the classification of penta as a POP, the Mexican government has requested that we relocate our penta manufacturing facility. We are in the process of identifying potential sites in the United States for such relocation. No assurance can be given that we will not incur significant expenditures in connection with such relocation, that we will find an adequate location within the required timeframe, or that the ultimate action of the COP will not have a material adverse effect on our financial condition and results of operation.

If the demand for the wood products on which our chemicals are used decreases, our business, results of operations, cash flow and financial condition may be adversely affected.

Our wood treating products are sold into relatively stable markets. However, demand for treated wood generally increases or decreases with the financial strength and maintenance budgets of electric utilities, and demand can vary with damage levels suffered from severe storms. A significant decline in utility pole sales could have a material adverse effect on our business, financial condition and results of operations.

If our products are not re-registered by the EPA or are re-registered subject to new restrictions, our ability to sell our products may be curtailed or significantly limited.

Our penta product registrations are under continuous review by the EPA under the Federal Insecticide, Fungicide and Rodenticide Act (“FIFRA”). We have submitted and will submit a wide range of scientific data to support our U.S. registrations. To satisfy the registration review, we are required to demonstrate, among other things, that our products will not cause unreasonable adverse effects on human health or the environment when used according to approved label directions. In September 2008, the EPA announced that it had determined that penta was eligible for re-registration, but the EPA proposed new restrictions on the use of penta that have required our customers to incur substantial additional costs and to revise certain operating procedures. In December 2014, the EPA issued a registration review work plan that required penta registrants to provide additional research and testing data respecting certain potential risks to human health or the environment as a further condition to continued registration. We are now conducting required testing but we cannot tell you when or if the EPA will issue a final decision concluding that the conditions of re-registration for our penta products have been satisfied, and that all additional testing requirements have been satisfied, and we cannot assure you that our products will not be subject to use or labeling restrictions that may have an adverse effect on our financial position and results of operations. The failure of our current or future-acquired products to be re-registered or to satisfy the registration review by the EPA, or the imposition of new use, labeling or other restrictions in connection with re-registration could have a material adverse effect on our financial condition and results of operations.

Our use of hazardous materials exposes us to potential liabilities.

Our manufacturing and distribution of chemical products involves the controlled use of hazardous materials. Our operations, therefore, are subject to various associated risks, including chemical spills, discharges or releases of toxic or hazardous substances or gases, fires, mechanical failure, storage facility leaks and similar events. Our suppliers are subject to similar risks that may adversely impact the availability of raw materials. While we adapt our manufacturing and distribution processes to the environmental control standards of regulatory authorities, we cannot completely eliminate the risk of accidental contamination or injury from hazardous or regulated materials, including injury of our employees, individuals who handle our products or goods treated with our products, or others who claim to have been exposed to our products, nor can we completely eliminate the unanticipated interruption or suspension of operations at our facilities due to such events. We may be held liable for significant damages or fines in the event of contamination or injury, and such assessed damages or fines could have a material adverse effect on our financial performance and results of operations.

The distribution, sale and use of our products is subject to prior governmental approvals and thereafter ongoing governmental regulation.

Our products are subject to laws administered by federal, state and foreign governments, including regulations requiring registration, approval and labeling, or regulating the use, of our products. The labeling requirements restrict the use and type of application for our products. More stringent restrictions could make our products less desirable which would adversely affect our sales and profitability. All states where our penta products are used also require registration before they can be marketed or used in that state.

Governmental regulatory authorities have required, and may require in the future, that certain scientific testing and data production be provided on our products. Under FIFRA, the federal government requires registrants to submit a wide range of scientific data to support U.S. registrations. This requirement significantly increases our operating expenses, and we expect those expenses will continue in the future. Because scientific analyses are constantly improving, we cannot determine with certainty whether or not new or additional tests may be required by regulatory authorities. While Good Laboratory Practice standards specify the minimum practices and procedures that must be followed in order to ensure the quality and integrity of data related to these tests submitted to the EPA, there can be no assurance that the EPA will not request certain tests or studies be repeated. In addition, more stringent legislation or requirements may be imposed in the future. In June 2016, Congress made significant changes to the Toxic Substances Control Act which could result in increased regulation and required testing of chemicals we manufacture, which could increase the costs of compliance for our operations. We can provide no assurance that our resources will be adequate to meet the costs of regulatory compliance or that the cost of such compliance will not adversely affect our profitability. Our products could also be subject to other future regulatory action that may result in restricting or completely banning their use which could have a material adverse effect on our performance and results of operations.

Future climate change regulation could result in increased operating costs and reduced demand for our products.

Although the United States has not ratified the Kyoto Protocol, a number of federal laws related to “greenhouse gas,” or “GHG,” emissions have been considered by Congress. Because of the lack of any comprehensive legislation program addressing GHGs, the EPA is using its existing regulatory authority to promulgate regulations requiring reduction in GHG emissions from various categories of sources. The EPA attempted to require the permitting of GHG emissions, starting with the largest sources first. Although the Supreme Court struck down the permitting requirements, it upheld the EPA’s authority to control GHG emissions when a permit is required due to emissions of other pollutants. Additionally, various state, local and regional regulations and initiatives have been enacted or are being considered.

Member States of the European Union each have an overall cap on emissions which are approved by the European Commission and implement the EU Emissions Trading Directive as a commitment to the Kyoto Protocol. Under this Directive, organizations apply to the Member State for an allowance of GHG emissions. These allowances are tradable so as to enable companies that manage to reduce their GHG emissions to sell their excess allowances to companies that are not reaching their emissions objectives. Failure to purchase sufficient allowances will require the purchase of allowances at a current market price.

Any laws or regulations that may be adopted to restrict or reduce emissions of GHGs could cause an increase to our raw material costs, could require us to incur increased operating costs and could have an adverse effect on demand for our products.

The Registration Evaluation and Authorization of Chemicals (“REACH”) legislation may affect our ability to manufacture and sell certain products in the European Union.

REACH, which was effective on June 1, 2007, requires chemical manufacturers and importers in the European Union to prove the safety of their products. As a result, we were required to pre-register certain products and file comprehensive reports, including testing data, on each chemical substance, and perform chemical safety assessments. Additionally, substances of high concern are subject to an authorization process. Authorization may result in restrictions on certain uses of products or even prohibitions on the manufacture or importation of products. The full registration requirements of REACH are phased in over several years. We will incur additional expense to cause the registration of our products under these regulations. REACH may also affect our ability to manufacture and sell certain products in the European Union.

Our products may be rendered obsolete or less attractive by changes in industry requirements or by supply-chain driven pressures to shift to environmentally preferable alternatives.

Changes in regulatory, legislative and industry requirements, or changes driven by supply-chain pressures, may shift current customers away from products using penta or certain of our other products and toward alternative products that are believed to have fewer environmental effects. The EPA, foreign and state regulators, local governments, private environmental advocacy organizations and a number of large industrial companies have proposed or adopted policies designed to decrease the use of a variety of chemicals, including penta and others included in certain of our products. Our ability to anticipate changes in regulatory, legislative, and industry requirements, or changes driven by supply-chain pressures, will be a significant factor in our ability to remain competitive. Further, we may not be able to comply with changed or new regulatory or industrial standards that may be necessary for us to remain competitive.

We cannot assure you that the EPA, foreign and state regulators and local governments will not restrict the uses of penta or certain of our other products or ban the use of one or more of these products, or that the companies who use our products may decide to reduce significantly or cease the use of our products voluntarily. As a result, our products may become obsolete or less attractive to our customers.

Volatility of oil and natural gas prices can adversely affect demand for our products and services.

Volatility in oil and natural gas prices may impact our customers' activity levels and spending for our products and services. Expectations about future prices and price volatility are important for determining future spending levels for customers of our pipeline performance products and services.

Historically, worldwide oil and natural gas prices and markets have been volatile, and may continue to be volatile in the future. Prices for oil and natural gas are subject to wide fluctuations in response to relatively minor changes in the supply of and demand for oil and natural gas, market uncertainty and a variety of additional factors that are beyond our control. These factors include, but are not limited to, increases in supplies from U.S. shale production, international political conditions, including uprisings and political unrest, a European sovereign debt crisis, the domestic and foreign supply of oil and natural gas, the level of consumer demand due to economic growth in China, weather conditions, domestic and foreign governmental regulations and taxes, the price and availability of alternative fuels, the health of international economic and credit markets, the ability of the members of the Organization of Petroleum Exporting Countries and other state-controlled oil companies to agree upon and maintain oil price and production controls, and general economic conditions.

Changing oil and natural gas prices may impact spending by customers of our industrial lubricants products. While higher oil and natural gas prices generally lead to increased spending by our customers in that business, sustained high energy prices can be an impediment to economic growth and to other segments of our business as described below, and can therefore negatively impact spending by some of our customers. Our customers also take into account the volatility of energy prices and other risk factors by requiring higher returns for individual projects if there is higher perceived risk. Any of these factors could affect the demand for oil and natural gas for our customers in the pipeline performance business and could have a material adverse effect on our results of operations.

The profitability of our electronic chemicals and some of our performance materials could also be adversely affected by high petroleum prices.

The profitability of our business depends, to a degree, upon the price of petroleum products, both as a component of transportation costs for delivery of products to our customers and as a raw material used to make some of our products, including penta solutions. High petroleum prices also affect the businesses of our customers. Our penta customers dissolve our product in petroleum-based materials to make a treating solution for utility poles. Unfavorable changes in petroleum prices or in other business and economic conditions affecting our customers could reduce purchases of our products, and impose practical limits on our pricing. Any of these factors could lower our profit margins, and have a material adverse effect on our results of operations. We are unable to predict what the price of crude oil and petroleum-based products will be in the future. We may be unable to pass along to our customers the increased costs that result from higher petroleum prices.

We may be unable to identify liabilities associated with the properties and businesses that may be acquired or obtain protection from sellers against them.

The acquisition of properties and businesses requires assessment of a number of factors, including physical condition and potential environmental and other liabilities. Such assessments are inexact and inherently uncertain. The assessments may result from a due diligence review of the subject properties and businesses, but such a review may not reveal all existing or potential problems. We may not be able to obtain comprehensive contractual indemnities from the seller for liabilities that it created or that were created by any predecessor of the seller. We may be required to assume the risk of the physical or environmental condition of the properties and businesses in addition to the risk that the properties and businesses may not perform in accordance with expectations.

We are dependent upon many critical systems and processes, many of which are dependent upon hardware that is concentrated in a limited number of locations. If a catastrophe or cyber security event were to occur at one or more of those locations or with our data, it could have a material adverse effect on our business.

Our business is dependent on certain critical systems, which support various aspects of our operations, from our computer network to our billing and customer service systems. The hardware supporting a large number of such systems is housed in a small number of locations. If one or more of these locations were to be subject to fire, natural disaster, terrorism, power loss, or other catastrophe, it could have a material adverse effect on our business. While we believe that we maintain reasonable disaster recovery programs, there can be no assurance that, despite these efforts, any disaster recovery, security and service continuity protection measures we may have or may take in the future will be sufficient.

In addition, we may be susceptible to acts of aggression on our critical operating system. Cyber security events such as computer viruses, electronic break-ins or other similar disruptive technological problems could also adversely affect our operations. Should such an event occur in the future, our insurance policies may not adequately compensate us for any losses that may occur due to any failures or interruptions in our computer systems and could affect our financial and operating results, causing disruptions in operations, damage of reputation, litigation, increased costs, or inaccurate information reported by our manufacturing facilities.

Significant physical effects of climatic change have the potential to damage our facilities, disrupt our production activities and cause us to incur significant costs in preparing for or responding to those effects.

In an interpretive guidance on climate change disclosure, the SEC indicates that climate change could have an effect on the severity of weather (including hurricanes and floods), sea levels, the arability of farmland, and water availability and quality. If such effects were to occur, our operations have the potential to be adversely affected. Potential adverse effects could include damage to our facilities from powerful winds or rising waters in low lying areas, disruption of our operations because of climate-related damages to our facilities and our costs of operation potentially arising from such climate effects, less efficient or non-routine operating practices necessitated by climate effects, or increased costs for insurance coverage in the aftermath of such effects. Significant physical effects of climate change could also have an indirect effect on our operations by disrupting the transportation of our products or by disrupting the operations of suppliers with whom we have a business relationship. We may not be able to recover through insurance some or any of the damage, losses or costs that may result from potential physical effects of climate change.

Weather may adversely impact our ability to conduct business.

Our pipeline performance facilities in Texas, our penta facility in Matamoros, Mexico, and several suppliers of raw materials are located on or near the Gulf of Mexico. Thus, we are dependent on terminals and facilities located in coastal areas for a substantial portion of certain of the raw materials we use, the penta we make and for our electronic chemicals products. These terminals and facilities are vulnerable to hurricanes, rising water and other adverse weather conditions that have the potential to cause substantial damage and to interrupt operations. There can be no assurance that adverse weather conditions will not affect the availability of penta and certain other raw materials in the future, the occurrence of which could have a material adverse effect on our financial condition and results of operations. More generally, severe weather conditions have the potential to adversely affect our operations, damage facilities and increase our costs, and those conditions may also have an indirect effect on our financing and operations by disrupting services provided by service companies or suppliers with whom we have a business relationship. We may not be able to recover through insurance some or any of the damage, losses or costs that may result from potential physical effects of climate.

Our business success depends significantly on the reliability and sufficiency of our manufacturing facilities.

Our revenues depend significantly on the continued operation of our manufacturing facilities. The operation of our facilities involves risks, including the breakdown, failure, or substandard operation or performance of equipment, power outages, explosions, fires, earthquakes, other natural disasters, terrorism and other unscheduled downtime. The occurrence of material operational problems, the loss or shutdown of our facilities over an extended period of time due to these or other events could have a material adverse effect on our financial performance and operating results.

Our business is subject to many operational risks for which we may not be adequately insured.

We cannot assure you that we will not incur losses beyond the limits of, or outside the coverage of, our insurance policies. From time to time, various types of insurance for companies in the chemical industry have not been available on commercially acceptable terms or, in some cases, have been unavailable. In addition, we cannot assure you that in the future we will be able to maintain existing coverage or that our insurance premiums will not increase substantially.

We maintain insurance coverage for sudden and accidental environmental damages. We do not believe that insurance coverage for environmental damage that occurs over time is available at a reasonable cost. Also, we do not believe that insurance coverage for the full potential liability that could be caused by sudden and accidental incidences is available at a reasonable cost. Accordingly, we may be subject to an uninsured or under-insured loss in such cases.

Our business may be adversely affected by cyclical and seasonal effects.

In general, the chemical industry is cyclical and demand for our performance materials is somewhat seasonal. The demand for our drag-reducing agents is generally higher in winter when pipeline operators use them to increase flow in colder temperatures. Some of our pipeline customers of our industrial lubricants products tend to prefer doing maintenance on their systems from the spring through the fall seasons. There is greater demand for our wood treating chemicals in the summer than in the winter because of the effects of weather on timber harvest. Our electronic chemical products are often used to produce semiconductors for industries and applications that are cyclical in nature, as well as subject to customer marketing programs and requirements. There can be no assurance that our business, resources and margins will not be adversely affected by seasonal or cyclical effects.

We depend on our senior management team and the loss of any member could adversely affect our operations.

Our success is dependent on the management and leadership skills of our senior management team, including Christopher T. Fraser, our President and Chief Executive Officer, Marvin T. Green III, our Chief Financial Officer, Ernest C. Kremling, our Senior Vice President Performance Materials and Manufacturing Services, Jeff Handelman, our Senior Vice President Electronic Chemicals, Christopher W. Gonser, our Vice President of Human Resources, and Roger C. Jackson, our Vice President, General Counsel and Secretary. While we have succession plans for key positions, the loss of any member of our senior management team or an inability to attract, retain and maintain additional qualified personnel could prevent us from implementing our business strategy. We cannot assure you that we will be able to retain our existing senior management personnel or attract additional qualified personnel when needed.

If we are unable to successfully negotiate with the labor unions representing our employees, we may experience a material work stoppage.

Some of our full-time employees are represented by labor unions, workers councils or comparable organizations, particularly in Mexico and Europe. As our current agreements expire, we cannot assure you that new agreements will be reached at the end of each period without union action, or that a new agreement will be reached on terms satisfactory to us. An extended work stoppage, slowdown or other action by our employees could significantly disrupt our business. Future labor contracts may be on terms that result in higher labor costs to us, which also could adversely affect our results of operations.

Our financial performance is subject to risks associated with changes in the value of the U.S. dollar versus local currencies.

Our primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar denominated sales and operating expenses worldwide. Weakening of foreign currencies relative to the U.S. dollar adversely affects the U.S. dollar value of our foreign currency-denominated sales and earnings, and generally leads us to raise international pricing, potentially reducing demand for our products. Margins on sales of our products in foreign countries and on sales of products that include components obtained from foreign suppliers, could be materially adversely affected by foreign currency exchange rate fluctuations. In some circumstances, for competitive or other reasons, we may decide not to raise local prices to fully offset the dollar's strengthening, or at all, which would adversely affect the U.S. dollar value of our foreign currency denominated sales and earnings. Conversely, a strengthening of foreign currencies relative to the U.S. dollar, while generally beneficial to our foreign currency-denominated sales and earnings, could cause us to reduce international pricing. Additionally, strengthening of foreign currencies may also increase our cost of product components denominated in those currencies, thus adversely affecting gross margins.

Additionally, because our consolidated financial statements are presented in U.S. dollars, we must translate revenues, income and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies may affect our revenues, operating income and the value of balance sheet items denominated in foreign currencies. We do not use derivative financial instruments to reduce our net exposure to currency exchange rate fluctuations. We cannot assure you that fluctuations in foreign currency exchange rates, particularly the strengthening of the U.S. dollar against major currencies or the currencies of large developing countries, would not materially affect our financial results.

We are subject to narcotics gang disruption in Mexico and to possible risk of terrorist attacks, each of which could adversely affect our business.

Our penta manufacturing facility is located in Matamoros, Mexico, an area where there has been violent crime involving narcotics gang warfare. Our penta operations could be disrupted or otherwise affected by narcotics gang activities in the Mexico border area where our facility is located. We are not insured against terrorist or narcotics gang attacks, and there can be no assurance that losses that could result from an attack on our facilities or personnel, railcars or tank trucks would not have a material adverse effect on our business, results of operations and financial condition. Since September 11, 2001, there has been concern that chemical manufacturing facilities and railcars carrying hazardous chemicals may be at an increased risk of terrorist attacks. Federal, state and local governments have begun a regulatory process that could lead to new regulations impacting the security of chemical industry facilities and the transportation of hazardous chemicals. Our business could be adversely impacted if a terrorist incident were to occur at any chemical facility or while a railcar or tank truck was transporting chemicals.

We are subject to risks inherent in foreign operations, including changes in social, political and economic conditions.

We have facilities in the United States, Canada, Mexico, Europe and Singapore, and generate a significant portion of our sales in foreign countries. Like other companies with foreign operations and sales, we are exposed to market risks relating to fluctuations in foreign currency exchange rates. At this time, the Euro, the Great Britain Pound and Singapore Dollars are the functional currencies of our operations in Europe and Asia. We are also exposed to risks associated with changes in the laws and policies governing foreign investments in Mexico, Europe and Asia, and to a lesser extent, changes in United States laws and regulations relating to foreign trade and investment. On June 23, 2016, the United Kingdom (U.K.) held a referendum in which voters approved an exit from the European Union, commonly referred to as “Brexit.” In February 2017, the British Parliament voted in favor of allowing the British government to begin negotiating the terms of the U.K.’s withdrawal from the European Union and discussions with the European Union began in March 2017. The U.K. will cease to be a member state when a withdrawal agreement is entered into (such agreement will also require parliamentary approval) or, failing that, two years following the notification of an intention to leave the European Union, unless the European Union (together with the U.K.) unanimously decides to extend this period. On March 29, 2017, the U.K. formally notified the European Union of its intention to leave the European Union. In March 2018, the European Union announced an agreement in principle to transitional provisions under which most European Union law would remain in force in the U.K. until the end of December 2020, however, this transitional period remains subject to the successful conclusion of a final withdrawal agreement between the parties. In the absence of such an agreement, there would be no transitional provisions and a “hard” Brexit would occur on March 29, 2019. Although it is unknown what the terms of such an agreement will be, it is possible that there will be greater restrictions on imports and exports between the U.K. and European Union countries, a fluctuation in currency exchange rates and increased regulatory complexities. These changes may adversely affect our operations and financial results. While such changes in laws, regulations and conditions have not had a material adverse effect on our business or financial condition to date, we cannot assure you as to the future effect of any such changes.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of July 31, 2018, we own or lease the following properties.

