

Huntsman CORP  
Form 10-K  
February 15, 2017

Use these links to rapidly review the document

[TABLE OF CONTENTS](#)

[INDEX TO CONSOLIDATED FINANCIAL STATEMENTS](#)

[Table of Contents](#)

**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 DECEMBER 31, 2016

**OR**

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number	Exact Name of Registrant as Specified in its Charter, Principal Office Address and Telephone Number	State of Incorporation/Organization	I.R.S. Employer Identification No.
001-32427	Huntsman Corporation 10003 Woodloch Forest Drive The Woodlands, Texas 77380 (281) 719-6000	Delaware	42-1648585
333-85141	Huntsman International LLC 10003 Woodloch Forest Drive The Woodlands, Texas 77380 (281) 719-6000	Delaware	87-0630358

**Securities registered pursuant to Section 12(b) of the Exchange Act:**

Registrant	Title of each class	Name of each exchange on which registered
Huntsman Corporation	Common Stock, par value \$0.01 per share	New York Stock Exchange
Huntsman International LLC	None	None

**Securities registered pursuant to Section 12(g) of the Exchange Act:**

Registrant	Title of each class
Huntsman Corporation	None
Huntsman International LLC	None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Huntsman Corporation	YES <input checked="" type="radio"/>	NO <input type="radio"/>
Huntsman International LLC	YES <input type="radio"/>	NO <input checked="" type="radio"/>

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

## Edgar Filing: Huntsman CORP - Form 10-K

Huntsman Corporation	YES <input type="radio"/>	NO <input checked="" type="radio"/>
Huntsman International LLC	YES <input type="radio"/>	NO <input checked="" type="radio"/>

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act 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.

Huntsman Corporation	YES <input checked="" type="radio"/>	NO <input type="radio"/>
Huntsman International LLC	YES <input checked="" type="radio"/>	NO <input type="radio"/>

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Huntsman Corporation	YES <input checked="" type="radio"/>	NO <input type="radio"/>
Huntsman International LLC	YES <input checked="" type="radio"/>	NO <input type="radio"/>

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 the registrants' 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. Huntsman Corporation

Huntsman Corporation	Large accelerated filer <input checked="" type="radio"/>	Accelerated filer <input type="radio"/>	Non-accelerated filer <input type="radio"/>	Smaller reporting company <input type="radio"/>
Huntsman International LLC	Large accelerated filer <input type="radio"/>	Accelerated filer <input type="radio"/>	Non-accelerated filer <input checked="" type="radio"/>	Smaller reporting company <input type="radio"/>

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Huntsman Corporation	YES <input type="radio"/>	NO <input checked="" type="radio"/>
Huntsman International LLC	YES <input type="radio"/>	NO <input checked="" type="radio"/>

On June 30, 2016, the last business day of the registrants' most recently completed second fiscal quarter, the aggregate market value of voting and non-voting common equity held by non-affiliates was as follows:

Registrant	Common Equity	Market Value Held by Nonaffiliates
Huntsman Corporation	Common Stock	\$2,573,379,972(1)
Huntsman International LLC	Units of Membership Interest	\$0(2)

(1) Based on the closing price of \$13.45 per share of common stock as quoted on the New York Stock Exchange.

(2) All units of membership interest are held by Huntsman Corporation, an affiliate.

On February 8, 2017, the number of shares outstanding of each of the registrant's classes of common equity were as follows:

Registrant	Common Equity	Outstanding
Huntsman Corporation	Common Stock	238,505,192
Huntsman International LLC	Units of Membership Interest	2,728

This Annual Report on Form 10-K presents information for two registrants: Huntsman Corporation and Huntsman International LLC. Huntsman International LLC is a wholly owned subsidiary of Huntsman Corporation and is the principal operating company of Huntsman Corporation. The information reflected in this Annual Report on Form 10-K is equally applicable to both Huntsman Corporation and Huntsman International LLC, except where otherwise indicated.