Location	Primary Use	Approximate Size	Owned/ Leased	Lease Expiration Date
Fort Worth, Texas	Corporate Office	27,778 square feet	Leased	December 2028
Tuscaloosa, Alabama	Formulation and Distribution: Penta	2.0 acres	Owned	N/A
Hollister, California	Manufacture and Warehouse: Electronic Chemicals	4.4 acres	Owned	N/A
Pueblo, Colorado	Manufacture and Warehouse: Electronic Chemicals	37.4 acres	Owned	N/A
Brookshire, Texas	Former Facility for Manufacture and Warehouse: Pipeline Performance	5.0 acres	Owned	N/A
Houston, Texas	Formulation and Distribution: Pipeline Performance	1.2 acres	Leased	June 2019
Houston, Texas	Training Facility: Pipeline Performance	12,412 square feet	Leased	December 2020
Waller, Texas	Manufacture and Warehouse: Pipeline Performance	40.0 acres	Owned	N/A
Calgary, Alberta, Canada	Formulation and Distribution: Pipeline Performance	1.4 acres	Owned	N/A
Rousset, France	Warehouse and adjacent land: Electronic Chemicals	1.2 acres	Leased	December 2023 and December 2024
St. Cheron, France	Manufacture and Warehouse: Electronic Chemicals	4.0 acres	Owned	N/A
St. Fromond, France	Manufacture and Warehouse:	71.6 acres	Owned	N/A

	Electronic Chemicals			
Milan, Italy	Warehouse: Electronic Chemicals	4.9 acres	Owned	N/A
Milan, Italy	Manufacture: Electronic Chemicals	2.5 acres	Owned	N/A
Johor Bahru, Malaysia	Sales office: Electronic Chemicals	1,360 square feet	Leased	March 2020
Penang, Malaysia	Sales office: Electronic Chemicals	416 square feet	Leased	February 2019
Matamoros, Mexico	Manufacture and Warehouse: Penta	13.0 acres	Owned	N/A
Singapore	Warehouses (2): Electronic Chemicals	3.0 acres	Leased	May 2020 and August 2019
Singapore	Manufacturing and Warehouse: Electronic Chemicals	4.9 acres	Leased	October 2031
Riddings, UK	Manufacture and Warehouse: Electronic Chemicals	4.2 acres	Leased	August 2025

We believe that all of these properties are adequately insured, in good condition and suitable for their anticipated future use. We believe that if the leases for our offices and facilities in Texas, Malaysia and France are not renewed or are terminated, we can obtain other suitable facilities. If our warehouses and facilities in Singapore and the United Kingdom, respectively, were not renewed or terminated, no assurance can be given that we could obtain suitable substitutes without incurring substantial expense. We believe, however, that we will be able to renew our leases on acceptable terms and conditions at the end of their respective terms.

We also have several storage agreements with commercial warehouses from which we distribute our products.

ITEM 3. LEGAL PROCEEDINGS

The information set forth in Note 11 to the consolidated financial statements included in Item 8 of Part II of this report is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock, par value $.01 per share, is traded on The New York Stock Exchange (trading symbol "KMG"). As of September 28, 2018, there were 15,553,484 shares of common stock issued and outstanding held by approximately 358 shareholders of record. The following table represents the high and low sale prices for our common stock as reported by the New York Stock Exchange for fiscal year 2018 and fiscal year 2017. The table also shows quarterly dividends we declared and paid during fiscal years 2018 and 2017.

	Common Stock Prices		Dividends Declared and Paid	
	High	Low	Per Share	Amount
Fiscal 2018				
First Quarter	$59.40	$45.65	$ 0.03	$ 357,000
Second Quarter	68.13	50.67	0.03	465,000
Third Quarter	70.60	55.00	0.03	465,000
Fourth Quarter	79.35	60.33	0.03	465,000
Fiscal 2017				
First Quarter	$30.75	$25.87	$ 0.03	$ 353,000
Second Quarter	40.37	26.33	0.03	356,000
Third Quarter	52.67	36.29	0.03	357,000
Fourth Quarter	61.10	46.09	0.03	357,000

We intend to pay out a reasonable share of cash from operations as dividends, consistent on average with the payout record of past years. We declared a dividend in the first quarter of fiscal year 2019 of $0.03 per share. The current quarterly dividend rate represents an annualized dividend of $0.12 per share. The future payment of dividends, however, will be within the discretion of the Board of Directors and depends on our profitability, capital requirements, financial condition, growth, business opportunities and other factors which our Board of Directors may deem relevant. In addition, the Merger Agreement contains certain restrictions on our ability to pay dividends. We repurchased no shares in fiscal years 2018 or 2017.

Our 2016 Long-Term Incentive Plan was submitted to the shareholders and approved at our annual meeting of shareholders on January 12, 2016. Our 2009 Long-Term Incentive Plan was submitted to the shareholders and approved at our annual meeting of shareholders on December 8, 2009.

The following information respecting our equity compensation plans is provided as of July 31, 2018:

Plan Category	Number of securities available for future

	issuance under equity compensation plans
Equity compensation plans approved by security holders	196,546
Equity compensation plans not approved by security holders	—
Total	196,546

STOCK PERFORMANCE GRAPH

Set forth below is a performance graph comparing the cumulative total return (assuming reinvestment of dividends), in U.S. Dollars, for the fiscal years ended July 31, 2013, 2014, 2015, 2016, 2017 and 2018 of $100 invested on July 31, 2013 in our common stock, the NYSE Composite Index and the S&P Small Cap Specialty Chemicals Index. Such returns are based on historical results and are not intended to suggest future performance.

	July 31, 2013	July 31, 2014	July 31, 2015	July 31, 2016	July 31, 2017	July 31, 2018
KMG Chemicals, Inc.	$100.00	$74.79	$97.92	$125.38	$231.62	$329.14
NYSE Composite Index	100.00	115.09	119.67	121.99	138.99	154.56
S&P Small Cap Specialty Chemicals Index	100.00	113.62	106.95	116.76	141.33	180.53

ITEM 6. SELECTED FINANCIAL DATA

The following table shows selected historical consolidated financial data for the five fiscal years ended July 31, 2018. The consolidated statements of income and cash flow data for each of the three fiscal years ended July 31, 2018, 2017 and 2016, and the balance sheet data as of July 31, 2018 and 2017, have been derived from our audited consolidated financial statements included elsewhere in this report. The consolidated statements of income and cash flow data for the fiscal years ended July 31, 2015 and 2014, and the balance sheet data as of July 31, 2016, 2015 and 2014 have been derived from our previously issued audited consolidated financial statements. The data should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements.

	Year Ended July 31,				
	2018	2017	2016	2015	2014
	(Amounts in thousands, except per share data)				
Statement of Income Data[(1)]					
Net sales	$465,556	$333,442	$297,978	$320,498	$353,406
Operating income	88,125	37,333	27,571	16,589	3,951
Income/(loss) from continuing operations	64,841	23,633	18,675	12,138	(988)
Net income/(loss)	64,841	23,633	18,675	12,138	(988)
Income/(loss) per share - basic	$4.41	$1.99	$1.59	$1.04	$(0.09)
Income/(loss) per share - diluted	4.29	1.92	1.57	1.03	(0.09)
Cash Flow Data[(1)]					
Net cash provided by operating activities	$87,975	$44,923	$41,034	$17,568	$40,358
Net cash used in investing activities	(25,177)	(524,175)	(17,037)	(18,288)	(9,274)
Net cash provided by (used in) financing activities	(58,420)	487,177	(18,563)	(9,091)	(26,065)
Payment of dividends	(1,753)	(1,423)	(1,406)	(1,402)	(1,393)
Balance Sheet Data[(1)]					
Total assets	$818,434	$792,431	$237,028	$242,359	$250,858
Long-term debt, net	306,119	523,102	35,800	53,000	60,000
Total stockholders' equity	416,067	173,716	143,189	123,421	120,206

(1) Our historical results are not necessarily indicative of results to be expected for any future period. The comparability of the data is affected by our acquisitions during the fiscal years 2017, 2016 and 2015; the disposition of our creosote distribution business during the fiscal year 2015; and our restructuring and realignment of operations during the fiscal years 2017, 2016, 2015 and 2014 as described in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations. See Note 16 to the consolidated financial statements included in this report.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the "Selected Financial Data" section of this report and our consolidated financial statements and the related notes and other financial information included elsewhere in this report. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under the section entitled "Risk Factors" and elsewhere in this report.

Introduction

We manufacture, formulate and globally distribute specialty chemicals and performance materials for the semiconductor, industrial wood preservation and pipeline and energy markets. We operate three business platforms within two segments: electronic chemicals and performance materials. In our electronic chemicals segment, we formulate, purify and blend acids, solvents and other wet chemicals used to etch and clean silicon wafers in the production of semiconductors, photovoltaics (solar cells) and flat panel displays. Our performance materials segment includes our pipeline performance and wood treating chemicals business platforms. In our pipeline performance platform, we provide products, services and solutions for optimizing pipeline throughput and maximizing performance and safety. Our pipeline performance products include drag-reducing agents, valve lubricants, cleaners and sealants, and related equipment supporting the pipeline and oilfield energy markets. We also provide routine and emergency maintenance services and training for pipeline operators worldwide. Our wood treating chemicals, based on pentachlorophenol, or penta, are sold to industrial customers who use these products to extend the useful life of wood utility poles and crossarms.

In fiscal year 2018, approximately 64.9% of our revenues were from our electronic chemicals segment, and 35.1% were from our performance materials segment, which includes our pipeline performance products and services and our wood treating chemicals.

Our results of operations are impacted by various competitive and other factors including:

- fluctuations in sales volumes;
- raw material pricing and availability;
- our ability to acquire and integrate new products and businesses; and
- the difference between prices received by us for our products and services and the costs to provide those products and services.

Merger Agreement with Cabot Microelectronics

On August 14, 2018, we entered into the Merger Agreement with Cabot Microelectronics and Cobalt Merger Sub, providing for the acquisition of KMG by Cabot Microelectronics. The Merger Agreement provides that, upon the terms and subject to the satisfaction or valid waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into KMG, with KMG continuing as the surviving corporation and a wholly owned subsidiary of Cabot Microelectronics.

If the Merger is completed, each outstanding share of our common stock will automatically be converted into the right to receive $55.65 in cash and 0.2000 shares of common stock of Cabot Microelectronics at the effective time of the Merger. The Merger Agreement and the Merger have been unanimously approved by our board of directors and the board of directors of Cabot Microelectronics. The consummation of the Merger is subject to customary closing conditions, including the adoption of the Merger Agreement by our shareholders. See Note 18 to the condensed consolidated financial statements included in this report.

Common Stock Offering

On October 23, 2017, we completed an underwritten public offering of 3,450,000 shares of our common stock, including 450,000 shares issued pursuant to the underwriters' exercise of their option to purchase additional shares, at a public offering price of $54 per share, resulting in net proceeds of approximately $175.6 million after deducting underwriting commissions and estimated offering expenses. We used all of the net proceeds of the offering to pay down our outstanding term loan. See Notes 8 and 13 to the condensed consolidated financial statements included in this report.

Amendment to Credit Agreement and Reduction of Interest Rate Margins

In connection with the acquisition of Flowchem, on June 15, 2017, we entered into a new credit agreement (the "Credit Agreement"), by and among, us, KeyBank National Association, as agent, KeyBanc Capital Markets Inc., HSBC Securities (USA) Inc., and JPMorgan Chase Bank, N.A., as joint lead arrangers and joint bookrunners and ING Capital LLC, as documentation agent.

The Credit Agreement provides for (i) a seven year syndicated senior secured term loan of $550.0 million (the “Term Loan”) and (ii) a five year senior secured revolving credit facility of $50.0 million (the “Revolving Loan”). The proceeds from the term loan under the Credit Agreement were used to finance the acquisition of Flowchem, pay the costs and expenses related to the acquisition, and to repay in full the $31.0 million outstanding indebtedness under our prior credit facility.

Following the pay down of our Term Loan using proceeds of the common stock offering, on December 19, 2017, we entered into an amendment to our Credit Agreement to reduce the interest rate margins applicable to borrowings under our Term Loan and Revolving Loan facilities. As a result of the amendment, our Term Loan currently bears interest at a rate of LIBOR plus 2.75% with the potential to reduce the rate to LIBOR plus 2.50% when our ratio of net funded debt to adjusted EBITDA, as calculated in accordance with the Credit Agreement, reaches 2.5 to 1.0. Prior to the amendment, our Term Loan bore interest at a rate of LIBOR plus 4.00%.

Acquisition of Flowchem

On June 15, 2017, we completed the acquisition of Flowchem Holdings LLC, the parent company of Flowchem. Based in Waller, Texas, Flowchem is a global provider of drag-reducing agents, related support services and equipment to midstream crude oil and refined fuel pipeline operators. The initial consideration paid for the acquisition was $495.0 million plus $11.4 million for cash acquired. Our subsequent working capital adjustment of $1.0 million reduced the total consideration in the acquisition to $505.4 million. See Note 2 to the consolidated financial statements included in this report.

Acquisition of Sealweld

On February 1, 2017, we completed the acquisition of the assets of Sealweld Corporation (“Sealweld”), a privately held corporation organized under the laws of the Province of Alberta, Canada, for CAD$22.3 million in cash (or approximately US$17.2 million, at an exchange rate of 0.77 CAD$ to US$ at February 1, 2017), which included CAD$5.5 million (or approximately US$4.2 million, at an exchange rate of 0.77 CAD$ to US$ at February 1, 2017) for estimated net working capital. Sealweld is based in Calgary, Alberta, Canada, with additional facilities in the United States. Sealweld is a leading global supplier of high-performance products and services for industrial valve and actuator maintenance, including lubricants, sealants, cleaners, valve fittings, tools and equipment. Additionally, Sealweld provides routine and emergency valve maintenance services and technician training for many of the world’s largest pipeline operators. See Note 2 to the consolidated financial statements included in this report.

Acquisition of NFC

On April 4, 2016, we completed the acquisition of Nagase Finechem Singapore (Pte) Ltd. (“NFC”), a Singapore-based manufacturer of electronic chemicals, for a cash purchase price of $2.9 million, including $1.1 million of estimated net working capital. NFC’s five-acre Singapore site comprises a manufacturing and packaging facility, warehouse, laboratory and cleanroom. The acquired company manufactures wet process chemicals, including solvents, acids and custom blends for the electronics market, including the liquid crystal display and semiconductor markets, and provides recycling and refining services for certain customers. We recorded a $1.8 million bargain purchase gain for the year ended July 31, 2016 related to this acquisition. See Note 2 to the consolidated financial statements included in this report.

Restructuring and Realignment of Operations

In April, 2017, we began the implementation of a plan of restructuring of our electronic chemicals segment in Asia. As a result, we incurred approximately $0.1 million and $0.2 million of employee related severance costs during fiscal years 2018 and 2017, respectively.

As part of the global restructuring of our electronic chemicals operations, we closed one of our facilities in Milan, Italy, and shifted production to our facilities in France and the United Kingdom. Decommissioning of certain manufacturing equipment in Milan was essentially complete in fiscal year 2016. Total accelerated depreciation related to the closure of the Milan facility for fiscal year 2016 was $0.3 million. During fiscal year 2016 we incurred $1.8 million related to restructuring costs, primarily due to accelerated depreciation.

See Note 16 to the consolidated financial statements included in this report.

Results of Operations

Segment Data

Segment data is presented for our two reportable segments for the three fiscal years ended July 31, 2018, 2017 and 2016. The segment data should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this report. The information presented for the performance materials segment for fiscal year 2016 represents information that was previously reported in our other chemicals segment. In the fiscal quarter ended April 30, 2017, our management, including the chief executive officer, who is the chief operating decision maker, determined that our operations should be reported as the electronic chemicals segment and the performance materials segment, as discussed in Note 15 to our consolidated financial statements included in this report.

	Year Ended July 31,		
	2018	2017	2016
	(Amounts in thousands)		
Net Sales:			
Electronic chemicals	$302,023	$276,621	$261,523
Performance materials	163,533	56,821	36,455
Total net sales for reportable segments	$465,556	$333,442	$297,978

Segment Net Sales

In fiscal year 2018, net sales in the electronic chemicals segment increased by $25.4 million, or 9.2%, to $302.0 million from $276.6 million in fiscal year 2017. Net sales in the electronic chemical segment increased primarily due to higher volume in the segment and were positively impacted by the weakening U.S. Dollar. In fiscal year 2017, net sales in the electronic chemicals segment increased by $15.1 million, or 5.8%, from $261.5 million in fiscal year 2016. In fiscal year 2017, net sales increased primarily due to higher volume globally within the segment, which included a full year of sales from the NFC business acquired in the third quarter of fiscal year 2016. The net sales growth in fiscal year 2017 was negatively impacted by $3.1 million due to the strengthening of the U.S. dollar against the Great Britain Pound and Euro.

In fiscal year 2018, net sales in the performance materials segment increased by $106.7 million, or 187.9%, to $163.5 million from $56.8 million in fiscal year 2017. Net sales in the performance materials segment increased primarily due to the acquisitions of Sealweld and Flowchem in the second half of fiscal year 2017, as well as volume growth in our legacy businesses within the segment. In fiscal year 2017, net sales in the performance materials segment increased by $20.3 million, or 55.6%, from $36.5 million in fiscal year 2016. Of the $20.3 million increase in fiscal year 2017, approximately $16.2 million came from sales attributable to the acquisitions of Sealweld and Flowchem in the second half of fiscal year 2017, and the remaining $4.2 million was generated by sales growth in our legacy businesses.

Segment Income from Operations

In fiscal year 2018, income from operations of the electronic chemicals segment increased by $11.3 million, or 32.0%, to $46.6 million from $35.3 million in fiscal year 2017. Income from operations in electronic chemicals increased primarily due to increased volumes, a favorable product mix and operating efficiencies. In fiscal year 2017, income from operations in electronic chemicals increased by $3.2 million, or 10.0%, from $32.1 million in fiscal year 2016. The improvement in income from operations in electronic chemicals in fiscal year 2017 was primarily due to increased volume globally and the realization of operating efficiencies throughout our global manufacturing operations.

In fiscal year 2018, income from operations of the performance materials segment increased by $41.2 million, or 298.6%, to $55.0 million from $13.8 million in fiscal year 2017. Income from operations in performance materials increased primarily due to the acquisitions of Sealweld and Flowchem in the second half of fiscal year 2017, as well as volume growth in our legacy businesses within the segment. In fiscal year 2017, income from operations in performance materials increased by $1.2 million, or 9.5%, from $12.6 million in fiscal year 2016. Income from operations of the performance materials segment improved in fiscal year 2017 primarily due to increases in volume in our legacy industrial lubricants and wood treating businesses, in addition to the income contributions of acquisitions in the second half of fiscal year 2017. Our performance materials segment results in fiscal year 2017 included the negative effect of the $3.7 million fair value adjustment in purchase accounting for inventories acquired in the Flowchem acquisition, which was fully recognized through cost of sales during fiscal year 2017.

Net Sales and Gross Profit

Net Sales and Gross Profit for Fiscal Year 2018 vs. Fiscal Year 2017

In fiscal year 2018, net sales increased by $132.2 million, or 39.7%, to $465.6 million, from $333.4 million in fiscal year 2017. Net sales increased primarily due to the acquisitions within the performance materials segment in the second half of fiscal year 2017, as well as volume growth within our other businesses in both reportable segments.

In fiscal year 2018, gross profits increased by $67.6 million, or 52.0%, to $197.7 million, from $130.1 million in fiscal year 2017. Gross profits increased primarily due to the acquisitions within the performance materials segment in the second half of fiscal year 2017. In fiscal year 2018, gross profit as a percentage of sales increased to 42.5%, from 39.0% in fiscal year 2017. Gross profit as a percentage of sales increased primarily due to the acquisitions within the performance materials segment in the second half of fiscal year 2017.

Net Sales and Gross Profit for Fiscal Year 2017 vs. Fiscal Year 2016

In fiscal year 2017, net sales increased $35.4 million, or 11.9%, to $333.4 million from $298.0 million in fiscal year 2016. Net sales for fiscal year 2017 increased compared to the prior year period primarily because of a $19.7 million increase in sales from the acquisitions completed in fiscal years 2017 and 2016, as well as a $15.8 million growth in volume of sales for our legacy businesses within both of our segments. Net sales growth was negatively impacted by $2.9 million due to the strengthening of the U.S. dollar against the Great Britain Pound and Euro, which was concentrated within the electronic chemicals segment.

In fiscal year 2017, gross profits increased by $14.6 million, or 12.6%, to $130.1 million from $115.5 million in fiscal year 2016. Our acquisitions in fiscal years 2017 and 2016 accounted for $5.5 million of the gross profit increase. Additionally, global sales growth and manufacturing efficiencies in our legacy businesses accounted for the remaining increase of $9.1 million as compared to fiscal year 2016. Gross profit as a percent of sales increased in fiscal 2017 to 39.0% from 38.8% in fiscal 2016. The improvements in gross profits as a percentage of sales in fiscal year 2017 as compared to 2016 was primarily due to realization of manufacturing efficiencies in the electronic chemicals segment and a change in the product mix in our legacy businesses in each segment. The $3.7 million fair value adjustments in purchase accounting for inventories acquired in the Flowchem acquisition in fiscal year 2017 acquisitions reduced gross profit as a percent of sales by 1.1%.

Because other companies may include certain of the costs that we record in cost of sales in distribution expenses or selling, general and administrative expenses, and may include certain of the costs that we record in distribution expenses or selling, general and administrative expenses as cost of sales, our gross profit may not be comparable to that reported by other companies.

Distribution and Selling, General and Administrative Expenses

Distribution and Selling, General and Administrative Expenses for Fiscal Year 2018 vs. Fiscal Year 2017

In fiscal year 2018, distribution expenses decreased $1.9 million, or 5.0% to $36.4 million from $38.3 million in fiscal year 2017. During fiscal year 2018 we incurred increased freight costs due to less favorable freight market conditions and higher volume, but this was offset by a decrease in distribution expenses due to certain internal distribution costs being classified as costs of sales instead of distribution expense. These internal distribution costs amounted to $7.0 million and $0.7 million in fiscal years 2018 and 2017, respectively.

Distribution expenses were 7.8% of net sales in fiscal year 2018, compared to 11.5% in fiscal year 2017. Distribution expenses as a percentage of net sales decreased primarily due to increased net sales within the performance materials segment as a result of the Flowchem acquisition, which has lower distribution expense as a percentage of net sales than the electronic chemicals segment, partially offset by less favorable freight market conditions. The distribution expenses as a percentage of sales were also impacted by the classification of certain internal distribution costs as costs of sales as described above.

In fiscal year 2018, selling, general and administrative expenses increased by $7.7 million, or 15.3%, to $57.9 million from $50.2 million in fiscal year 2017. Selling, general and administrative expenses were 12.4% of net sales in fiscal year 2018, compared to 15.1% in fiscal year 2017. Selling, general and administrative expenses increased primarily due to a $2.9 million additional selling, general and administrative costs as a result of the acquisitions in the performance materials segment in the second half of fiscal year 2017, $1.7 million increase in stock-based compensation as a result of our financial performance and a $0.7 million increase in external audit fees.

Distribution and Selling, General and Administrative Expenses for Fiscal Year 2017 vs. Fiscal Year 2016

In fiscal year 2017, distribution expenses increased to approximately $38.3 million from $37.0 million in fiscal year 2016, an increase of $1.3 million, or 3.5%. Distribution expense increased in fiscal year 2017 because of increased shipping costs primarily driven by increasing diesel prices and product volume. Distribution expense was 11.5% of consolidated net sales in fiscal year 2017 and 12.4% in fiscal year 2016.

In fiscal year 2017, selling, general and administrative expenses increased to $54.5 million from $49.2 million in fiscal year 2016, an increase of $5.3 million, or 10.8%. As a percentage of net sales, those expenses were 16.3% and 16.5% in fiscal years 2017 and 2016, respectively. Selling, general and administrative expenses rose in fiscal year 2017 primarily due to the increase of $5.5 million in expenses related to our acquisitions in fiscal year 2017 within the performance materials segment and a full year of expenses from the acquisition within electronic chemicals in fiscal year 2016 including amortization of the acquired intangible assets. Additionally, we experienced a $1.4 million increase in stock-based compensation expenses as compared to fiscal year 2016. The increases in selling, general and administration expenses were largely offset by a decrease of $1.4 million in professional services costs related to external and internal audit services.

The electronic chemicals segment represented greater than 95% of distribution expense in each of the periods presented. Within the electronic chemicals segment, distribution expense as a percentage of net sales was 11.5% in each of fiscal years 2018 and 2017, and 12.4% in 2016. The distribution expense in fiscal year 2018 was impacted by the classification of certain internal distribution costs as costs of sales as described above.

Net Income, Diluted Earnings Per Share, Adjusted EBITDA and Adjusted Diluted Earnings Per Share

In fiscal year 2018, net income increased by $41.2 million, or 174.6% to $64.8 million from $23.6 million in fiscal year 2017. Diluted earnings per share was $4.29 and $1.92 in fiscal years 2018 and 2017, respectively.

Adjusted EBITDA (as defined below under Non-GAAP Financial Measures) excludes, among other items, costs associated with the loss on the extinguishment of debt, costs incurred as a result of repricing our long-term borrowings, acquisition and integration expenses related to the acquisitions of Flowchem and Sealweld and our proposed merger with Cabot Microelectronics, derivative fair value gains and other designated items. In fiscal year 2018, adjusted EBITDA increased by $59.3 million, or 98.5%, to $119.5 million from $60.2 million in fiscal year 2017. Adjusted EBITDA increased primarily due to our acquisitions of Sealweld and Flowchem in the second half of fiscal year 2017, with additional positive contributions from each of our businesses across both reportable segments.

In fiscal year 2018, adjusted diluted earnings per share (as defined below under Non-GAAP Financial Measures) was $4.33, compared to $2.27 in fiscal year 2017. The increase in fiscal year 2018 in adjusted diluted earnings per share primarily reflects our acquisitions of Sealweld and Flowchem in the second half of fiscal year 2017, with additional positive contributions from each of our businesses across both reportable segments.

Non-GAAP Financial Measures

We provide certain non-GAAP financial information to complement reported GAAP results including adjusted EBITDA, adjusted net income and adjusted diluted earnings per share. We believe that analysis of our financial performance is enhanced by an understanding of these non-GAAP financial measures. We believe that they aid in evaluating the underlying operational performance of our business, and facilitate comparisons between periods. Non-GAAP financial information, such as adjusted EBITDA, is used externally by users of our consolidated financial statements, such as analysts and investors. A similar calculation of adjusted EBITDA is utilized internally for executives' compensation and by our lenders for a key debt compliance ratio.

We define adjusted EBITDA as earnings from continuing operations before interest, taxes, depreciation, amortization, acquisition and integration expenses, restructuring and realignment charges, the effect of purchase price accounting on acquired inventories valuation and other designated items. Adjusted EBITDA is a primary measurement of cash flows from operations and a measure of our ability to invest in our operations and provide shareholder returns. Adjusted EBITDA is not intended to represent United States GAAP definitions of cash flow from operations or net income/(loss). Adjusted net income adjusts net income for acquisition and integration expenses, restructuring and realignment charges and other designated items, while adjusted diluted earnings per share is adjusted net income divided by weighted average diluted shares outstanding.

Adjusted EBITDA, adjusted net income and adjusted diluted earnings per share should be viewed as supplements to, and not substitutes for, United States GAAP measures of performance and are not necessarily comparable to similarly titled measures used by other companies.

The table below provides a reconciliation of net income to adjusted EBITDA.

	Year Ended July 31,		
	2018	2017	2016
	(Amounts in thousands)		
Net income	$64,841	$23,633	$18,675
Interest expense	21,529	4,817	799
Income taxes	(442)	8,809	9,555
Depreciation and amortization	29,948	16,964	14,829
EBITDA	115,876	54,223	43,858
Loss on the extinguishment of debt	6,710	353	—
Derivative fair value gain	(5,576)	—	—
Debt repricing transaction costs	607	—	—
Acquisition and integration expenses	1,843	1,550	335
Gain on purchase of NFC	—	—	(1,826)
Restructuring and realignment charges, excluding accelerated depreciation	74	20	1,464
Corporate relocation expense	—	370	1,553
Effect of purchase price accounting on acquired inventories valuation(1)	—	3,674	—
Adjusted EBITDA	$119,534	$60,190	$45,384

(1) Higher costs of goods sold for our performance materials segment related to the fair value adjustment in purchase accounting for acquired inventories.

The table below provides a reconciliation of net income to adjusted net income and adjusted diluted earnings per share.

	Year Ended July 31,		
	2018	2017	2016
	(Amounts in thousands, except per share)		
Net income	$64,841	$23,633	$18,675
Items impacting pre-tax income:			
Amortization of Flowchem intangible assets	12,575	—	—
Loss on extinguishment of debt	6,710	353	—
Acquisition and integration expenses	1,843	1,550	335
Amortization of debt discounts and financing costs	1,421	—	—
Debt repricing transaction costs	607	—	—
Restructuring and realignment charges	74	20	1,759
Derivative fair value gain	(5,576)	—	—
Impact of the Tax Cuts and Jobs Act	(12,326)	—	—
Corporate relocation expense	—	370	1,553
Gain on purchase of NFC	—	—	(1,826)
Effect of purchase price accounting on acquired inventories valuation(1)	—	3,674	—

Income taxes[2]	(4,765)	(1,741)	(1,277)
Adjusted net income	$65,404	$27,859	$19,219
Diluted earnings per share	$4.29	$1.92	$1.57
Adjusted diluted earnings per share	$4.33	$2.27	$1.61
Weighted average diluted shares outstanding	15,111	12,286	11,926

(1) Higher costs of goods sold for our performance materials segment related to the fair value adjustment in purchase accounting for acquired inventories. Only 73% of the purchase price adjustment is deductible for income taxes, and has therefore been included in the calculation of the tax-effect of the items impacting pre-tax income.

(2) For fiscal year 2018, represents the aggregate tax-effect assuming a 27% tax rate of the items impacting pre-tax income, which is our estimated U.S. statutory federal tax rate for fiscal year 2018 following the enactment of the Tax Cut and Jobs Act of 2017 (the "Tax Act") in December 2017. For the fiscal years ended July 31, 2017 and July 31, 2016, represents the aggregate tax-effect assuming a 35% tax rate of items impacting pre-tax income.

Interest Expense

Interest expense was $21.5 million in fiscal year 2018, $4.8 million in fiscal year 2017 and $0.8 million in fiscal year 2016. Interest expense was higher compared to the prior year due to the increase in long-term debt outstanding subsequent to our Flowchem acquisition. For fiscal year 2018, net payments required under our interest rate swap agreements increased interest expense by $0.6 million. Interest expense included $1.4 million in amortization of debt discounts and financing costs. In addition, $6.7 million of accelerated amortization of debt issuance costs and original issue discount as a result of $224.8 million of prepayments on the Term Loan are separately recognized as loss on the extinguishment of debt.

Income Taxes

We had an income tax benefit of $0.4 million in fiscal year 2018, and an income tax expense of $8.8 million and $9.6 million in fiscal years 2017 and 2016, respectively. Our effective tax rate was -0.7% in fiscal year 2018, 27.2% in fiscal year 2017 and 33.8% in fiscal year 2016. For fiscal year 2018, the difference between the effective tax rate and our blended United States statutory rate of 26.8% is primarily due to the one-time tax benefit of $12.3 million reflecting the impact of the re-measurement of net deferred tax liabilities resulting from the reduction in the corporate tax rate, from 35% to 21%, included in the Tax Act passed on December 22, 2017. The impact of the current period tax rate changes resulted in current period adjustments providing a tax benefit of $2.9 million. Additionally, we have stock-based compensation excess tax benefits of $2.4 million in fiscal year 2018.

Liquidity and Capital Resources

Our principal requirements for capital funds are for our day-to-day operations, manufacturing and integration activities, and to satisfy our contractual obligations, including for the payment of interest on our indebtedness.

Capital expenditures for fiscal year 2018 were approximately $23.7 million, which included the replacement of operational assets and investments in technology, supply chain and the expansion of our manufacturing facility in Singapore. Of the $23.7 million in capital expenditures, $17.1 million was within the electronic chemicals segment. For fiscal year 2019, we currently plan to spend a total of approximately $33.6 million in production asset replacements, refurbishments and improvements, as well as capital expenses for our manufacturing expansion and ERP system implementation at acquired entities.

We expect to fund our 2019 capital budget predominantly with cash flows from operations. As of July 31, 2018, our cash and cash equivalents totaled $24.4 million. Cash and cash equivalents are held for working capital purposes. We do not enter into investments for trading or speculative purposes.

We believe that our existing cash and cash equivalents, cash flows from our operating activities and available borrowing amounts under our credit facility will be sufficient to meet our anticipated cash needs for the next twelve months. Our future capital requirements will depend on many factors including our growth rate, the expansion of our sales and marketing activities, the introduction of new and enhanced products, the expansion of our manufacturing capacity and the continuing market acceptance of our products.

Cash Flows

Net cash provided by operating activities was $88.0 million in fiscal year 2018, compared to $44.9 million generated by operating activities in fiscal year 2017, and $41.0 million in fiscal year 2016.

In fiscal year 2018, operating cash flows were favorably impacted by the full year of contributions of the Flowchem and Sealweld acquisitions in the second half of fiscal year 2017. In addition, we saw increased volume in our legacy businesses and continued realization of manufacturing efficiencies, which resulted in an increase in adjusted EBITDA of $59.3 million, as compared to the prior fiscal year. We also benefited from the decreased income tax expense as a result of the Tax Act. These benefits were partially offset by the $16.7 million increase in interest expense related to the Term Loan.

In fiscal year 2017, operating cash flows were favorably impacted by increased volume globally in our legacy businesses, continued realization of manufacturing efficiencies, earnings contributions of the recent acquisitions within the performance materials segment and a full year of earnings from the NFC business acquired in the third quarter of fiscal year 2016, all of which resulted in adjusted EBITDA of $60.2 million. We also benefited from decreases in restructuring and realignment costs of $1.7 million, income tax expense of $0.7 million and $1.4 million in professional fees. These benefits were partially offset by the $4.0 million increase in interest expense related to the Term Loan and a $1.3 million increase in distribution expense.

In fiscal year 2016, operating cash flows were favorably impacted by higher margins in our electronic chemicals and performance materials segments, resulting in adjusted EBITDA of $45.4 million. In addition, we had $11.5 million less for distribution expense and $2.4 million less for taxes in fiscal year 2016, compared to the prior year. Furthermore, improvements to our cash conversion cycle contributed to operating cash flows. Trade receivables decreased by $5.2 million and inventories decreased by $4.3 million within the electronic chemicals segment. However, accounts payable and other accrued liabilities decreased by $5.3 million when compared to higher than usual balances at the end of fiscal year 2015.

In fiscal year 2018, cash used in investing activities was $25.2 million, which primarily reflected the investments made in property, plant and equipment for the replacement of operational assets and investments in technology, supply chain and the expansion of our manufacturing facility in Singapore.

In fiscal year 2017, cash used in investing activities was $524.2 million, which primarily reflected the acquisitions of Flowchem and Sealweld. In addition, we spent $13.1 million for additions to property, plant and equipment, of which $11.5 million was for our electronic chemicals segment, and the remainder of which was for our performance materials segment and capital expenditures of corporate technology infrastructure implementation.

In fiscal year 2016, cash used in investing activities was $17.0 million. In addition, we spent $14.4 million for additions to property, plant and equipment, of which $8.4 million was for the electronic chemicals segment and the remainder was for the performance materials segment and the capital expenditures related to the relocation of our corporate headquarters to Fort Worth, Texas. We also spent a net $2.7 million in connection with the acquisition of NFC.

In fiscal year 2018, net cash used in financing activities was $58.4 million, which reflected the $228.0 million of payments on our long-term debt, which utilized the $175.6 million in proceeds from the sale of common stock, as well as an additional $52.4 million paid using from the cash provided by operating activities. We also paid $1.8 million in dividends in fiscal year 2018.

In fiscal year 2017, net cash provided by financing activities was $487.2 million, which reflected the $550.0 million borrowed to acquire Flowchem and pay the outstanding borrowings under our previous revolving credit facility in the fourth quarter of fiscal year 2017, and $17.0 million borrowed to finance the Sealweld acquisition in the third quarter of fiscal 2017. The borrowings were offset by the payoff of the $31.0 million then outstanding indebtedness under our prior revolving credit facility on the date of the closing of the Flowchem acquisition, payments of $18.8 million towards our prior revolving credit facility prior to the Sealweld acquisition in fiscal year 2017, $15.3 million in debt issuance costs associated with our new credit agreement and a $10.0 million payment towards the principal balance outstanding on the new credit agreement. In addition, we paid $1.4 million in dividends for the year ended July 31, 2017.

In fiscal year 2016, net cash used in financing activities was $18.6 million. We paid down $20.0 million on our revolving credit facility and borrowed $2.8 million to finance the acquisition of NFC. In addition, we paid $1.4 million in dividends for the year ended July 31, 2016.

Working Capital

On June 15, 2017, we entered into our new Credit Agreement providing for a seven year syndicated senior secured Term Loan of $550.0 million and a five year senior secured Revolving Loan of $50.0 million. At July 31, 2018, we had $312.0 million outstanding under the Term Loan, with up to an additional $47.0 million of additional borrowing capacity under the Revolving Loan after giving effect to a reduction of $3.0 million reserved for outstanding letters of credit.

The proceeds from the Term Loan were used to finance the acquisition of Flowchem, pay the costs and expenses related to the acquisition of Flowchem, and to repay in full the $31.0 million then outstanding indebtedness under our prior revolving credit facility. We did not draw upon the Revolving Loan at the closing of the Credit Agreement. Management believes that the Credit Agreement, combined with cash flows from operations and existing cash and cash equivalents, will adequately provide for our working capital needs for current operations for the next twelve months.

Long Term Obligations

Our long-term debt and current maturities as of July 31, 2018 and July 31, 2017 consisted of the following (in thousands):

	July 31, 2018	July 31, 2017
Senior secured debt:		
Term loan, maturing on June 15, 2024, variable interest rates based on LIBOR plus 2.75% at July 31, 2018	$312,000	$540,000
Revolving loan facility, maturing on June 15, 2022, variable interest rates based on LIBOR plus 2.25% at July 31, 2018	—	—
Total debt	312,000	540,000
Current maturities of long-term debt	—	(3,167)
Unamortized debt issuance costs and original issue discount	(5,881)	(13,731)
Long-term debt, net of current maturities	$306,119	$523,102

As described above, on June 15, 2017, we entered into the Credit Agreement with KeyBank National Association, as agent, KeyBanc Capital Markets Inc., HSBC Securities (USA) Inc., and JPMorgan Chase Bank, N.A., as joint lead arrangers and joint bookrunners, and ING Capital LLC, as documentation agent.

On December 19, 2017, we entered into an amendment to the Credit Agreement to reduce the interest rate margins applicable to borrowings under the Term Loan and the Revolving Loan. Following the amendment, the interest rate on the Term Loan was reduced from LIBOR plus 4.00% to LIBOR plus 2.75%, based on a ratio of net funded debt to adjusted EBITDA, as calculated in accordance with the Credit Agreement:

Ratio of Net Funded Debt to Adjusted EBITDA	Margin
Greater than 2.5 to 1.0	2.75 %
Less than or equal to 2.5 to 1.0	2.50 %

As of July 31, 2018, the Term Loan bore interest at 4.827%. See “Interest Rate Sensitivity” under Item 7A of this report for the effect of our interest rate swap transactions on interest expense.

In addition, following the amendment, the interest rate on the Revolving Loan was reduced from LIBOR plus 3.00% to LIBOR plus 2.25%, based on a ratio of net funded debt to adjusted EBITDA, as calculated in accordance with the Credit Agreement:

Ratio of Net Funded Debt to Adjusted EBITDA	Margin
Greater than 4.25 to 1.0	2.75 %
Greater than 3.75 to 1.0, but less than or equal to 4.25 to 1.0	2.50 %
Less than 3.75 to 1.0	2.25 %

As of July 31, 2018, the Revolving Loan bore interest at 4.327%. There were no outstanding borrowings under the Revolving Loan as of July 31, 2018. We also incur an unused commitment fee of 0.375% on the unused amount of commitments under the Revolving Loan.

Loans under the Credit Agreement are secured by our U.S. assets, including stock in subsidiaries, inventory, accounts receivable, equipment, intangible assets, and real property. The Credit Agreement includes restrictive covenants, including a covenant that we must maintain a consolidated net leverage ratio below 5.75 to 1.0 through the fiscal quarter ended April 30, 2019, which ratio is reduced each year thereafter by an amount set forth in the Credit Agreement, until the twelve months ended April 30, 2022, following which we must maintain a consolidated net leverage ratio below 4.00 to 1.0. As of July 31, 2018, we were in compliance with our debt covenants.

Principal payments due under our long-term debt agreements as of July 31, 2018 were as follows (in thousands):

	Total	2019	2020	2021	2022	2023	Thereafter
Long-term debt	$312,000	$ —	$ —	$ —	$ —	$ —	$312,000

Environmental Expenditures

Our capital expenditures and operating expenses for environmental matters, excluding penta product support and testing, data submission and related costs, were approximately $3.7 million in fiscal year 2018, $2.9 million in fiscal year 2017 and $2.6 million in fiscal year 2016. We expect that comparable capital and operating costs for fiscal year 2019 will be $7.7 million, plus REACH registration costs of $0.2 million.

In addition, we expensed approximately $0.2 million for penta product support in fiscal year 2018, and expensed approximately $0.1 million and $0.4 million in fiscal years 2017 and 2016, respectively. We estimate we will incur approximately $0.4 million in fiscal year 2019 for penta product support. We capitalized testing, data submission and related costs pertaining to penta in fiscal year 2018 of approximately $1.0 million. We estimate that we will incur additional capital costs for testing, data submission and related costs pertaining to penta of approximately $0.6 million in fiscal year 2019.

Since environmental laws have traditionally become increasingly stringent, costs and expenses relating to environmental control and compliance may increase in the future. While we do not believe that the incremental cost of compliance with existing or future environmental laws and regulations will have a material adverse effect on our business, financial condition or results of operations, we cannot assure that costs of compliance will not exceed current estimates.

Contractual Obligations

Our obligations to make future payments under contracts as of July 31, 2018 are summarized in the following table (in thousands):

	Payments Due by Period (in thousands)				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Long-term debt	$312,000	$—	$—	$—	$312,000
Estimated interest payments on debt(1)	89,776	15,269	30,581	30,539	$13,387
Operating leases	17,843	3,159	8,066	1,806	6,618
Other long-term liabilities(2)	992	243	486	$263	—
Purchase obligations(3)	64,267	50,630	13,637	—	—
Total	$484,878	$69,301	$52,770	$32,608	$332,005

(1) Estimated payments are based on interest rates in effect and the expected amount of outstanding borrowings on our Credit Agreement as of the end of July 2018.

(2) Includes postretirement benefit obligations for a supplemental executive retirement plan for one of our former United States executives and in connection with benefit obligations of our foreign subsidiary; and estimated unused commitment fees on our revolving credit facility, assuming no borrowings on our Revolving Loan and no additional letters of credit.

(3) Consists primarily of raw materials purchase contracts. These are typically not fixed price arrangements. The prices are based on the prevailing prices.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, such as financing or unconsolidated variable interest entities, other than operating leases.