Huntsman International LLC meets the conditions set forth in General Instructions (I)(1)(a) and (b) of Form 10-K and, to the extent applicable, is therefore filing this form with a reduced disclosure format.

### Documents Incorporated by Reference

Part III: Proxy Statement for the 2017 Annual Meeting of Stockholders to be filed within 120 days of  
Huntsman Corporation's fiscal year ended December 31, 2016.

Table of Contents

**HUNTSMAN CORPORATION AND SUBSIDIARIES  
HUNTSMAN INTERNATIONAL LLC AND SUBSIDIARIES  
2016 ANNUAL REPORT ON FORM 10-K**

**TABLE OF CONTENTS**

	<b>Page</b>
<u>PART I</u>	
<u>ITEM 1. BUSINESS</u>	<u>1</u>
<u>ITEM 1A. RISK FACTORS</u>	<u>36</u>
<u>ITEM 1B. UNRESOLVED STAFF COMMENTS</u>	<u>51</u>
<u>ITEM 2. PROPERTIES</u>	<u>51</u>
<u>ITEM 3. LEGAL PROCEEDINGS</u>	<u>54</u>
<u>ITEM 4. MINE SAFETY DISCLOSURES</u>	<u>54</u>
<u>EXECUTIVE OFFICERS OF THE REGISTRANT</u>	<u>54</u>
<u>PART II</u>	
<u>ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	<u>58</u>
<u>ITEM 6. SELECTED FINANCIAL DATA</u>	<u>59</u>
<u>ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	<u>61</u>
<u>ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	<u>86</u>
<u>ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	<u>88</u>
<u>ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	<u>88</u>
<u>ITEM 9A. CONTROLS AND PROCEDURES</u>	<u>89</u>
<u>ITEM 9B. OTHER INFORMATION</u>	<u>93</u>
<u>PART III</u>	
<u>ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	<u>93</u>
<u>ITEM 11. EXECUTIVE COMPENSATION</u>	<u>93</u>
<u>ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	<u>93</u>
<u>ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE</u>	<u>93</u>
<u>ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	<u>93</u>
<u>PART IV</u>	
<u>ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES</u>	<u>94</u>

Table of Contents

**HUNTSMAN CORPORATION AND SUBSIDIARIES  
HUNTSMAN INTERNATIONAL LLC AND SUBSIDIARIES  
2016 ANNUAL REPORT ON FORM 10-K**

With respect to Huntsman Corporation, certain information set forth in this report contains "forward-looking statements" within the meaning the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than historical factual information are forward-looking statements, including without limitation statements regarding: projections of revenue, expenses, profit, profit margins, tax rates, tax provisions, cash flows, pension and benefit obligations and funding requirements, our liquidity position or other projected financial measures; management's plans and strategies for future operations, including statements relating to anticipated operating performance, cost reductions, restructuring activities, new product and service developments, competitive strengths or market position, acquisitions, divestitures, spin-offs, or other distributions, strategic opportunities, securities offerings, stock repurchases, dividends and executive compensation; growth, declines and other trends in markets we sell into; new or modified laws, regulations and accounting pronouncements; outstanding claims, legal proceedings, tax audits and assessments and other contingent liabilities; foreign currency exchange rates and fluctuations in those rates; general economic and capital markets conditions; the timing of any of the foregoing; assumptions underlying any of the foregoing; and any other statements that address events or developments that we intend or believe will or may occur in the future. In some cases, forward-looking statements can be identified by terminology such as "believes," "expects," "may," "will," "should," "anticipates" or "intends" or the negative of such terms or other comparable terminology, or by discussions of strategy. We may also make additional forward-looking statements from time to time. All such subsequent forward-looking statements, whether written or oral, by us or on our behalf, are also expressly qualified by these cautionary statements.

All forward-looking statements, including without limitation management's examination of historical operating trends, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith and we believe there is a reasonable basis for them, but there can be no assurance that management's expectations, beliefs and projections will result or be achieved. All forward-looking statements apply only as of the date made. We undertake no obligation to publicly update or revise forward-looking statements whether because of new information, future events or otherwise, except as required by securities and other applicable law.