Recent Accounting Standards

We have considered all recently issued accounting standards updates and SEC rules and interpretive releases, and are currently assessing the potential impacts on our financial statements. See “Recent Accounting Standards” in Note 1 to the consolidated financial statements included in this report.

Critical Accounting Policies

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires the use of estimates, judgments, and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the periods presented. The significant accounting principles that we believe are the most important to aid in fully understanding our financial results are the following:

Revenue Recognition — Our chemical products are sold in the open market and revenue is recognized when risk of loss and title to the products transfers to customers. We also recognize service revenue in connection with technical support services and chemicals delivery and handling at customer facilities. Revenue is recognized as those services are provided.

Allowance for Doubtful Accounts — We record an allowance for doubtful accounts to reduce accounts receivable where we believe accounts receivable may not be collected. A provision for bad debt expense recorded to selling, general and administrative expenses increases the allowance. Accounts receivable that are written off decrease the allowance. The amount of bad debt expense recorded each period and the resulting adequacy of the allowance at the end of each period are determined using a customer-by-customer analyses of accounts receivable balances each period and subjective assessments of future bad debt exposure. Historically, write offs of accounts receivable balances have been insignificant. The allowance was $0.2 million and $0.3 million at July 31, 2018 and 2017, respectively.

Goodwill — Goodwill represents the excess of the purchase price paid for acquired businesses over the allocated fair value of the related net assets after impairments, if applicable.

We evaluate goodwill for impairment annually, and when an event occurs or circumstances change to suggest that the carrying amount may not be recoverable. We have goodwill of $225.3 million and $7.9 million associated with our performance materials and electronic chemicals segments, respectively, as of July 31, 2018. As part of the goodwill impairment analysis, current accounting standards give companies the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If it is determined that it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing the currently prescribed two-step impairment test is unnecessary. In developing a qualitative assessment to meet the "more-likely-than-not" threshold, each reporting unit with goodwill on its balance sheet is assessed separately and different relevant events and circumstances are evaluated for each unit. If it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the prescribed two-step impairment test is performed. Current accounting standards also give us the option to bypass the qualitative assessment for any reporting unit in any period, and proceed directly to performing the first step of the two-step goodwill impairment test. We conduct our annual impairment test as of July 31 of each year. In 2018, 2017 and 2016, we performed a qualitative assessment that indicated the fair value of each of our reporting units is greater than its carrying amount. In conjunction with the sale of our creosote distribution business on January 16, 2015, we allocated goodwill of approximately $0.7 million that was previously a part of the wood treating chemicals reporting unit to the assets disposed of in the sale. Factors that could impact our future assessments or indicate potential impairment of our goodwill and long-lived assets include the overall profitability of each of our operations, a downturn in the semiconductor industry that our electronic chemicals business relies upon, a longer-term downturn in the oil and gas industry that our industrial lubricants business relies upon, or regulatory changes impacting our wood treating chemicals business, among other things. We note that our market capitalization as of July 31, 2018 indicated a significant gap between that market valuation and our overall total stockholders' equity of $416.1 million.

Impairment of Long-Lived Assets — Long-lived assets, including property, plant and equipment, and intangible assets, with defined lives, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset or its disposition. The measurement of an impairment loss for long-lived assets, where management expects to hold and use the asset, are based on the asset's estimated fair value. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value.

Asset Retirement Obligations — We measure asset retirement obligations based upon the applicable accounting guidance, using certain assumptions including estimates for decommissioning, dismantling and disposal costs. In the event that operational or regulatory issues vary from our estimates, we could incur additional significant charges to income and increases in cash expenditures related to those costs. Certain conditional asset retirement obligations related to facilities have not been recorded in the consolidated financial statements due to uncertainties surrounding the ultimate settlement date and estimate of fair value related to a legal obligation to perform an asset retirement activity. When a reasonable estimate of the ultimate settlement can be made, an asset retirement obligation is recorded and such amounts may be material to the consolidated financial statements in the period in which they are recorded. In conjunction with our decision to exit the Bay Point facility, in fiscal year 2014 we recognized $3.7 million in asset retirement obligations related to the estimated decommissioning, decontamination, and dismantling costs. See Note 16 to the consolidated financial statements included in this report.

Income Taxes — We follow the asset and liability method of accounting for income taxes in accordance with current accounting standards. Under this method, deferred income taxes are recorded based upon the differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws in effect at the time the underlying assets or liabilities are recovered or settled. While most of our operations reflect net deferred tax liabilities as of July 31, 2018, we will continue to evaluate the recoverability of our deferred tax assets in the future. Those assessments will include consideration of the historical and future levels of profitability and taxable income, as well as any limitations on the recoverability of those deferred tax assets. To the extent that circumstances change and we determine further amounts of deferred tax assets are not recoverable, we may record additional valuation allowances.

When our earnings from foreign subsidiaries are considered to be indefinitely reinvested, no provision for United States income taxes is made for these undistributed earnings. If any of the subsidiaries have a distribution of earnings in the form of dividends or otherwise, we would be subject to both United States income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries.

We record a valuation allowance in the reporting period when management believes that it is more likely than not that any deferred tax asset created will not be realized. Management will continue to evaluate the appropriateness of the valuation allowance in the future based upon our operating results.

The calculation of our tax liabilities involves assessing the uncertainties regarding the application of complex tax regulations. We recognize liabilities for tax expenses based on our estimate of whether, and the extent to which, additional taxes will be due. If we determine that payment of these amounts is unnecessary, we reverse the liability and recognize a tax benefit when the determination is made. We record an additional charge in our provision for taxes in the period in which we determine that the recorded tax liability is less than we expect the ultimate assessment to be.

Inventory— Inventories are valued at the lower of cost or market. For certain products, cost is generally determined using the first-in, first-out (“FIFO”) method. For certain other products we utilize a weighted-average cost. We record inventory obsolescence as a reduction in inventory when considered unsellable. We review inventories periodically to ensure the valuation of these assets is recorded at the lower of cost or market and to record an obsolescence reserve when inventory is considered unsellable. During the fiscal years ended July 31, 2018 and 2017, we recognized inventory valuation loss of $0.4 million and $0.1 million, respectively. As of July 31, 2018 and 2017, we had $0.3 million and $0.6 million, respectively, of reserves for inventory obsolescence.

Disclosure Regarding Forward Looking Statements

This report includes “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 forward-looking statements include information about possible or assumed future results of our operations. All statements, other than statements of historical facts, included or incorporated by reference in this report that address activities, events or developments that we expect or anticipate may occur in the future, including such things as the pending Merger with Cabot Microelectronics, future capital expenditures, business strategy, competitive strengths, goals, growth of our business and operations, plans and references to future successes may be considered forward-looking statements. Also, when we use words such as “anticipate,” “believe,” “estimate,” “intend,” “plan,” “project,” “forecast,” “may,” “should,” “budget,” “g “probably” or similar expressions, we are making forward-looking statements. Many risks and uncertainties may impact the matters addressed in these forward-looking statements. Our forward-looking statements speak only as of the date made and we will not update forward-looking statements unless the securities laws require us to do so.

Some of the key factors which could cause our future financial results and performance to vary from those expected include, but are not limited to:

- the uncertainty of the value of the Merger Consideration that our shareholders will receive in the Merger due to a fixed exchange ratio and a potential fluctuation in the market price of Cabot Microelectronics common stock;
- the possibility that the consummation of the Merger is delayed or does not occur, including due to the failure of our shareholders to approve the Merger;

- the occurrence of any event, change or other circumstances that could give rise to the termination of the Merger Agreement or the failure to satisfy the closing conditions;
- the effect of restrictions placed on our business activities and the limitations put on our ability to pursue alternatives to the Merger pursuant to the Merger Agreement;
- the disruption from the Merger making it more difficult for us to maintain relationships with their respective customers, employees or suppliers;
- the outcome of any legal proceedings that have been or may be instituted following the announcement of the Merger;
- the loss or significant reduction in business from primary customers;
- our ability to realize the anticipated benefits of business acquisitions and to successfully integrate previous or future business acquisitions, including the integration of Flowchem;

32

- the loss of key suppliers, particularly for sulfuric acid;
- our level of indebtedness, which could diminish our ability to raise additional capital to fund operations or limit our ability to react to changes in the economy or the chemicals industry;
- the implementation of our strategy with respect to the expansion of operations in Singapore taking longer or being more costly than currently believed, and the failure to achieve all the planned benefits of that effort;
- the implementation of our enterprise resource planning system taking longer or being more costly than currently believed;
- our ability to implement productivity improvements, cost reduction initiatives or facilities expansions;
- market developments affecting, and other changes in, the demand for our products and the entry of new competitors or the introduction of new competing products;
- volatility in oil and natural gas prices, which may impact customers' activity levels and spending for our products and services and which could impact goodwill impairment testing for our pipeline performance business;
- increases in the price of energy, affecting our primary raw materials and active ingredients;
- the timing of planned capital expenditures;
- our ability to identify, develop or acquire, and market additional product lines and businesses necessary to implement our business strategy and our ability to finance such acquisitions and development;
- the condition of the capital markets generally, which will be affected by interest rates, foreign currency fluctuations and general economic conditions;
- cost and other effects of legal and administrative proceedings, settlements, investigations and claims, including environmental liabilities which may not be covered by indemnity or insurance;
- the effects of weather, earthquakes, other natural disasters and terrorist attacks;
- the impact of penta or any of our other products being or being proposed to be banned or restricted as a persistent organic pollutant or otherwise under the Stockholm Convention Treaty, REACH or other applicable laws or regulations, and the ability to obtain registration and re-registration of our products under applicable law;
- exposure to movements in foreign currency exchange rates as a result of the geographic diversity of our operations;
- the political and economic climate in the foreign or domestic jurisdictions in which we conduct business; and
- other United States or foreign regulatory or legislative developments which affect the demand for our products generally or increase the environmental compliance cost for our products or operations or impose liabilities on the manufacturers and distributors of such products.

The information contained in this report, including the information set forth under the heading "Risk Factors", identifies additional factors that could cause our results or performance to differ materially from those we express in our forward-looking statements. Although we believe that the assumptions underlying our forward-looking statements are reasonable, any of these assumptions and, therefore, the forward-looking statements based on these assumptions, could themselves prove to be inaccurate. In light of the significant uncertainties inherent in the forward-looking statements which are included in this report and the exhibits and other documents incorporated herein by reference, our inclusion of this information is not a representation by us or any other person that our objectives and plans will be achieved.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks in the ordinary course of our business, arising primarily from changes in interest rates and to a lesser extent foreign currency exchange rate fluctuations. At July 31, 2018, we did not use derivative financial instruments or hedging transactions to manage foreign currency exchange rate fluctuations. At July 31, 2018, we were a party to interest rate swap agreements, as described below.

Interest Rate Sensitivity

As of July 31, 2018, we had no fixed rate debt.

Our variable rate debt as of July 31, 2018 consisted of the Term Loan under the Credit Agreement with an interest rate of 4.827% (2.750% plus LIBOR), maturing on June 15, 2024. On July 31, 2018, we had $312.0 million outstanding on the Term Loan. Currently, advances under the Revolving Loan bear interest at LIBOR plus 2.250%.

Based on the outstanding balance of our variable rate debt under the Credit Agreement at July 31, 2018, a 1.0% change in the interest rate as of July 31, 2018 would result in an additional charge of approximately $3.1 million in annual interest expense, assuming no further principal payments on our outstanding debt and excluding the impact of the interest rate swap agreements described below.

On August 11, 2017, we entered into an interest rate swap agreements (the "Swap Transaction") to manage our exposure to fluctuations in variable interest rates. The Swap Transaction effectively exchanged the interest rate on $174.1 million, or approximately 55.8% of the debt outstanding under the Credit Agreement at July 31, 2018 from (i) variable LIBOR plus margin to (ii) a fixed rate of 1.925% per annum plus margin. For fiscal year 2018, net payments required under the Swap Transaction increased interest expense by $0.6 million. The Swap Transaction has an effective date of August 31, 2017 and a termination date of June 15, 2024.

Foreign Currency Exchange Rate Sensitivity

We are exposed to fluctuations in foreign currency exchange rates from international operations in the electronic chemicals segment. Our international operations in Europe and Singapore use different functional currencies, including the Euro, Great Britain Pound and Singapore Dollar. The U.S. dollar is our consolidated reporting currency. Currency translation gains and losses result from the process of translating those operations from the functional currency into our reporting currency. Currency translation gains and losses are recorded as other comprehensive income or loss. Assets and liabilities have been translated using exchange rates in effect at the balance sheet dates. Revenues and expenses have been translated using the average exchange rates during the period.

We recognized a foreign currency translation loss of $0.7 million in fiscal year 2018, a gain of $2.5 million in fiscal year 2017, and a loss of $2.6 million in fiscal year 2016, each of which was included in accumulated other comprehensive income/(loss) in the consolidated balance sheets. At July 31, 2018, the cumulative foreign currency translation loss reflected in accumulated other comprehensive loss was $10.2 million.

Additionally we have limited exposure to certain transactions denominated in a currency other than the functional currency in our European and Singapore operations. Accordingly, we recognize exchange gains or losses in our consolidated statement of income from these transactions. Foreign currency exchange losses during fiscal year 2018 were $0.5 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
KMG Chemicals, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of KMG Chemicals, Inc. and subsidiaries (the "Company") as of July 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three year period ended July 31, 2018, and the related notes and financial statement schedule II collectively, the consolidated financial statements. In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of July 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended July 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of July 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated October 1, 2018, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2012.

Dallas, Texas

October 1, 2018

36

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
KMG Chemicals, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited KMG Chemicals, Inc. and subsidiaries' (the "Company") internal control over financial reporting as of July 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of July 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of July 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended July 31, 2018, the related notes, and financial statement schedule II, (collectively the consolidated financial statements), and our report dated October 1, 2018 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Dallas, Texas

October 1, 2018

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

AS OF JULY 31, 2018 AND 2017

(In thousands, except for share and per share amounts)

	2018	2017
Assets		
Current assets		
Cash and cash equivalents	$24,436	$20,708
Accounts receivable		
Trade, net of allowances of $219 at July 31, 2018 and $263 at July 31, 2017	61,895	51,168
Other	9,943	6,168
Inventories, net	54,218	46,482
Prepaid expenses and other	4,807	8,617
Total current assets	155,299	133,143
Property, plant and equipment, net	117,101	105,435
Goodwill	233,204	224,391
Intangible assets, net	300,457	320,401
Other assets, net	12,373	9,061
Total assets	$818,434	$792,431
Liabilities & stockholders' equity		
Current liabilities		
Accounts payable	$39,005	$29,570
Accrued liabilities	12,524	12,456
Employee incentive accrual	7,726	7,713
Current portion of long-term debt	—	3,167
Total current liabilities	59,255	52,906
Long-term debt, net	306,119	523,102
Deferred tax liabilities	32,129	37,944
Other long-term liabilities	4,864	4,763
Total liabilities	402,367	618,715
Commitments and contingencies		
Stockholders' equity		
Preferred stock, $.01 par value, 10,000,000 shares authorized, none issued	—	—
Common stock, $.01 par value, 40,000,000 shares authorized, 15,509,733 shares issued and outstanding at July 31, 2018 and 11,889,649 shares issued and outstanding at July 31, 2017	155	119
Additional paid-in capital	222,371	42,535
Accumulated other comprehensive loss	(10,321)	(9,712)
Retained earnings	203,862	140,774
Total stockholders' equity	416,067	173,716
Total liabilities and stockholders' equity	$818,434	$792,431

See accompanying notes to consolidated financial statements.

38

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME

FOR THE YEARS ENDED JULY 31, 2018, 2017 AND 2016

(In thousands, except per share amounts)

	2018	2017	2016
Net sales	$465,556	$333,442	$297,978
Cost of sales	267,895	203,304	182,470
Gross profit	197,661	130,138	115,508
Distribution expenses	36,439	38,318	36,986
Selling, general and administrative expenses	57,900	50,188	47,233
Amortization of intangible assets	15,123	4,279	1,959
Restructuring charges	74	20	1,629
Realignment charges	—	—	130
Operating income	88,125	37,333	27,571
Other income/(expense)			
Interest expense, net	(21,529)	(4,817)	(799)
Loss on the extinguishment of debt	(6,710)	(353)	—
Derivative fair value gain	5,576	—	—
Gain on purchase of NFC	—	—	1,826
Gain on sale of creosote distribution business, net	—	—	—
Other, net	(1,063)	279	(368)
Total other income/(expense), net	(23,726)	(4,891)	659
Income before income taxes	64,399	32,442	28,230
Provision for income taxes	442	(8,809)	(9,555)
Net income	$64,841	$23,633	$18,675
Earnings per share			
Basic	$4.41	$1.99	$1.59
Diluted	$4.29	$1.92	$1.57
Weighted average shares outstanding			
Basic	14,708	11,885	11,719
Diluted	15,111	12,286	11,926

See accompanying notes to consolidated financial statements.

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

FOR THE YEARS ENDED JULY 31, 2018, 2017 AND 2016

(In thousands)

	2018	2017	2016
Net income	$64,841	$23,633	$18,675
Other comprehensive (loss)/income			
Foreign currency translation (loss)/gain	(692)	2,544	(2,620)
Pension and other post-retirement benefit liability adjustments	83	(209)	240
Total other comprehensive (loss)/income	(609)	2,335	(2,380)
Total comprehensive income	$64,232	$25,968	$16,295

See accompanying notes to consolidated financial statements.

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

FOR THE YEARS ENDED JULY 31, 2018, 2017 AND 2016

(In thousands)

	Common Stock Shares Issued	Par Value	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
BALANCE AT JULY 31, 2015	11,690	$ 117	$ 31,676	$ (9,667)	$ 101,295	$ 123,421
Cash dividends ($0.12 per share)					(1,406)	(1,406)
Restricted stock issued	187	2	(2)			—
Stock-based compensation expense			4,836			4,836
Tax benefit from stock-based awards			43			43
Net income					18,675	18,675
Loss on foreign currency translation				(2,620)		(2,620)
Pension liability adjustment				240		240
BALANCE AT JULY 31, 2016	11,877	$ 119	$ 36,553	$ (12,047)	$ 118,564	$ 143,189
Cash dividends ($0.12 per share)					(1,423)	(1,423)
Restricted stock issued	12		(277)			(277)
Stock-based compensation expense			6,259			6,259
Tax benefit from stock-based awards						—
Net income					23,633	23,633
Gain on foreign currency translation				2,544		2,544
Pension liability adjustment				(209)		(209)
BALANCE AT JULY 31, 2017	11,889	119	42,535	(9,712)	140,774	173,716
Cash dividends ($0.12 per share)					(1,753)	(1,753)
Restricted stock issued	170	1	(3,730)			(3,729)
Issuance of common stock	3,450	35	175,602			175,637
Stock-based compensation expense			7,964			7,964
Net income					64,841	64,841
Loss on foreign currency translation				(692)		(692)
Pension liability adjustment				83		83
BALANCE AT JULY 31, 2018	15,509	155	222,371	(10,321)	203,862	416,067

See accompanying notes to consolidated financial statements.

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED JULY 31, 2018, 2017 AND 2016

(In thousands)

	2018	2017	2016
Cash flows from operating activities			
Net income	$64,841	$23,633	$18,675
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	29,948	16,964	14,534
Loss on extinguishment of debt	6,710	353	—
Amortization of debt discounts and financing costs included in interest expense	1,421	401	167
Stock-based compensation expense	7,964	6,259	4,836
Deferred income tax (benefit)/expense	(5,517)	(1,090)	258
Other	371	(1,028)	211
Derivative fair value gain	(5,576)	—	—
Debt repricing transaction costs	607	—	—
Depreciation related to restructuring and realignment	—	—	295
Gain on NFC acquisition	—	—	(1,826)
Changes in operating assets and liabilities, net of effects of acquisition			
Accounts receivable — trade	(11,039)	(3,146)	5,154
Accounts receivable — other	(2,221)	254	(1,889)
Inventories	(8,206)	2,870	4,348
Other current and non-current assets	(566)	(1,500)	1,221
Accounts payable	9,904	(1,096)	(9,226)
Accrued liabilities and other	(666)	2,049	4,276
Net cash provided by operating activities	87,975	44,923	41,034
Cash flows from investing activities			
Additions to property, plant and equipment	(23,654)	(13,074)	(14,358)
Purchase of NFC, net of cash acquired	—	—	(2,679)
Purchase of Sealweld, net of cash acquired	(585)	(16,599)	—
Purchase of Flowchem, net of cash acquired	—	(495,000)	—
Other investing activities	(988)	(753)	—
Proceeds from insurance claim	50	1,251	—
Net cash used in investing activities	(25,177)	(524,175)	(17,037)
Cash flows from financing activities			
Proceeds from sale of common stock, net of issuance costs	175,637	—	—
Principal payments on borrowings on term loan	(228,000)	(10,000)	—
Debt repricing transaction costs	(607)		
Proceeds from term loan	—	550,000	—
Borrowings under credit facility	—	17,000	2,800
Deferred financing costs	—	(15,323)	—
Net payments under credit facility	—	(52,800)	(20,000)
Cash payments related to tax withholdings from stock-based awards	(3,729)	(277)	—
Payment of dividends	(1,753)	(1,423)	(1,406)
Other financing activities	32	—	43
Net cash (used in)/provided by financing activities	(58,420)	487,177	(18,563)
Effect of exchange rate changes on cash	(650)	(645)	(523)

Net increase in cash and cash equivalents	3,728	7,280	4,911
Cash, cash equivalents and restricted cash at the beginning of year	20,708	13,428	8,517
Cash, cash equivalents and restricted cash at end of year	$24,436	$20,708	$13,428

See accompanying notes to consolidated financial statements.

KMG CHEMICALS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED JULY 31, 2018, 2017 AND 2016

(In thousands)

	2018	2017	2016
Supplemental disclosures of cash flow information			
Cash paid for interest	$19,550	$4,309	$621
Cash paid for income taxes	$5,292	$9,937	$9,744
Supplemental disclosure of non-cash investing activities			
Purchase of property, plant and equipment through accounts payable	$958	$1,385	$373
Accrued liabilities under industrial lubricants business acquisition	$—	$175	$—

See accompanying notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General — KMG Chemicals, Inc. (the “Company”) is involved principally in the manufacture, formulation and distribution of specialty chemicals and performance materials for the semiconductor, industrial wood preservation and pipeline and energy markets.

In its electronic chemicals business, the Company sells high purity process chemicals primarily to the semiconductor industry. The Company operates its electronic chemicals business through KMG Electronic Chemicals, Inc. in North America and through KMG Italia, S.r.l. and KMG Electronic Chemicals Holdings S.a.r.l. (and its subsidiaries) in Europe and Asia and has facilities in the United States, the United Kingdom, France, Italy and Singapore. In its pipeline performance business, the Company sells products and services to the pipeline and energy services market that are used to optimize pipeline throughput and maximize performance and safety. The Company operates its pipeline performance business through KMG Val-Tex, LLC (“Val-Tex”), Sealweld (USA), Inc., KMG Industrial Lubricants Canada, Inc., and Flowchem LLC (and its subsidiaries), and has four facilities in the United States and one facility in Canada. In the wood treating business, the Company manufactures penta at its plant in Matamoros, Mexico through KMG de Mexico (“KMEX”), a Mexican corporation which is a wholly-owned subsidiary of KMG Bernuth. The Company sells its wood treating chemicals in the United States, Mexico and Canada. The Company has two reportable segments, electronic chemicals and performance materials. The performance materials segment includes the Company’s pipeline performance business and its wood treating chemicals business. See Note 15.

On August 14, 2018, the Company entered into an Agreement and Plan of Merger (“Merger Agreement”) with Cabot Microelectronics Corporation, a Delaware corporation (“Cabot Microelectronics”), and Cobalt Merger Sub Corporation, a Texas corporation and wholly owned subsidiary of Cabot Microelectronics (“Merger Sub”), providing for the acquisition of the Company by Cabot Microelectronics. The Merger Agreement provides that, upon the terms and subject to the satisfaction or valid waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into the Company (the “Merger”), with the Company continuing as the surviving corporation and a wholly owned subsidiary of Cabot Microelectronics.

Principles of Consolidation — The consolidated financial statements include the accounts of KMG Chemicals, Inc. and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates — The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (“GAAP”) requires management to make 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 could differ from these estimates.

Reclassifications — Certain reclassifications of prior year amounts have been made to conform to current year presentation. These reclassifications had no impact on net income (loss) or total stockholders’ equity as previously reported.

Cash and Cash Equivalents — The Company considers all investments with original maturities of three months or less when purchased to be cash equivalents.

Restricted Cash — Restricted cash includes cash balances which are legally or contractually restricted to use. The Company's restricted cash as of July 31, 2016 included proceeds that were placed in escrow in connection with the sale of the animal health business. See Note 3.

Fair Value of Financial Instruments — The carrying value of financial instruments, including cash and cash equivalents, accounts receivable, and accounts payable approximate fair value because of the relatively short maturity of these instruments. The fair value of the Company's debt at July 31, 2018 and 2017 approximated its carrying value since the debt obligations bear interest at a rate consistent with market rates.

Accounts Receivable — The Company's trade accounts receivables are primarily from sales of products worldwide. The Company extends credit based on an evaluation of the customer's financial condition, generally without requiring collateral. Exposure to losses on receivables is dependent on each customer's financial condition.

The Company records an allowance for doubtful accounts to reduce accounts receivable when the Company believes an account may not be collected. A provision for bad debt expense is recorded to selling, general and administrative expenses. The amount of bad debt expense recorded each period and the resulting adequacy of the allowance at the end of each period are determined using a customer-by-customer analyses of accounts receivable balances each period and the Company's assessment of future bad debt exposure. Historically, write offs of accounts receivable balances have been insignificant. The allowance was $0.2 million and $0.3 million at July 31, 2018 and 2017, respectively.

Inventories — Inventories are valued at the lower of cost or net realizable value. For certain products, cost is generally determined using the first-in, first-out (“FIFO”) method. For certain other products the Company utilizes a weighted-average cost. The Company records a reserve for inventory obsolescence as a reduction in its inventory when considered not salable.

Property, Plant, and Equipment — Property, plant, and equipment are stated at cost less accumulated depreciation and amortization. Major renewals and betterments are capitalized. Repairs and maintenance costs are expensed as incurred.

Depreciation for equipment commences once placed in service, and depreciation for buildings and leasehold improvements commences once they are ready for their intended use. Depreciable life is determined through economic analysis. Depreciation for financial statement purposes is provided on the straight-line method.

The estimated useful lives of classes of assets are as follows:

Asset Class	Life (Years)
Building	15 to 30
Plant	10 to 18
Equipment	3 to 15
Leasehold improvements	Remaining life of the lease

Depreciation expense was approximately $14.8 million, $12.7 million and $12.9 million in fiscal years 2018, 2017 and 2016, respectively (including accelerated depreciation of $0.3 million in fiscal year 2016). See Notes 5 and 16.

Intangible Assets — Identifiable intangible assets with a defined life are amortized using a straight-line method over the useful lives of the assets. Identifiable intangible assets of an indefinite life are not amortized. These assets are required to be tested for impairment at least annually. If this review indicates that impairment has occurred, the carrying value of the intangible assets will be adjusted to fair value. Based on an assessment of qualitative factors, in accordance with GAAP, it was determined that there were no events or circumstances that would lead the Company to a determination that is more likely than not that the fair value of the applicable assets was less than its carrying value as of July 31, 2018 and 2017. The Company therefore concluded that its indefinite lived intangible assets were not impaired as of July 31, 2018 and 2017.

Goodwill — Goodwill represents the excess of the purchase price paid for acquired businesses over the allocated fair value of the related net assets after impairments, if applicable.

The Company evaluates goodwill for impairment annually, and when an event occurs or circumstances change to suggest that the carrying amount may not be recoverable. The Company has goodwill of $225.3 million and $7.9 million associated with its performance materials and electronic chemicals segments, respectively, as of July 31, 2018. As part of the goodwill impairment analysis, current accounting standards give companies the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If it is determined that it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing the currently prescribed two-step impairment test is unnecessary. In developing a qualitative assessment to meet the “more-likely-than-not” threshold, each reporting unit with goodwill on its balance sheet is assessed separately, and different relevant events and circumstances are evaluated for each unit. If it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then the prescribed two-step impairment test is performed. Current accounting standards also give us the option to bypass the qualitative assessment for any reporting unit in any period, and proceed directly to performing the first step of the two-step goodwill impairment test. The Company conducts its annual impairment test as of July 31 of each year. In 2018, 2017 and 2016, the Company performed a qualitative assessment that indicated the fair value of each of its reporting units is greater than its carrying amount. In conjunction with the sale of the creosote business on January 16, 2015, the Company allocated goodwill of approximately $0.7 million that was previously a part of the wood treating chemicals reporting unit to the assets disposed of in the sale.

Asset retirement obligation — The Company measures asset retirement obligations based upon the applicable accounting guidance, using certain assumptions including estimates for decommissioning, dismantling and disposal costs. In the event that operational or regulatory issues vary from management's estimates, the Company could incur additional significant charges to income and increases in cash expenditures related to those costs. Certain conditional asset retirement obligations related to facilities have not been recorded in the consolidated financial statements due to uncertainties surrounding the ultimate settlement date and estimate of fair value related to a legal obligation to perform an asset retirement activity. When a reasonable estimate of the ultimate settlement can be made, an asset retirement obligation is recorded and such amounts may be material to the consolidated financial statements in the period in which they are recorded. In conjunction with its decision to exit the Bay Point facility, in fiscal year 2014 the Company recognized $3.7 million in asset retirement obligations related to the decommissioning, decontamination, and dismantling costs for which it is obligated under its manufacturing agreement. See Note 16.

Impairment of Long-Lived Assets — Long-lived assets, including property, plant and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. The determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its disposition. The measurement of an impairment loss for long-lived assets, where management expects to hold and use the asset, are based on the asset's estimated fair value. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value. There were no impairment charges in fiscal years 2018, 2017 or 2016. See Notes 5 and 7.

Revenue Recognition — The Company's chemical products are sold in the open market and revenue is recognized when risk of loss and title to the products transfers to customers, the price to the buyer is fixed or determinable and recoverability is reasonably assured. For consignment sales, the revenues are recognized when the customer uses the product for their intended use. The Company also recognizes service revenue in connection with technical support services and chemicals delivery and handling at customer facilities. Revenue is recognized as those services are provided. To the extent that customers are eligible for rebates, they are estimated and recognized as the sales are made.

Cost of Sales — Cost of sales includes inbound freight charges, purchasing and receiving costs, inspection costs and internal transfer costs. In the case of products manufactured by the Company, direct and indirect manufacturing costs, such as depreciation and property, plant and equipment, and associated plant administrative expenses are included as well as laid-in cost of raw materials consumed in the manufacturing process.

Distribution Expenses — These expenses include outbound freight, storage and handling expenses and other miscellaneous costs (including depreciation and amortization) associated with product storage, handling and distribution.

Selling, General and Administrative Expenses — These expenses include selling expenses, corporate headquarters' expenses, depreciation, amortization of intangible assets and environmental regulatory support expenses.

Shipping and Handling Costs — Shipping and handling costs are included in cost of sales and distribution expenses. Inbound freight charges and internal transfer costs are included in cost of sales. Product storage and handling costs and the cost of distributing products to the Company's customers are included in distribution expenses.

Income Taxes — The Company follows the asset and liability method of accounting for income taxes in accordance with current accounting standards. Under this method, deferred income taxes are recorded based upon the differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws in effect at the time the underlying assets or liabilities are recovered or settled.

When the Company's earnings from foreign subsidiaries are considered to be indefinitely reinvested, no provision for United States income taxes is made for these undistributed earnings. If any of the subsidiaries have a distribution of earnings in the form of dividends or otherwise, the Company would be subject to both United States income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries.

The Company records a valuation allowance in the reporting period when management believes that it is more likely than not that any deferred tax asset created will not be realized. Management will continue to evaluate the appropriateness of the valuation allowance in the future based upon the operating results of the Company.

The calculation of the Company’s tax assets and liabilities involves assessing the uncertainties regarding the application of complex tax regulations. The Company recognizes liabilities for tax expenses based on its estimate of whether, and the extent to which, additional taxes will be due. If the Company determines that payment of these amounts is unnecessary, the Company reverses the liability and recognizes a tax benefit during the period in which it determines that the liability is no longer necessary. The Company records an additional charge in its provision for taxes when the determination is made. See Note 6.

Earnings Per Share — Basic earnings per common share amounts are calculated using the weighted average number of common shares outstanding during each period. Diluted earnings per share assumes the issuance of restricted stock under time-based and performance-based awards, and the exercise of stock options having exercise prices less than the average market price during the applicable period, using the treasury stock method. Time-based and performance-based awards have no liquidation or dividend rights and are thus are not considered participating securities.

Foreign Currency Translation — The functional currency of the Company’s operations in Mexico is the U.S. Dollar. As a result, certain income statement items, such as sales or expenses denominated in pesos are re-measured at the average monthly exchange rate for the dates those items were recognized. Foreign currency transaction gains and losses are included in the statement of operations as incurred. These gains and losses were nominal in fiscal years 2018, 2017 and 2016.

The Company's other international operations are in Europe, Singapore and Canada, and use local currencies as the functional currency, including the Great Britain Pound, Euro, Singapore Dollar and Canadian Dollar. The translation adjustment resulting from currency translation of the local currency into the reporting currency (U.S. Dollar) is included as a separate component of stockholders' equity. The assets and liabilities have been translated from local currencies into U.S. Dollars using exchange rates in effect at the balance sheet dates. Results of operations have been translated using the average exchange rates during the period. Foreign currency translation resulted in a translation adjustment gains/(losses) of $(0.7) million, $2.5 million and $(2.6) million in fiscal years 2018, 2017 and 2016, respectively, each of which are included in accumulated other comprehensive income/(loss) in the consolidated balance sheets.

Stock-Based Compensation — The Company's stock-based compensation expense is based on the fair value of the award measured on the date of grant. For stock option awards, the grant date fair value is measured using a Black-Scholes option valuation model. For stock awards, the Company's stock price on the date of the grant is used to measure the grant date fair value. For awards of stock which are based on a fixed monetary value, the grant date fair value is based on the monetary value. Stock-based compensation costs are recognized as an expense over the requisite service period of the award using the straight-line method.

Recent Accounting Standards

The Company has considered all recently issued accounting standards updates and SEC rules and interpretive releases.

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In August 2017, the FASB issued ASU 2017-12, Targeted Improvements to Accounting for Hedging Activities.	The new guidance improves the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results.	August 1, 2019. Early adoption is permitted.	The Company is currently evaluating the impact of adoption on its financial statements and related disclosures, but does not expect adoption will have a material impact as the Company does not currently utilize hedge accounting for derivative instruments.
In January 2017, the FASB issued ASU 2017-04, Intangibles: Goodwill and Other: Simplifying the Test for Goodwill Impairment.	The new guidance simplifies subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test.	August 1, 2020. Early adoption is permitted.	The Company adopted the new guidance as of August 1, 2017, as part of the FASB's simplification initiative. The adoption of the new guidance did not have an impact to the Company.
In June 2016, the FASB issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 326), Measurement of Credit Losses on Financial	The new guidance changes the impairment model for most financial assets and certain other instruments, including trade and other receivables, held-to-maturity debt securities and loans, and requires entities to use a new forward-looking expected loss	August 1, 2020. Early adoption is permitted.	The Company does not expect adoption will have a material impact on its consolidated financial statements and related disclosures.

Instruments	model that will result in the earlier recognition of allowance for losses.		
In February 2016, the FASB issued ASU 2016-02, Leases.	The new guidance supersedes the lease guidance under FASB Accounting Standards Codification ("ASC") Topic 840, Leases, resulting in the creation of FASB ASC Topic 842, Leases. The guidance requires a lessee to recognize in the statement of financial position a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term for both finance and operating leases.	August 1, 2019. Early adoption is permitted.	The Company is currently evaluating its population of leases, and is continuing to assess all potential impacts of the standard, but currently believes the most significant impact relates to its accounting for manufacturing and logistics equipment, and real estate operating leases. The Company anticipates recognition of additional assets and corresponding liabilities related to leases upon adoption, but cannot quantify these at this time. The Company plans to adopt the standard effective August 1, 2019.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers. Since that date, the FASB has issued additional ASUs clarifying certain aspects of ASU 2014-09.	The new guidance requires entities to recognize revenue in a way that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. The new guidance provides alternative methods of adoption. Subsequent guidance issued after May 2014 did not change the core principle of ASU 2014-09.	August 1, 2018.	The Company has completed its assessment of significant revenue contracts and the guidance will not have a significant impact on its consolidated financial statements. The Company is still evaluating the required changes in disclosure for the footnotes to the consolidated financial statements. The Company plans to adopt the revenue guidance effective August 1, 2018, and is going to utilize the modified retrospective method of adoption.

2. ACQUISITIONS

On June 15, 2017, the Company completed the acquisition of Flowchem Holdings LLC (“Flowchem”). The consideration paid on the closing date was the purchase price of $495.0 million plus $11.4 million for cash acquired. A subsequent working capital adjustment of $1.0 million reduced the total consideration in the acquisition to $505.4 million. Based in Waller, Texas, Flowchem is a global provider of drag-reducing agents, related support services and equipment to midstream crude oil and refined fuel pipeline operators. To finance the acquisition the Company entered into a new credit agreement providing for a seven year syndicated term loan of $550.0 million term loan. See Note 8 for further discussion of the Company’s credit agreement. The Company expensed transaction and acquisition-related costs of approximately $0.5 million and $0.7 million in the fiscal years ended July 31, 2018 and 2017, respectively, which is included in selling, general and administrative expenses on the Company’s consolidated statement of income.

The Company has accounted for the purchase using the acquisition method of accounting for business combinations. Accordingly, the purchase price has been allocated to the underlying assets and liabilities in proportion to their respective fair values. The following table summarizes the acquired assets and assumed liabilities and the acquisition accounting for the fair value of the assets and liabilities recognized in the consolidated balance sheet at July 31, 2018 (in thousands):

Cash	$ 11,445
Accounts receivable	10,051
Inventory	9,310
Other current assets	499
Property, plant and equipment	19,665
Intangible assets:	
Customer relationships	205,467
Trade names and trademark	32,353
Proprietary manufacturing process	39,323
Total assets	328,113

Current liabilities	3,314
Deferred tax liability	27,418
Net identifiable assets acquired	$297,381
Goodwill	208,062
Fair value of net assets acquired	$505,443

The fair value of the accounts receivable acquired was $10.1 million, equivalent to the amount the Company expects to be collected. The $208.1 million of goodwill was assigned to the performance materials segment, and the Company expects $168.6 million of goodwill to be tax deductible. The goodwill is primarily attributable to the assembled workforce of Flowchem and the allocation of proceeds in excess of the fair value of net identifiable assets acquired.

Flowchem was consolidated into our financial statements starting on its acquisition date. The net sales and net income of Flowchem recorded in our consolidated statement of income from its acquisition date through July 31, 2017, were $9.4 million and $(0.3) million, respectively. The following unaudited pro forma financial information presents our results as if the Flowchem acquisition had occurred at the beginning of fiscal year 2016 (in thousands, except for per share amounts):

	Year Ended July 31,	
	2017	2016
Net sales	$410,243	$375,841
Net income	23,336	11,869
Earnings per share		
Basic	$1.96	$1.01
Diluted	1.90	1.00

The unaudited pro forma information presented above is for information purposes only and is not necessarily indicative of the operating results that would have occurred had the Flowchem acquisition been consummated at the beginning of the period, nor is it necessarily indicative of future operating results. The unaudited supplemental pro forma financial information includes adjustments reflecting (i) estimated annual depreciation and amortization of approximately $30.4 million and $30.2 million in each of fiscal years 2017 and 2016, respectively, that would have been charged assuming the fair value adjustments to property, plant and equipment and intangible assets had been applied from August 1, 2015; (ii) estimated annual interest expense of approximately $30.9 million and $30.4 million in each of fiscal years 2017 and 2016, respectively, including the amortization and deferred financing costs and original issue discount that would have been recorded as a result of the debt issued to finance the Flowchem acquisition; (iii) the elimination of transaction-related costs of $1.7 million in fiscal year 2017; and (iv) an adjustment to tax-effect the aforementioned unaudited pro forma adjustments using an estimated aggregate statutory income tax rate of the jurisdiction to which the above adjustments relate. The unaudited pro forma amounts do not include any potential synergies, cost savings or other expected benefits of the Flowchem acquisition.

During the year ended July 31, 2018, measurement period adjustments were made to the preliminary purchase price allocation recorded in the consolidated financial statements for the fiscal year ended July 31, 2017. The acquired intangible assets, deferred tax liabilities, goodwill, accounts receivable and current liabilities were adjusted as a result of additional analyses performed on the estimates used in the calculation of the fair value of the assets acquired and liabilities assumed. The measurement period adjustments to the amortizable intangible assets resulted in a reduction in the amortization expense going forward. The Company’s measurement period adjustments in fiscal year 2018 to the acquired deferred tax assets and liabilities were the result of further analyses performed over Flowchem’s tax attributes as of the date of the business combination, which increased the recognized goodwill.

	July 31, 2018	Measurement Period Adjustment	July 31, 2017
Customer relationships	$205,467	$ (9,415)	$214,882
Trade names and trademarks	32,353	3,402	28,951
Proprietary manufacturing process	39,323	78	39,245
Accounts receivable	10,051	(1,229)	11,280
Deferred tax liability	27,418	2,372	25,046
Current liabilities	3,314	182	3,132
Goodwill	208,062	8,716	199,346

On February 1, 2017, the Company completed the acquisition of the assets of Sealweld Corporation (“Sealweld”), a privately held corporation organized under the laws of the Province of Alberta, Canada, for CAD$22.3 million in cash (or approximately US$17.2 million, at an exchange rate of 0.77 CAD$ to US$ at February 1, 2017), which included

CAD$5.5 million (or approximately US$4.2 million, at an exchange rate of 0.77 CAD$ to US$ at February 1, 2017) for estimated working capital. Sealweld is based in Calgary, Alberta, Canada, with an additional facility in the United States. Sealweld is a global supplier of high-performance products and services for industrial valve and actuator maintenance, including lubricants, sealants, cleaners, valve fittings, tools and equipment. Additionally, Sealweld provides routine and emergency valve maintenance services and technician training for many of the world’s largest pipeline operators. The Company completed the acquisition by borrowing $17.0 million on the revolving loan under its revolving credit facility. See Note 8 for further discussion of the Company’s revolving credit facility. Sealweld is included in the performance materials segment. The Company expensed transaction and acquisition-related costs of approximately $0.8 million in the fiscal year ended July 31, 2017, which is included in selling, general and administrative expenses on the Company’s consolidated statement of income.

The following table summarizes the acquired assets and assumed liabilities and the acquisition accounting for the fair value of the assets and liabilities recognized in the consolidated balance sheet at July 31, 2017 (in thousands):

Cash	$69
Accounts receivable	2,937
Inventory	2,350
Other assets	38
Property, plant and equipment, net	4,192
Intangible assets	
Trade name/trademark	2,185
Non-compete agreements	2,254
Customer relationships	2,348
Total assets acquired	$16,373
Current liabilities	1,272
Deferred tax liability	681
Net identifiable assets acquired	14,420
Goodwill	2,771
Fair value of net assets acquired	$17,191

This purchase price allocation is final. The fair value of the accounts receivable acquired was $2.9 million, equivalent to the contractual amount acquired. The Company collected substantially all acquired accounts receivable. During the fiscal quarter ended January 31, 2018, the Company recorded a measurement period adjustment of $0.1 million to the acquired current liabilities as a result of the identification of certain tax liabilities existing at the date of the acquisition. As a result of the measurement period adjustment, the Company increased goodwill from $2.7 million to $2.8 million. The goodwill was assigned to the performance materials segment, and the Company expects $0.1 million of goodwill to be tax deductible. The goodwill is primarily attributable to the assembled workforce of Sealweld.

On April 4, 2016, the Company completed the acquisition of Nagase Finechem Singapore (Pte) Ltd. (“NFC”), a Singapore based manufacturer of electronic chemicals, for a cash purchase price of $2.9 million, including $1.1 million of estimated net working capital. NFC’s five-acre Singapore site comprises a manufacturing and packaging facility, warehouse, laboratory and cleanroom. The acquired company manufactures wet process chemicals, including solvents, acids and custom blends for the liquid crystal display and semiconductor markets, and provides recycling and refining services for certain customers. The Company completed the acquisition by borrowing $2.8 million on the revolving loan under its revolving credit facility. See Note 8 for further discussion of the Company’s revolving credit facility. The Company expensed transaction and acquisition-related costs of approximately $0.2 million in the fiscal quarter ended April 30, 2016, which is included in selling, general and administrative expenses on the Company’s consolidated statement of income.

The following table summarizes the acquired assets and assumed liabilities and the acquisition accounting for the fair value of the assets and liabilities recognized in the consolidated balance sheets at July 31, 2016 (in thousands):

Cash	$228
Accounts receivable	1,862
Other assets	101
Property, plant and equipment, net	3,242
Intangible assets	
Licensing agreement	73
Toll manufacturing agreement	255
Total assets acquired	$5,761
Total current liabilities assumed	1,028

Fair value of net assets acquired	$4,733

The aggregate fair value of the working capital (assets and liabilities), property, plant and equipment and intangible assets acquired were determined by management to exceed the consideration paid for the acquisition, resulting in a bargain purchase gain under GAAP. In reaching that conclusion, management noted that there were no other liabilities being assumed in connection with the acquisition, including no environmental liabilities. Management believes the seller had determined to perform the transaction as part of an overall repositioning of its business. Based on these considerations, the Company recorded a gain of $1.8 million in connection with the bargain purchase during the year ended July 31, 2016. The pro forma impact on consolidated results is immaterial for the year ended July 31, 2016.

3. CASH, CASH EQUIVALENTS AND RESTRICTED CASH

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same amounts shown in the consolidated statements of cash flows:

Current Presentation	July 31, 2018	July 31, 2017	July 31, 2016
Cash and cash equivalents	$24,436	$20,708	$12,428
Restricted cash	—	—	1,000
Total cash, cash equivalents and restricted cash	$24,436	$20,708	$13,428

The Company's restricted cash includes cash balances which are legally or contractually restricted to use. The Company's restricted cash was included in other long term assets as of July 31, 2016 and included proceeds that were placed in escrow in connection with the sale of the animal health business in fiscal year 2013. These proceeds were released from escrow in February 2017.

4. INVENTORIES

Inventories are summarized as follows at July 31, 2018 and 2017 (in thousands):

	2018	2017
Raw materials and supplies	$12,123	$9,124
Work in process	3,343	884
Supplies	613	3,763
Finished products	38,402	33,341
Less reserve for inventory obsolescence	(263)	(630)
Inventories, net	$54,218	$46,482

5. PROPERTY, PLANT AND EQUIPMENT

Property, plant, and equipment and related accumulated depreciation and amortization are summarized as follows at July 31, 2018 and 2017 (in thousands):

	2018	2017
Land	$16,293	$12,632
Buildings and improvements	51,862	50,973
Equipment	121,304	106,379
Leasehold improvements	2,777	2,755
	192,236	172,739
Less accumulated depreciation and amortization	(91,315)	(76,974)

	100,921	95,765
Construction-in-progress	16,180	9,670
Property, plant and equipment, net[1]	$117,101	$105,435

(1) In fiscal year 2016, as part of the Company's ongoing review of its Milan production facilities, the Company determined that certain other facilities had excess capacity sufficient to absorb the manufacturing operations of one of its Milan plants. As a result, the Company committed to sell properties with a total estimated fair value, less costs to sell, of approximately $4.3 million at July 31, 2016. Assets held for sale are included in Prepaid expenses and other in Current assets. In April 2018, the Company decided to use the facility for storage and reclassified these assets to held and used, and accordingly recognized depreciation expense of $0.1 million.

6. INCOME TAXES

The Company is subject to United States federal, state and foreign taxes on its operations. The geographical sources of income before income taxes for each of the three years ended July 31, 2018, 2017 and 2016 are as follows (in thousands):

	2018	2017	2016
United States	$51,438	$27,642	$28,820
Foreign	12,961	4,800	(590)
Income before income taxes	$64,399	$32,442	$28,230

The components of income tax expense/(benefit) for the years ended July 31, 2018, 2017 and 2016 consisted of the following (in thousands):

	2018	2017	2016
Current:			
Federal	$2,080	$7,620	$7,900
Foreign	1,990	511	166
State	1,478	1,588	1,275
	5,548	9,719	9,341
Deferred:			
Federal	(6,435)	(1,052)	358
Foreign	(588)	160	(261)
State	1,033	(18)	117
	(5,990)	(910)	214
Total	$(442)	$8,809	$9,555

Deferred income taxes are provided on all temporary differences between financial and taxable income. The following table presents the components of the Company's deferred tax assets and liabilities at July 31, 2018 and 2017 (in thousands):

	2018	2017
Non-current deferred tax assets		
Inventory	$415	$933
Net operating loss	1,185	1,233
Employee benefits	284	2,322
Deferred compensation	3,184	3,922
Accrued liabilities	14	43
Other	808	982
Less valuation allowance	(575)	(1,768)
Total non-current deferred tax assets	$5,315	$7,667

Non-current deferred tax liabilities:		
Difference in amortization basis of intangibles	$(27,616)	$(34,851)
Difference in depreciable basis of property	(7,330)	(6,722)
Other	(1,782)	(767)
Total non-current deferred tax liabilities	(36,728)	(42,340)
Net non-current deferred tax liability	$(31,413)	$(34,673)

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017 (the "Tax Act"). The Tax Act significantly revises the future ongoing U.S. corporate income tax by, among other things, lowering the U.S. corporate income tax rate from 35% to 21%, changing how foreign earnings are subject to U.S. tax by implementing a territorial tax system, and eliminating certain deductions, including the domestic manufacturing deduction. The Tax Act also enhances and extends through 2026 the option to claim accelerated depreciation deductions on qualified property. As the Company has a July 31 fiscal year-end, the lower corporate income tax rate will be phased in, resulting in a U.S. statutory federal rate of approximately 27% for the fiscal year ending July 31, 2018, and 21% for subsequent fiscal years. Under GAAP, the Company is required to recognize the effects of changes in tax laws and tax rates on deferred tax assets and liabilities in the period in which the new legislation is enacted.

Shortly after the Tax Act was enacted, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”) which provides guidance on accounting for the Tax Act’s impact. In accordance with SAB 118, a company must reflect the income tax effects of the Tax Act in the reporting period in which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act.

The Company’s accounting for the following elements of the Tax Act is incomplete. However, the Company was able to make reasonable estimates of certain effects and, therefore, recorded provisional adjustments as follows:

- For the fiscal year ended July 31, 2018, the Company recorded a net tax benefit of approximately $12.3 million for the re measurement of net deferred tax liabilities as of December 31, 2017. This adjustment is based on a reasonable estimate of the impact of the reduction in the corporate tax rate. While the Company is able to make a reasonable estimate of the impact, its deferred taxes may be affected by changes in the Company’s interpretations and assumptions, as well as additional guidance on the interpretation of the Tax Act.

- The Deemed Repatriation Transition Tax (Transition Tax) is a tax on previously untaxed accumulated and current earnings and profits (“E&P”) of certain of the Company’s foreign subsidiaries. To assess the amount of the Transition Tax, the Company must determine, in addition to other factors, the amount of post-1986 E&P of the relevant subsidiaries, as well as the amount of non-U.S. income taxes paid on such earnings. The Company is able to make a reasonable estimate of the Transition Tax and currently estimate that it will not have a material Transition Tax obligation. However, the Company is continuing to review additional information regarding its accumulated E&P and non-U.S. income taxes paid to more precisely compute the amount of the Transition Tax, if any.

- Furthermore, as a result of the Tax Act, the Company is currently analyzing its global working capital requirements and the potential tax liabilities that would be incurred if certain non-U.S. subsidiaries made distributions, which include local country withholding tax and potential U.S. state taxation. In prior years, no provision for U.S. income taxes or withholding taxes had been made on the cumulative undistributed earnings of foreign companies because the Company intended to permanently reinvest all the foreign earnings outside the U.S with the exception of Mexico operations.

- The Company is also analyzing other provisions of the Tax Act such as potential limitations on the amount of currently deductible interest expense, and the limitations on the deductibility of certain executive compensation.

The changes included in the Tax Act are broad and complex and the Company does not have all the necessary information to analyze all income tax effects of the Tax Act. In addition, there is uncertainty about the interpretation of the Tax Act and the Internal Revenue Service guidance on the Tax Act.

As of July 31, 2018 and 2017, the Company has recorded a valuation allowance of $0.6 million and $1.8 million related to some of the Company’s European and Asian tax jurisdictions and certain state net operating loss carryforwards. In assessing whether a deferred tax asset will be realized, the Company considers whether it is more likely than not that some portion or all of the deferred tax asset will not be realized. The Company considers the reversal of existing taxable temporary differences, projected future taxable income and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are deductible, the Company believes it is more likely than not that it will realize the benefits of these deductible differences, net of the existing valuation allowances, as of July 31, 2018.

As of July 31, 2018, the Company had $2.3 million of foreign net operating loss carryforwards that do not expire, and $0.7 million of U.S. federal net operating loss carryforward that expires in 2034.

The following table accounts for the differences between the actual tax provision, and the amounts obtained by applying the applicable statutory United States federal income tax rate to income from continuing operations before income taxes for each of the years ended July 31, 2018, 2017, and 2016, respectively (in thousands):

	2018	2017	2016
Income taxes at the federal statutory rate	$17,278	$11,354	$9,881
Effect of foreign operations	(196)	(198)	485
Change in valuation allowance	(1,244)	(1,218)	311
Impact of Tax Cut and Jobs Act	(12,326)	—	—
Impact of current year rate changes	(2,853)	—	—
Effects of foreign currency fluctuations	65	131	(330)
State income taxes, net of federal income tax effect	2,114	1,015	969
Production deduction and tax credits	(1,208)	(1,217)	(1,473)
Stock-based compensation	(2,398)	(964)	—
Acquisition related cost	378	151	85
Flowchem reorganization	—	(584)	—
Other	(52)	339	(373)
Total	$(442)	$8,809	$9,555

The Company’s effective tax rate decreased in fiscal year 2018 primarily because of the impact of the Tax Act, and excess tax benefits from stock-based compensation.

For the years ended July 31, 2018 and 2017, stock-based compensation excess tax benefits of $2.4 million and $1.0 million, respectively, were reflected in the consolidated statements of income as a component of the provision for income taxes.

Uncertain Tax Positions

The Company records uncertain tax provisions in accordance with GAAP, which prescribes the minimum recognition threshold that a tax position is required to meet before being recognized in the financial statements. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense. The statute of limitations remains open for the fiscal year ended July 31, 2015 and forward for United States federal income taxes and fiscal year ended July 31, 2013 and forward for state tax jurisdictions.

The Company is subject to income taxes in the U.S. (federal and state) and numerous foreign jurisdictions. Significant judgment is required in evaluating the Company’s tax positions and determining its provision for income taxes. There are transactions and calculations for which the ultimate tax determination is uncertain. The Company establishes reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due or may be challenged despite the Company’s belief that its tax return positions are supportable. The Company accounts for uncertain tax positions in accordance with FASB ASC 740, which prescribes the minimum recognition threshold a tax position taken or expected to be taken in a tax return is required to meet before being recognized in the financial statements.

The following table summarizes the activity related to the Company’s gross unrecognized tax benefits (in thousands):

Balance at July 31, 2017	$965
Increases related to prior years positions	10
Decreases related to prior year positions	(45)
Decrease related to lapse of applicable statute of limitations	(508)
Balance at July 31, 2018	$422

The Company does not anticipate any significant changes to the unrecognized tax benefits within the next twelve months. The Company recognizes interest and penalties related to uncertain tax positions within the provision for income taxes in the consolidated statements of income. The Company recognized $10 thousand and $0.1 million in penalties and interest related to unrecognized tax benefits for the years ended July 31, 2018 and 2017, respectively.

In fiscal year 2017, the Company's subsidiary in Italy was successful in its appeal of a case related to income tax assessments for the three year period ended July 31, 2011, and settled litigation with the local taxing authority related to the registration tax assessment for the December 2007 purchase of the electronic chemicals business in Italy. During fiscal year 2017, the Company reversed its liability for its uncertain tax position in Italy as of July 31, 2016 of $0.1 million.

7. INTANGIBLE ASSETS

Intangible assets subject to amortization are amortized over their estimated useful lives which are between five and twenty years. Intangible assets are summarized as follows (in thousands):

	Number of Years Weighted Average Amortization Period	July 31, 2018 Original Cost	Accumulated Amortization	Foreign Currency Translation	Carrying Amount
Intangible assets subject to amortization (range of useful life):					
Electronic chemicals-value of product qualifications (5-15 years)	15.0	12,800	(5,046)	(809)	6,945
Performance materials-customer relationships (15-20 years)	19.7	218,106	(14,024)	(2)	204,080
Performance materials-proprietary manufacturing process (15 years)	15.0	39,323	(2,949)	—	36,374
Electronic chemicals - Other (1-15 years)	7.0	2,190	(1,478)	(112)	600
Performance Materials - Other (5-15 years)	8.7	4,308	(843)	—	3,465
Total intangible assets subject to amortization	18.6	$276,727	$(24,340)	$ (923)	$251,464
Intangible assets not subject to amortization:					
Performance materials-penta product registrations					8,765
Performance materials-related trade name and trademark					37,420
Performance materials-proprietary manufacturing process					2,808
Total intangible assets not subject to amortization					48,993
Total intangible assets, net					$300,457

The following table presents the estimated aggregate amounts of amortization expense for the succeeding five years and thereafter, related to intangible assets as of July 31, 2018 (in thousands):

	2019	2020	2021	2022	2023	Thereafter
Total estimated aggregate amortization expense	$ 15,671	$ 15,445	$ 15,219	$ 14,918	$ 14,724	$ 175,487

	Number of Years Weighted Average Amortization Period	July 31, 2017 Original Cost	Accumulated Amortization	Foreign Currency Translation	Carrying Amount
Intangible assets subject to amortization (range of useful life):					
Electronic chemicals-value of product qualifications (5-15 years)	14.1	14,100	(5,479)	(841)	7,780
Performance materials-customer relationships (15-20 years)	19.7	227,521	(3,244)	54	224,331
Performance materials-proprietary manufacturing process (15 years)	15.0	39,245	(322)	—	38,923
Electronic chemicals - other (1-15 years)	7.4	2,649	(1,740)	(114)	795
Performance materials - other (5-15 years)	6.2	3,160	(289)	54	2,925
Total intangible assets subject to amortization	13.6	$286,675	$(11,074)	$ (847)	$274,754
Intangible assets not subject to amortization:					
Performance materials-penta product registrations					8,765
Performance materials-related trade name and trademark					34,074
Performance materials-proprietary manufacturing process					2,808
Total intangible assets not subject to amortization					45,647
Total intangible assets, net					$320,401

Assets acquired in the acquisition of the industrial lubricants business in May 2015 included $10.3 million of customer relationships and $0.2 million of non-compete agreements, which are being amortized over fifteen and five years, respectively. Additionally, in connection with the acquisition, the Company recorded $11.4 million of goodwill (non-deductible for tax). Assets acquired in the acquisition of the UPC subsidiaries in May 2013 included $12.8 million of product qualifications and $1.9 million of non-compete agreements, which are being amortized over fifteen and seven years, respectively. Total amortization expense related to intangible assets was approximately $15.1 million, $4.3 million and $2.0 million for the fiscal years ended July 31, 2018, 2017 and 2016, respectively.

The Federal Insecticide, Fungicide and Rodenticide Act, ("FIFRA"), a health and safety statue, requires that one of our products within our performance materials segment be registered with the U.S. Environmental Protection Agency ("EPA"). Costs of such registration are included within the Performance materials – other, above, and are expensed over a period of fifteen years, the anticipated renewal period.

The following table presents carrying value of goodwill by operating segment as of July 31, 2018, 2017 and 2016 (in thousands):

	Performance Materials	Electronic Chemicals	Total
Balance as of July 31, 2016	$ 14,504	$ 7,724	$ 22,228
Business acquisition - Sealweld	2,671	—	2,671
Business acquisition - Flowchem	199,346	—	199,346
Foreign currency translation adjustment	7	139	146
Balance as of July 31, 2017	216,528	7,863	224,391
Business acquisition - Sealweld purchase price adjustments	100	—	100
Business acquisition - Flowchem purchase price adjustments	8,716	—	8,716
Foreign currency translation adjustment	(15)	12	(3)
Balance as of July 31, 2018	$ 225,329	$ 7,875	$ 233,204

8. LONG-TERM OBLIGATIONS

Working Capital

On June 15, 2017 the Company entered into a credit agreement (the “Credit Agreement”) providing for a seven year syndicated senior secured term loan of $550.0 million (the “Term Loan”) and a five year senior secured revolving credit facility of $50.0 million (the “Revolving Loan”). At July 31, 2018, the Company had $312.0 million outstanding under the Term Loan, with up to an additional $47.0 million of additional borrowing capacity under the Revolving Loan after giving effect to a reduction of $3.0 million reserved for outstanding letters of credit. In fiscal year 2018, the Company made $3.2 million of scheduled principal payments and $224.8 million of prepayments on the Term Loan, using $175.6 million in proceeds from the sale of common stock. Associated with the prepayments on the Term Loan, the Company recognized $6.7 million as loss on the extinguishment of debt due to the accelerated amortization of debt issuance costs and original issue discount.

Long Term Obligations

The Company’s long-term debt and current maturities as of July 31, 2018 and 2017 consisted of the following (in thousands):

	July 31, 2018	July 31, 2017
Senior secured debt:		
Term loan, maturing on June 15, 2024, variable interest rates based on LIBOR plus 2.75% at July 31, 2018	$312,000	$540,000
Revolving loan facility, maturing on June 15, 2022, variable interest rates based on LIBOR plus 2.25% at July 31, 2018	—	—
Total debt	312,000	540,000
Current maturities of long-term debt	—	(3,167)
Unamortized debt issuance costs and original issue discount	(5,881)	(13,731)
Long-term debt, net of current maturities	$306,119	$523,102

As described above, on June 15, 2017 the Company entered into the Credit Agreement with KeyBank National Association, as agent, KeyBanc Capital Markets Inc., HSBC Securities (USA) Inc., and JPMorgan Chase Bank, N.A., as joint lead arrangers and joint bookrunners, and ING Capital LLC, as documentation agent. The proceeds from the Term Loan under the Credit Agreement were used to finance the acquisition of Flowchem, pay the costs and expenses related to the acquisition of Flowchem, and to repay in full the $31.0 million then outstanding indebtedness under the Company’s prior revolving credit facility. The Company did not draw upon the Revolving Loan at the closing of the Credit Agreement. In connection with the refinancing, the Company charged to loss on the extinguishment of debt $0.4 million of unamortized debt issuance costs related to the Company’s prior revolving credit facility.

On December 19, 2017, the Company entered into an amendment to the Credit Agreement to reduce the interest rate margins applicable to borrowings under the Term Loan and the Revolving Loan.

The Term Loan under the Credit Agreement bears interest at a varying rate of LIBOR plus a margin based on net funded debt to adjusted EBITDA, as described in the table below.

Ratio of Net Funded Debt to Adjusted EBITDA	Margin	
Greater than 2.5 to 1.0	2.75	%
Less than or equal to 2.5 to 1.0	2.50	%

As of July 31, 2018, the Term Loan bore interest at 4.827%.

The Revolving Loan under the Credit Agreement bears interest at a varying rate of LIBOR plus a margin based on net funded debt to adjusted EBITDA, as described in the table below.

Ratio of Net Funded Debt to Adjusted EBITDA	Margin	
Greater than 4.25 to 1.0	2.75	%
Greater than 3.75 to 1.0, but less than or equal to 4.25 to 1.0	2.50	%
Less than 3.75 to 1.0	2.25	%

As of July 31, 2018, the Revolving Lone bore interest at 4.327%. There were no outstanding borrowings under the Revolving Loan as of July 31, 2018. The Company also incurs an unused commitment fee on the unused amount of commitments under the Revolving Loan of 0.375%.

Loans under the Credit Agreement are secured by the Company's domestic assets, including stock in subsidiaries, inventory, accounts receivable, equipment, intangible assets, and real property. The Credit Agreement has restrictive covenants, including a covenant that the Company must maintain a consolidated net leverage ratio below 5.75 to 1.0 through the fiscal quarter ended April 30, 2019, which ratio is reduced each year thereafter by an amount set forth in the Credit Agreement, until the twelve months ended April 30, 2022, following which the Company must maintain a consolidated net leverage ratio below 4.0 to 1.0. As of July 31, 2018, the Company was in compliance with all covenants of the Credit Agreement.

Principal payments due under long-term debt agreements as of July 31, 2018 for the fiscal years ended July 31 are as follows (in thousands):

	Total	2019	2020	2021	2022	2023	Thereafter
Long-term debt	$312,000	$ —	$ —	$ —	$ —	$ —	$312,000

On August 11, 2017, the Company entered into interest rate swap agreements (the "Swap Transaction") to management its exposure to fluctuations in variable interest rates. The Swap Transaction effectively exchanged the interest rate on $174.1 million, or approximately 55.8% of the debt outstanding under the Credit Agreement at July 31, 2018 from (i) variable LIBOR plus margin to (ii) a fixed rate of 1.925% per annum plus margin. For fiscal year 2018, net payments required under the Company's interest rate swap agreements increased interest expense by $0.6 million.

9. FAIR VALUE MEASUREMENTS

Fair Value Hierarchy

Fair value is 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 date. There are three approaches for measuring the fair value of assets and liabilities: the market approach, the income approach and the cost approach, each of which includes multiple valuation techniques.

The fair value accounting standards do not prescribe which valuation technique should be used when measuring fair value and do not prioritize among the techniques. These standards establish a fair value hierarchy that prioritizes the inputs used in applying the various valuation techniques. Inputs broadly refer to the assumptions that market participants use to make pricing decisions, including assumptions about risk. Level 1 inputs are given the highest priority in the fair value hierarchy while Level 3 inputs are given the lowest priority. The three levels of the fair value hierarchy are as follows:

- Level 1 – Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
-

- Level 2 – Observable market-based inputs or unobservable inputs that are corroborated by market data. These are inputs other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date.
- Level 3 – Unobservable inputs for which there is little, if any, market activity for the asset or liability being measured. These inputs reflect management's best estimates of the assumptions market participants would use in determining fair value. The level 3 measurements consist of instruments using standard pricing models and other valuation methods that utilize unobservable pricing inputs that are significant to the overall fair value.

Valuation techniques that maximize the use of observable inputs are favored. Assets and liabilities are classified in their entirety based on the lowest priority level of input that is significant to the fair value measurement. The assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the placement of assets and liabilities within the levels of the fair value hierarchy.

Significant uses of fair value measurements include:

- impairment assessments of long-lived assets;

- impairment assessments of goodwill;
- recorded value of derivative instruments; and
- assets acquired and liabilities assumed in business combinations.

Fair Values – Recurring

The derivative instrument transactions were entered into on August 14, 2017, and as of July 31, 2018 are included within Level 2 other assets, net in the Company's condensed consolidated balance sheet. The following tables present the fair value hierarchy table for assets and liabilities measured at fair value, on a recurring basis (in thousands):

	Fair Value Measurements at July 31, 2018, Using:			
Description	Level 1	Level 2	Level 3	Total
Assets				
Derivatives – interest rate swaps	$—	$5,576	$ —	$5,576
Total	$—	$5,576	$ —	$5,576

Derivative assets consist of interest rate swaps entered into to mitigate the risk relating to possible adverse changes in interest rates for the Company's floating rate borrowings. The fair value of the interest rate swaps is estimated as the net present value of projected cash flows based upon forward interest rates at the balance sheet date. The models used to value the interest rate swaps are based primarily on readily observable market data, such as LIBOR forward rates, for all substantial terms of the interest rate swap contracts and the credit risk of the counterparties. As such, these derivative instruments are included in Level 2 inputs. See Note 10, Derivative Financial Instruments.

Fair Values – Non-Recurring

In addition to the financial assets and liabilities included in the above table, certain nonfinancial assets and liabilities are to be measured at fair value on a nonrecurring basis in accordance with applicable GAAP. In general, nonfinancial assets including goodwill, other intangible assets and property and equipment are measured at fair value when there is an indication of impairment and are recorded at fair value only when an impairment is recognized. As of July 31, 2018, the Company had not recorded any impairment related to such assets and had no other material nonfinancial assets or liabilities requiring adjustments or write-downs to their current fair value.

As allowed by applicable FASB guidance, the Company has elected not to apply the fair value option for financial assets and liabilities to any of its currently eligible financial assets or liabilities. As of July 31, 2018, the Company's material financial assets and liabilities not carried at fair value included cash and cash equivalents, accounts receivable, accounts payable and accrued expenses. These financial instruments are recorded at their carrying values which are deemed to approximate fair value, generally due to their short periods to maturity.

10. DERIVATIVE FINANCIAL INSTRUMENTS

The Company held certain derivative instruments that were accounted for pursuant to ASC 815, Derivatives and Hedging (ASC 815). The Company entered into certain interest rate swaps with initial notional amounts totaling $243.0 million, to limit its exposure to variability of the one-month LIBOR floating interest rate on a significant portion of the outstanding balance of its Term Loans. See Note 8, Long-Term Obligations. The interest rate swap agreements are in place with two U.S.-based counterparties, with expected termination dates of June 15, 2024

Every derivative instrument is required to be recorded on the balance sheet as either an asset or a liability measured at its fair value. If the derivative does not qualify as a hedge or is not designated as a hedge, changes in fair value of these non-hedge derivatives are recognized in earnings in derivative fair value income or loss.

None of the derivative instruments are used for trading purposes. The effects of the derivative instruments on the condensed consolidated financial statements were as follows as of or for each of the period presented below (amounts presented exclude any income tax effects):

The combined fair value of derivatives not designated as hedging instruments included in the accompanying condensed consolidated balance sheet as of July 31, 2018 is summarized below (in thousands).

Description	Location	Fair Value as of July 31, 2018
Derivative instruments – interest rate swaps	Other assets, net	$5,576

The effects of derivatives not designated as hedging instruments on the condensed consolidated statements of income for the twelve months ended July 31, 2018 are summarized below (in thousands).

Description	Location	Year Ended July 31, 2018	Year Ended July 31, 2017
Derivative instruments – interest rate swaps	Derivative fair value gain	$5,576	$ —

11. COMMITMENTS AND CONTINGENCIES

Contractual Obligations — The Company has non-cancelable operating leases for its office and warehouse facilities and certain transportation equipment and purchase obligations. Our obligations to make future payments under such operating leases as of July 31, 2018 are summarized in the following table (in thousands):

	Total	2019	2020	2021	2022	2023	Thereafter
Operating leases	$17,843	$3,159	$2,564	$1,894	$1,802	$1,806	$ 6,618

Rent expense relating to the operating leases was approximately $4.3 million, $3.7 million and $3.1 million in fiscal years 2018, 2017 and 2016, respectively.

Environmental — The Company's operations are subject to extensive federal, state and local laws, regulations and ordinances in the United States and abroad relating to the generation, storage, handling, emission, transportation and discharge of certain materials, substances and waste into the environment, and various other health and safety matters. Governmental authorities have the power to enforce compliance with their regulations, and violators may be subject to fines, injunctions or both. The Company must devote substantial financial resources to ensure compliance.

Certain licenses, permits and product registrations are required for the Company's products and operations in the United States, Mexico and other countries in which it does business. The licenses, permits and product registrations are subject to revocation, modification and renewal by governmental authorities. In the United States in particular, producers and distributors of penta are subject to registration and notification requirements under federal law (including under FIFRA), and comparable state law) in order to sell this product in the United States. Compliance with these requirements has had, and in the future will continue to have, a material effect on our business, financial condition and results of operations.

The Company incurred expenses in connection with FIFRA research and testing programs of approximately $0.2, $0.1 million, and $0.4 million, in fiscal years 2018, 2017 and 2016, respectively. These costs are included in selling, general, and administrative expenses.

Litigation and Other Contingencies — The Company is subject to contingencies, including litigation relating to environmental laws and regulations, commercial disputes and other matters. Certain of these contingencies are discussed below. The ultimate resolution of these contingencies is subject to significant uncertainty, and should the Company fail to prevail in any of them or should several of them be resolved against the Company in the same reporting period, these matters could, individually or in the aggregate, be material to the consolidated financial statements. The ultimate outcome of these matters, however, cannot be determined at this time, nor can the amount of any potential loss be reasonably estimated, and as a result except where indicated no amounts have been recorded in the Company's consolidated financial statements.

The Company records legal costs associated with loss contingencies as expenses in the period in which they are incurred.

On September 24, 2018, a putative shareholder class action was filed in the United States District Court for the Northern District of Texas styled Richard Walter, individually and on behalf of all others similarly situated, v. KMG Chemicals, Inc., et. al., No. 4:18-cv-00785 (the "Walter Lawsuit"). The Walter Lawsuit names as defendants the Company and the members of its Board of Directors. The Walter Lawsuit asserts claims for alleged violation of Section 14(a) of the Exchange Act based on allegations that the Registration Statement on Form S-4 filed by Cabot Microelectronics with the SEC on September 12, 2018 in connection with the Merger is materially incomplete and misleading. The Walter Lawsuit further alleges that the Company's directors violated Section 20(a) of the Exchange Act as alleged control persons. The Walter Lawsuit seeks, among other things, injunctive relief barring the defendants from holding a shareholder vote on the Merger or from consummating the Merger until they have issued adequate disclosures and monetary relief that is not quantified. The Company believes the allegations are without merit.

Shareholders may file additional lawsuits challenging the Merger, which may name the Company, Cabot Microelectronics, members of the boards of directors of either party, or others as defendants. No assurance can be made as to the outcome of such lawsuits or the lawsuits described above, including the amount of costs associated with defending these claims or any other liabilities that may be incurred in connection with the litigation of these claims. If plaintiffs are successful in obtaining an injunction prohibiting the parties from completing the Merger on the agreed-upon terms, such an injunction may delay the completion of the Merger in the expected timeframe, or may prevent the Merger from being completed altogether.

The EPA has listed the Star Lake Canal Superfund Site near Beaumont, Texas on the National Priorities List. The Company's subsidiary, KMG-Bernuth, was notified in October 2014 that the EPA considered it to have potential liability under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, also known as "CERCLA" in connection with this site by virtue of its relationship with certain alleged predecessor companies, including Idacon, Inc. (f/k/a Sonford Chemical Company). The EPA has estimated that the remediation will cost approximately $22.0 million. The Company and approximately seven other parties entered into an agreement with the EPA in September 2016 to complete a remedial design phase of the remediation of the site. The remediation work will be performed under a separate future agreement. Although the Company has not conceded liability, the Company established a reserve of $1.3 million in the third quarter of fiscal year 2015 in connection with the remedial design. As of July 31, 2018, the reserve remaining was $1.0 million.

The Company is subject to federal, state, local and foreign laws and regulations and potential liabilities relating to the protection of the environment and human health and safety including, among other things, the cleanup of contaminated sites, the treatment, storage and disposal of wastes, the emission of substances into the air or waterways, and various health and safety matters. The Company expects to incur substantial costs for ongoing compliance with such laws and regulations. The Company may also face governmental or third-party claims, or otherwise incur costs, relating to cleanup of, or for injuries resulting from, contamination at sites associated with past and present operations. The Company accrues for environmental liabilities when a determination can be made that they are probable and reasonably estimable.

12. EMPLOYEE BENEFIT PLANS

The Company has a defined contribution 401(k) plan in which all regular U.S. employees are eligible to participate. The Company makes matching contributions under this plan of up to 4% of a participant's compensation up to the annual regulated maximum amounts. The first 3% of the employee contribution is matched at 100%. The next 2% of the employee contribution is matched at 50%. Company contributions to the plan totaled approximately $0.8 million, $0.7 million and $0.6 million in fiscal years 2018, 2017, and 2016, respectively.

The locations in the United Kingdom and Singapore make contributions to retirement plans that function as defined contribution retirement plans. The Company's contributions to those plans were approximately $1.7 million, $2.0 million and $1.6 million in fiscal years 2018, 2017 and 201, respectively.

The Company's other long-term liabilities included approximately $1.6 million and $1.5 million as of July 31, 2018 and 2017, respectively, related to benefit obligations in connection with the France location included in the acquisition of the UPC business. This payable is an unfunded benefit obligation of the Company.

The Company has an employee benefit arrangement for one of its former U.S. employees. As of July 31, 2018 and 2017, the associated liability was approximately $0.3 million and $0.4 million, respectively. The amount payable is a general obligation of the Company. Benefit payments under this arrangement, which the Company began paying in April 2013, will be paid for 10 years.

13. EARNINGS PER SHARE

Basic earnings per share have been computed by dividing net income by the weighted average shares outstanding. Diluted earnings per share have been computed by dividing net income by the weighted average shares outstanding plus potentially dilutive common shares. The following table presents information necessary to calculate basic and diluted earnings per share for periods indicated:

	Year Ended		
	2018	2017	2016
	(Amounts in thousands, except per share data)		
Net income from continuing operations	$64,841	$23,633	$18,675
Weighted average shares outstanding			
Weighted average shares outstanding — basic	14,708	11,885	11,719
Dilutive effect of stock awards	403	401	207
Weighted average shares outstanding — diluted	15,111	12,286	11,926
Basic earnings per share	$4.41	$1.99	$1.59
Diluted earnings per share	$4.29	$1.92	$1.57

Outstanding stock-based awards are not included in the computation of diluted earnings per share under the treasury stock method, if including them would be anti-dilutive. There was an average of 900 shares, 3,858 shares and 11,281 shares for the fiscal years ended 2018, 2017 and 2016, respectively, not included in the computation of diluted earnings per share because they were anti-dilutive.

14. STOCK-BASED COMPENSATION

Stock-Based Incentive Plans

The Company adopted a 2016 Long-Term Incentive Plan ("2016 LTI Plan") in January 2016 and it was approved by the shareholders at the annual meeting in January 2016. The Company adopted a 2009 Long-Term Incentive Plan ("2009 LTI Plan") in October 2009 and it was approved by the shareholders at the annual meeting in December 2009 (the 2016 LTI Plan and the 2009 LTI Plan are referred to collectively as the "LTI Plans").

The LTI Plans permit the granting of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, dividend equivalent rights, and other awards. They are administered by the Board of Directors or a committee appointed by the Board of Directors. The Board has designated the Compensation and Development Committee as the administrator of the LTI Plans. Subject to the terms of the LTI Plans, the committee has the sole discretion to select the persons eligible to receive awards, the type and amount of incentives to be awarded, and the terms and conditions of awards. The committee also has the authority to interpret the LTI Plans, and establish and amend regulations necessary or appropriate for their administration. Any employee of the Company or a subsidiary of the Company or a director of the Company whose judgment, initiative, and efforts contributed or may be expected to contribute to the successful performance of the Company is eligible to participate. The maximum number of shares of the Company's common stock that may be delivered pursuant to awards granted is 750,000 shares under the 2016 LTI Plan and 750,000 under the 2009 LTI Plan. No executive officer may receive in any calendar year stock options or stock appreciation rights, or awards that are subject to the attainment of performance goals, relating to more than 200,000 shares of common stock under the 2016 LTI Plan or 250,000 shares of common stock under the 2009 LTI Plan. At July 31, 2018, there were approximately 133,056 shares available for future grants under the 2016 LTI Plan and 63,490 shares available for future grants under the 2009 LTI Plan.

Accounting for Stock-Based Compensation

The Company recognized stock-based compensation costs of approximately \$8.0 million, \$6.3 million and \$4.8 million, respectively, for the fiscal years ended July 31, 2018, 2017 and 2016, and the related tax benefits of \$2.4 million, \$2.2 million and \$1.7 million, respectively, for the fiscal years ended July 31, 2018, 2017 and 2016. Stock-based compensation costs are recorded as selling, general and administrative expenses in the consolidated statements of income. The Company accounts for stock-based compensation costs at fair value measured on the date of grant of the award using a Black-Scholes option valuation model for stock option awards. Grant date fair value for stock awards is measured using the Company’s closing stock price on the date of grant of the stock awards where the award is based on a specific number of shares. Stock-based compensation costs are recognized as an expense over the requisite service period, generally the vesting period of the award, using the straight-line method.

As of July 31, 2018, there was approximately \$8.0 million of unrecognized compensation costs that are related to outstanding stock awards expected to be recognized over a weighted-average period of 1.6 years.

In connection with the election of Christopher T. Fraser as the Company’s President and Chief Executive Officer on September 24, 2013, the Company granted Mr. Fraser (i) 50,000 shares of common stock and (ii) time-based restricted stock awards for 30,000 shares of common stock (vesting over five years). The Company also agreed to grant performance-based restricted stock unit awards for an aggregate of 70,000 shares of common stock in five equal installments beginning in fiscal year 2014. The Company recorded an expense of approximately $1.1 million in the first quarter of fiscal year 2014 for the grant date fair value of the 50,000 shares of common stock.

A summary of activity for stock-awards is presented below.

Performance-Based Stock Awards

The Company grants performance-based restricted stock unit (“RSU”) awards to certain executives and employees. Stock-based compensation for the awards is recognized over the requisite service period beginning on the date of grant through the end of the measurement period based on the number of RSUs expected to vest under the awards at the end of the measurement period. The expected percent of vesting is determined using certain performance measures described below and is re-evaluated at the end of each reporting period through the end of the measurement period.

At August 1, 2017, there were 374,175 non-vested performance-based RSU awards outstanding. During the fiscal year ended July 31, 2018, 69,292 performance-based RSU awards vested. As of July 31, 2018, the non-vested performance-based RSU awards consisted of awards granted to certain executives and employees in fiscal years 2018, 2017 and 2016 as summarized below, reflecting the target number of RSUs under the awards. Upon vesting, each RSU is converted to one share of common stock.

Date of Grant	Series Award	Target Award (RSUs)	Grant Date Fair Value	Measurement Period Ending	Actual or Expected Percentage of Vesting [1]	Shares Projected to Vest or Vested
Fiscal Year 2018 Awards						
12/5/2017	Series 4, Tranche 1	27,542	$54.09	07/31/2020		
	Forfeitures[2]	(2,291)				
	Total Series 4, Tranche 1	25,251			100 %	25,251
12/5/2017	Series 4, Tranche 2	27,541	$54.09	07/31/2020		
	Forfeitures[2]	(2,291)				
	Total Series 4, Tranche 2	25,250			176 %	44,440
2/15/2018	Series 1	7,287	$60.22	7/31/2020		
4/5/2018	Series 1	100	$60.93	7/31/2020		
	Forfeitures[2]	(300)				
	Total Series 1	7,087			176 %	12,473
Fiscal Year 2017 Awards						
12/08/2016	Series 1	10,531	$34.95	07/31/2019		
	Forfeitures[2]	(930)				
	Total Series 1	9,601			186 %	17,875
04/28/2017	Series 4, Tranche 1	4,545	$52.55	07/31/2019		
10/21/2016	Series 4, Tranche 1	44,337	$29.11	07/31/2019		
	Forfeitures[2]	(8,442)				
	Total Series 4, Tranche 1	40,440			100 %	40,440
04/28/2017	Series 4, Tranche 2	4,546	$52.55	07/31/2019		
10/21/2016	Series 4, Tranche 2	44,337	$29.11	07/31/2019		
	Forfeitures[2]	(8,442)				
	Total Series 4 - Tranche 2	40,441			186 %	75,295
Fiscal Year 2016 Awards						
03/10/2016	Series 1	14,625	$21.89	10/31/2018		
01/29/2016	Series 1	57,163	$21.80	10/31/2018		
	Forfeitures[2]	(13,858)				
	Total Series 1	57,930			197 %	114,223

01/19/2016	Series 3	55,292	$20.89	07/31/2020	195 %	107,543

(1) The percentage vesting for performance-based RSU awards is currently estimated at 176%, 186% and 197% of the target award for Series 1 awards granted in fiscal years 2018, 2017 and 2016, respectively, 195% of the target award for Series 3 awards granted in fiscal year 2016, 100% and 176% of the target award for the first and second tranches, respectively, of the Series 4 awards granted in fiscal year 2018, and 100% and 186% of the target award for the first and second tranches, respectively, of the Series 4 awards granted in fiscal year 2017.
(2) Forfeitures include Series 1 and Series 4 awards that were granted in fiscal years 2018, 2017 and 2016 to certain employees that were forfeited at the termination of their employment.

Series 1: For the fiscal year 2018, 2017 and 2016 awards, vesting is subject to performance requirements composed of certain objectives including adjusted average annual return on invested capital and annual compound growth rate in the Company’s adjusted diluted earnings per share. These objectives are measured quarterly using the Company's budget, actual results and long-term projections. For each of the Series 1 awards, the expected percentage of vesting is evaluated through July 31, 2018, and reflects the percentage of RSUs projected to vest for the respective awards at the end of their measurement periods. For the fiscal year 2018, 2017 and 2016 awards, the awards may vest at a maximum of 200% of the target award on achievement of maximum performance objectives.

Series 3: In fiscal year 2016 Mr. Fraser was awarded a performance-based Series 3 award for 82,938 RSUs (at target) having performance requirements related to cumulative revenue and total stockholder return. The measurement period for the fiscal year 2016 award begins on November 1, 2015 and the award vests one-third (1/3) at July 31, 2018, 2019 and 2020. The award may vest at a maximum of 200% of the target award on achievement of maximum performance objectives.

Series 4: For the fiscal year 2018 and 2017 awards, each award includes two tranches. For the first tranche, vesting is subject to the achievement of an adjusted earnings before interest, taxes and depreciation and amortization ("EBITDA") metric. For the second tranche, vesting is subject to performance requirements for adjusted average annual return on invested capital and annual compound growth rate in the Company's adjusted diluted earnings per share. These objectives are assessed quarterly using the Company's budget, actual results and long-term projections. For each of the Series 4 awards, the expected percentage vesting is evaluated through July 31, 2018, and reflects the percentage of RSUs projected to vest at the end of the measurement period. For the fiscal year 2018 and 2017 awards, the RSUs in the second tranche may vest at a maximum of 200% of the target award on achievement of maximum performance objectives.

The weighted-average grant-date fair value of performance-based RSUs awards forfeited during the fiscal year 2018 was $37.75. The weighted-average grant-date fair value of performance-based RSU awards outstanding at August 1, 2017 and July 31, 2018 was $25.49 and $30.99, respectively.

The total grant-date fair value of performance-based RSU awards vested during fiscal years 2018, 2017 and 2016 was approximately $1.9 million, $2.3 million, and $2.1 million, respectively.

Time-Based Stock Awards

A summary of activity for time-based stock awards for the fiscal year ended July 31, 2018 is presented below:

	Shares	Weighted-Average Grant-Date Fair Value
Non-vested on August 1, 2016	211,368	$ 21.28
Granted(1)	34,501	41.23
Vested(2)	(63,852)	23.55
Forfeited(3)	(8,414)	25.85
Non-vested on July 31, 2017	173,603	24.37
Granted(4)	32,966	60.76
Vested(5)	(48,675)	32.39
Forfeited(3)	(4,106)	48.02
Non-vested on July 31, 2018	153,788	29.01

(1) Includes 12,580 shares granted to non-employee directors during fiscal year 2018. Includes 11,342 RSUs granted to certain employees during fiscal year 2017 as special compensation. Includes 10,579 RSUs granted to certain employees during fiscal year 2017 which are expected to vest on July 31, 2019. The Company recognizes compensation expense related to the awards over the respective service period.

(2) Includes 12,580 shares granted to non-employee directors during fiscal year 2017. The shares vest on the date of grant, and the Company recognizes compensation expense related to the awards over the respective service periods in accordance with GAAP. Includes 51,272 RSUs granted to employees. The vested amount includes 6,000 RSUs granted to Mr. Fraser. Upon vesting, each RSU was converted to one share of common stock.

(3) Forfeitures includes RSU awards that were granted in fiscal years 2018 and 2017 to certain employees that were forfeited at the termination of their employment.

(4) Includes 8,062 shares granted to non-employee directors during fiscal year 2018. Includes 17,517 RSUs granted to certain employees during fiscal year 2018 as special compensation. Includes 7,387 RSUs granted to certain employees during fiscal year 2018 which are expected to vest on July 31, 2020. The Company recognizes compensation expense related to the awards on a straight-line basis over the respective service period.

(5) Includes 8,062 shares granted to non-employee directors for service during fiscal year 2018. The shares vest on the date of grant, and the Company recognizes compensation expense related to the awards over the respective service periods in accordance with GAAP. Includes 40,613 RSUs granted to employees. The vested amount includes 6,000 RSUs granted to Mr. Fraser. Upon vesting, each RSU was converted to one share of common stock.

The total grant date fair value of time-based RSU awards vested during the fiscal years ended 2018, 2017 and 2016 was approximately $1.6 million, $1.5 million, and $0.8 million, respectively.

15. SEGMENT INFORMATION

The Company has two reportable segments—electronic chemicals and performance materials. In the fiscal quarter ended April 30, 2017, the Company's management, including the chief executive officer, who is the chief operating decision maker, determined that the Company's operations should be reported as the electronic chemicals segment and the performance materials segment. Previously the Company had two reportable segments – electronic chemicals and other chemicals. As of April 30, 2017, the performance materials segment includes the Company's pipeline performance business and wood treating chemicals business that were previously referred to as the other chemicals segment. The Flowchem business acquired in June 2017 is included in the performance materials segment.

The business segment management reporting and controlling systems are based on the same accounting policies as those described in the summary of significant accounting policies. See Note 1.

	Year Ended July 31,		
	2018	2017 (Amount in thousands)	2016
Net Sales			
Electronic Chemicals	$302,023	$ 276,621	$261,523
Performance Materials	163,533	56,821	36,455
Total consolidated net sales	$465,556	$ 333,442	$297,978
Depreciation and amortization[(1)]			
Electronic Chemicals	$11,145	$ 11,455	$11,832
Performance Materials	16,743	3,857	1,149
Other Activities	2,060	1,652	1,553
Total consolidated depreciation and amortization	$29,948	$ 16,964	$14,534
Goodwill and intangible assets, net			
Electronic Chemicals	$15,421	$ 16,446	$17,625
Performance Materials	518,241	528,346	38,509
Total consolidated goodwill and intangible assets, net	$533,662	$ 544,792	$56,134
Total assets			
Electronic Chemicals	$191,173	$ 171,202	$165,561
Performance Materials	600,192	596,872	53,798
Other Activities	27,068	24,357	17,669
Total consolidated assets	$818,434	$ 792,431	$237,028
Operating income			
Electronic Chemicals	$46,554	$ 35,317	$32,141
Performance Materials	54,991	13,804	12,631
Other Activities	(13,420)	(11,788)	(17,201)
Total consolidated operating income	88,125	37,333	27,571
Total other (expense) income, net	(23,726)	(4,891)	659
Income before income taxes	$64,399	$ 32,442	$28,230

(1) For fiscal year 2016, segment depreciation excludes depreciation for restructuring and realignment.

For fiscal years 2018, 2017 and 2016 sales to one customer represented approximately 20%, 23% and 26%, respectively, of the Company’s net sales. No other customers accounted for 10% or more of the Company’s net sales.

Geographic Data:

The Company operated 19 facilities that are dedicated to manufacturing, blending and distributing products in 8 countries. The United States is home to 7 of those sites, representing 59.8% of the Company's long-lived assets. Sales are attributed to geographic areas based on customer location; long-lived assets are attributed to geographic areas based on asset location.

	2018	2017	2016
	(Amounts in thousands)		
Net sales:			
United States	$257,546	$180,075	$162,427
International	208,010	153,367	135,551
Net sales	$465,556	$333,442	$297,978
Property, plant and equipment, net:			
United States	$70,068	$67,490	
International	47,033	37,945	
Property, plant and equipment, net	$117,101	$105,435	

16. RESTRUCTURING AND REALIGNMENT EVENTS

In April 2017, the Company began implementation of a plan of restructuring of its electronic chemicals segment in Asia. As a result, the Company incurred approximately $0.1 million and $0.2 million of employee related severance costs during fiscal years 2018 and 2017, respectively.

As part of the global restructuring of its electronic chemicals operations, the Company closed one of its facilities in Milan, Italy in December 2015, and shifted some production to facilities in France and the United Kingdom. Accelerated depreciation with respect to the closed facilities has been completed. Restructuring charges, exclusive of accelerated depreciation, were $1.8 million in the aggregate in fiscal year 2016.

At July 31, 2018, the accrued liability associated with restructuring and other related charges consisted of the following:

	Employee Costs	Decommissioning and Environmental	Total
Accrued liability at July 31, 2016	$ 721	$ 36	$757
Payments	(362)	(41)	(403)
Adjustment	(359)	82	(277)

Accrued liability at July 31, 2017	$ —	$ 77	$77
Payments	—	(36)	(36)
Adjustment	—	(41)	(41)
Accrued liability at July 31, 2018	$ —	$ —	$—

Total accelerated depreciation for the fiscal years ended July 31, 2016 and 2015 was $0.3 million and $0.9 million, respectively.

In October 2014, the Company announced a realignment of its hydrofluoric acid business and subsequently exited the facility operated for the Company by Chemtrade Logistics ("Chemtrade") in Bay Point, California. Under the manufacturing agreement, the Company is obligated to pay or reimburse Chemtrade for certain costs associated with the cessation of operations at Bay Point, including certain employee costs and the decommissioning, dismantling and removal of the Company's manufacturing equipment at the site. The Company established an asset retirement obligation of $3.7 million for these costs. Operations ceased in the third quarter of fiscal year 2015. All assets have been fully depreciated as of July 31, 2015. All obligations related to the facility were settled as of July 31, 2017.

The changes to the asset retirement obligation associated with realignment are as follows:

Asset retirement obligation at July 31, 2016	$ 168
Charges	(3)
Payments	(165)
Asset retirement obligation at July 31, 2017	$ —

17. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(Amounts in thousands, except per share data)			
Year Ended July 31, 2018				
Net sales	$110,664	$113,851	$118,647	$122,394
Gross profit	46,481	49,254	50,491	51,435
Operating income	20,080	21,730	23,953	22,362
Income before income taxes	8,479	17,156	20,688	18,076
Net income	5,850	25,337	15,645	18,009
Earnings per share:				
Net income per share				
- basic	$0.47	$1.64	$1.01	$1.16
- diluted	0.46	1.59	0.98	1.13
Year Ended July 31, 2017				
Net sales	$76,495	$79,071	$81,616	$96,260
Gross profit	29,684	31,202	32,510	36,742
Operating income	8,681	9,040	9,367	10,245
Income before income taxes	8,734	8,583	9,210	5,915
Net income	5,742	6,486	6,067	5,338
Earnings per share:				
Net income per share				
- basic	$0.48	$0.55	$0.51	$0.45
- diluted	0.47	0.53	0.49	0.43

Earnings per share amounts are computed independently for each quarter presented. Therefore, the sum of the quarterly earnings per share may not equal annual earnings per share.

18. SUBSEQUENT EVENTS

On August 14, 2018, the Company entered into a Merger Agreement with Cabot Microelectronics and Cobalt Merger Sub, providing for the acquisition of the Company by Cabot Microelectronics. The Merger Agreement provides that, upon the terms and subject to the satisfaction or valid waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into the Company, with the Company continuing as the surviving corporation and a wholly owned subsidiary of Cabot Microelectronics.

If the Merger is completed, each outstanding share of the Company's common stock will automatically be converted into the right to receive $55.65 in cash and 0.2000 shares of common stock of Cabot Microelectronics, par value $0.001 per share at the effective time of the Merger. Immediately prior to closing, each restricted stock unit award relating to the Company's shares of common stock granted prior to August 14, 2018 will vest and be cancelled in exchange for the Merger Consideration in respect of each share of the Company's common stock underlying the applicable award. Each restricted stock unit award granted on or following August 14, 2018 will be converted into a corresponding award relating to shares of Cabot Microelectronics common stock and continue to vest post-closing in accordance with the terms of the applicable award agreement.

The Merger Agreement and the Merger have been unanimously approved by the boards of directors of the Company and Cabot Microelectronics. The consummation of the Merger is subject to customary closing conditions, including the adoption of the Merger Agreement by the Company's shareholders.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The term “disclosure controls and procedures” is defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934. This term refers to the controls and procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the Securities and Exchange Commission. Our management, including our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this annual report. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluations of effectiveness to future periods are subject to the risk that controls may become inadequate in the future period because of changes in conditions, in the degree of compliance with the policies, or because procedures may deteriorate.

Under the supervision and with the participation of our management, including our principal executive and principal financial officers, we conducted an assessment as of July 31, 2018 of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the “COSO Framework”). Based on this assessment, management concluded that its internal control over financial reporting was effective as of July 31, 2018.

Management’s assertion about the effectiveness of our internal control over financial reporting as of July 31, 2018, has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control over Financial Reporting

There were no changes to our internal control over financial reporting during the fiscal quarter ended July 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

Pursuant to instruction G(3) to Form 10-K, the information required by Part III is incorporated by reference, and will be included either in a definitive proxy statement relating to our annual meeting of shareholders or an amendment to this Form 10-K, which will be filed with the Securities and Exchange Commission within 120 days of the end of fiscal year 2018.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 10-K

(a) The financial statements and financial statement schedules filed as part of this report in Item 8 are listed in the Index to Financial Statements contained in that item.
(b) The following documents are filed as exhibits. Documents marked with an asterisk (*) are management contracts or compensatory plans, and portions of documents marked with a dagger (†) have been granted confidential treatment.

2.1	Agreement and Plan of Merger dated as of August 14, 2018, by and among KMG Chemicals, Inc., Cabot Microelectronics Corporation and Cobalt Merger Sub Corporation, filed as Exhibit 2.1 to the Company's report on Form 8-K filed August 17, 2018, and incorporated herein by reference.
2.2	Purchase Agreement and Plan of Merger dated as of April 23, 2017, by and among KMG Chemicals, Inc., KMG FC, LLC, Flowchem Holdings LLC, Arsenal Capital Partners III-B LP, as Arsenal Blocker Seller, and ACP Flowchem LLC, in its capacity as the Representative, filed as Exhibit 2.1 to the Company's report on Form 8-K filed April 25, 2017, and incorporated herein by reference.
2.3	Asset Purchase Agreement dated as of January 31, 2017, among KMG Chemicals, Inc., KMG Industrial Lubricants Canada, Inc., KMG Electronic Chemicals Luxembourg Holdings S.a.r.l., as Purchasers, Sealweld Corporation, Chisholm Asset Corporation, Sealweld Corporation FZE, as Sellers, and Dean Chisholm, as Shareholder, filed as Exhibit 10.15 to the Company's report on Form 8-K filed February 1, 2017, and incorporated herein by reference.
3.1	Restated and Amended Articles of Incorporation filed as Exhibit 3(i) to the Company's Form 10-SB filed December 6, 1996, and incorporated herein by reference.
3.2	Amended and Restated Bylaws, amended and restated as of October 23, 2014, filed as Exhibit 3.2 to the Company's report on Form 10-K filed October 28, 2014, and incorporated herein by reference.
3.3	Articles of Amendment to Restated and Amended Articles of Incorporation, filed December 11, 1997 filed as Exhibit 3 to the Company's second quarter 1998 report on Form 10-QSB filed December 12, 1997, and incorporated herein by reference.
3.4	First Amendment to the Amended and Restated Bylaws, adopted and effective as of August 14, 2018, filed as Exhibit 3.1 to the Company's report on Form 8-K filed August 17, 2018, and incorporated herein by reference.
4.1	Form of Common Stock Certificate filed as Exhibit 4.1 to the Company's Form 10-QSB12G filed December 6, 1996, and incorporated herein by reference.
10.1*	Employment Agreement with Roger C. Jackson dated August 1, 2002 filed as Exhibit 10.31 to the Company's 2003 report on Form 10-K filed October 23, 2003, and incorporated herein by reference.
10.2*	

	Supplemental Executive Retirement Plan dated effective August 1, 2001 filed as Exhibit 10.27 to the Company's 2001 report on Form 10-K filed October 24, 2001, and incorporated herein by reference.
10.3*	Performance-Based Restricted Stock Agreement, Series 1 dated September 2, 2005 filed as Exhibit 10.28 to the Company's report on Form 8-K filed September 7, 2005, and incorporated herein by reference.
10.4*	Performance-Based Restricted Stock Agreement, Series 2 dated September 2, 2005 filed as Exhibit 10.29 to the Company's report on Form 8-K filed September 7, 2005, and incorporated herein by reference.
10.5*	Executive Severance Plan dated October 10, 2008, by and between the Company and its Eligible Employees filed as Exhibit 10.42, to the Company's report on Form 8-K filed October 14, 2008, and incorporated herein by reference.
10.6†	Purchase Agreement dated December 31, 2007 with Intel Corporation filed as Exhibit 10.45 to the Company's report on Form 8-K filed May 13, 2009, and incorporated herein by reference.
10.7*	2009 Long Term Incentive Plan of the Company, filed as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed October 30, 2009, and incorporated herein by reference.
10.8*	Employment Agreement with Mr. Fraser dated September 24, 2013 filed as Exhibit 10.31 to the Company's report on Form 8-K filed on September 26, 2013, and incorporated herein by reference.
10.9	Form of the Indemnification Agreement filed as Exhibit 10.32 to the Company's report on Form 8-K filed on March 3, 2014, and incorporated herein by reference.
10.10*	2016 Long Term Incentive Plan of the Company, filed as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed December 1, 2015, and incorporated herein by reference.
10.11	Credit Agreement, dated as of June 15, 2017, by and among KMG Chemicals, Inc., as the Borrower, the Lenders referred to therein, as Lenders, KeyBank National Association, as Agent, Swingline Lender and Issuing Lender, KeyBanc Capital Markets Inc., HSBC Securities (USA) Inc., and JPMorgan Chase Bank, N.A., as Joint Lead Arrangers and Joint Bookrunners, and ING Capital LLC, as Documentation Agent, filed as Exhibit 10.1 to the Company's report on Form 8-K filed on June 15, 2017, and incorporated herein by reference.
10.12*	The Executive Nonqualified Excess Plan Adoption Agreement, effective September 13, 2017, filed as Exhibit 10.1 to the Company's report on Form 8-K filed on August 27, 2018, and incorporated herein by reference.
10.13*	The Executive Nonqualified Excess Plan Document, effective September 13, 2017, filed as Exhibit 10.2 to the Company's report on Form 8-K filed on August 27, 2018, and incorporated herein by reference.
10.13	First Amendment to Credit Agreement, dated as of December 19, 2017, by and among KMG Chemicals, Inc. and the other Borrower Parties referred to therein, and KeyBank National Association, as Administration Agent, filed as Exhibit 10.1 to the Company's report on Form 8-K filed on December 19, 2017, and incorporated herein by reference.
10.14*	Amendment No. 1 to the 2016 Long Term Incentive Plan of the Company, filed as Exhibit 10.2 to the Company's report on Form 10-Q filed March 9, 2018, and incorporated herein by reference.
12.1	Statement Regarding the Computation of Ratio of Earnings to Fixed Charges.

21.1	Subsidiaries of the Company.
23.1	Consent of KPMG LLP.
31.1	Certificate under Section 302 the Sarbanes-Oxley Act of 2002 of the Chief Executive Officer.
31.2	Certificate under Section 302 the Sarbanes-Oxley Act of 2002 of the Chief Financial Officer.
32.1	Certificate under Section 906 of the Sarbanes-Oxley Act of 2002 of the Chief Executive Officer.
32.2	Certificate under Section 906 of the Sarbanes-Oxley Act of 2002 of the Chief Financial Officer.
101.INS	XBRL Instance Document
101.SCH	XBRL Schema Document
101.CAL	XBRL Calculation Linkbase Document
101.DEF	XBRL Definition Linkbase Document
101.LAB	XBRL Label Linkbase Document
101.PRE	XBRL Presentation Linkbase Document

(c) Schedule II-Valuation and Qualifying Accounts and Reserves. All other schedules are omitted because they are not applicable or the required information is contained in the applicable financial statements or notes thereto.

KMG Chemicals, Inc.

Schedule II — Valuation and Qualifying Accounts

Fiscal years ended July 31, 2018, 2017 and 2016

(in thousands)

Description	Balance at beginning of period	Additions charged to costs and expenses	Deductions	Balance at end of period
Year ended July 31, 2018:				
Allowance for doubtful accounts	$ 263	$ (55)	$ 11	$ 219
Inventory obsolescence	630	(367)	—	263
Valuation allowance on deferred tax assets	1,768	426	(1,619)	575
Year ended July 31, 2017:				
Allowance for doubtful accounts	$ 210	$ (156)	$ 209	$ 263
Inventory obsolescence	654	(22)	(2)	630
Valuation allowance on deferred tax assets	2,895	(1,127)	—	1,768
Year ended July 31, 2016:				
Allowance for doubtful accounts	$ 144	$ 7	$ 59	$ 210
Inventory obsolescence	481	173	—	654
Valuation allowance on deferred tax assets	2,016	(360)	1,239	2,895

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

KMG CHEMICALS, INC.

By:	/s/ Christopher T. Fraser Christopher T. Fraser, President, Chief Executive Officer and Director	Date: October 1, 2018

Pursuant to the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By:	/s/ Christopher T. Fraser Christopher T. Fraser, President, Chief Executive Officer and Director	Date: October 1, 2018
By:	/s/ Marvin T. Green III Marvin T. Green III, Chief Financial Officer	Date: October 1, 2018
By:	/s/ M. Shawn Ham M. Shawn Ham, Controller and Chief Accounting Officer	Date: October 1, 2018
By:	/s/ Gerald G. Ermentrout Gerald G. Ermentrout, Director	Date: October 1, 2018
By:	/s/ George W. Gilman George W. Gilman, Director	Date: October 1, 2018
By:	/s/ Robert Harrer Robert Harrer, Director	Date: October 1, 2018
By:	/s/ John C. Hunter, III John C. Hunter, III, Director	Date: October 1, 2018
By:	/s/ Fred C. Leonard Fred C. Leonard III, Director	Date: October 1, 2018
By:	/s/ Margaret C. Montana Margaret C. Montana, Director	Date: October 1, 2018
By:	/s/ Karen A. Twitchell Karen A. Twitchell, Director	Date: October 1, 2018

74