There are a number of risks and uncertainties that could cause our actual results to differ materially from the forward-looking statements contained in or contemplated by this report. Any forward-looking statements should be considered in light of the risks set forth in "Part I. Item 1A. Risk Factors" and elsewhere in this report.

This report includes information with respect to market share, industry conditions and forecasts that we obtained from internal industry research, publicly available information (including industry publications and surveys), and surveys and market research provided by consultants. The publicly available information and the reports, forecasts and other research provided by consultants generally state that the information contained therein has been obtained from sources believed to be reliable. We have not independently verified any of the data from third-party sources, nor have we ascertained the underlying economic assumptions relied upon therein. Similarly, our internal research and forecasts are based upon our management's understanding of industry conditions, and such information has not been verified by any independent sources.

For convenience in this report, the terms "Company," "our," "us," or "we" may be used to refer to Huntsman Corporation and, unless the context otherwise requires, its subsidiaries and predecessors. Any references to our "Company," "we," "us" or "our" as of a date prior to October 19, 2004 (the date of our formation) are to Huntsman Holdings, LLC and its subsidiaries (including their respective

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

predecessors). In this report, "Huntsman International" refers to Huntsman International LLC (our 100%-owned subsidiary) and, unless the context otherwise requires, its subsidiaries; "AAC" refers to Arabian Amines Company, our consolidated manufacturing joint venture with the Zamil Group; "HPS" refers to Huntsman Polyurethanes Shanghai Ltd. (our consolidated splitting joint venture with Shanghai Chlor-Alkali Chemical Company, Ltd); "LPC" refers to Louisiana Pigment Company, L.P. (our unconsolidated joint venture with Kronos); "Sasol-Huntsman" refers to Sasol-Huntsman GmbH and Co. KG (our consolidated joint venture with Sasol that owns and operates a maleic anhydride facility in Moers, Germany); and "SLIC" refers to Shanghai Liengheng Isocyanate Investment BV (an unconsolidated manufacturing joint venture with BASF and three Chinese chemical companies).

In this report, we may use, without definition, the common names of competitors or other industry participants. We may also use the common names or abbreviations for certain chemicals or products. Many of these terms are defined in the Glossary of Chemical Terms found at the conclusion of "Part I. Item 1. Business" below.

Table of Contents

**PART I**

**ITEM 1. BUSINESS**

**GENERAL**

We are a global manufacturer of differentiated organic chemical products and of inorganic chemical products. Our Company, a Delaware corporation, was formed in 2004 to hold the businesses of Huntsman Holdings, LLC, a company founded by Jon M. Huntsman. Mr. Huntsman founded the predecessor to our Company in 1970 as a small polystyrene plastics packaging company. Since then, we have grown through a series of significant acquisitions and now own a global portfolio of businesses.

We operate all of our businesses through Huntsman International, our 100% owned subsidiary. Huntsman International is a Delaware limited liability company and was formed in 1999.

Our principal executive offices are located at 10003 Woodloch Forest Drive, The Woodlands, Texas 77380, and our telephone number at that location is (281) 719-6000.

**RECENT DEVELOPMENTS**

On January 30, 2017, our titanium dioxide manufacturing facility in Pori, Finland experienced fire damage and is currently not operational. The fire brigade responded quickly to extinguish the fire and there were no injuries. We have notified applicable customers and suppliers of this *force majeure* event. We do not currently have an estimated time frame for how long the facility will be off line, but we are committed to repairing the facility as quickly as possible. The Pori facility has a nameplate capacity of 130,000 metric tons, which represents approximately 15% of our total titanium dioxide capacity and approximately 10% of total European titanium dioxide demand. The site is insured for property damage as well as business interruption losses. According to our insurance policies, the respective retention levels (deductibles) for physical damage and business interruption are \$15 million and 60 days, respectively. On February 9, 2017, we received a €50 million (approximately \$52 million) payment from our insurer as an initial partial progress payment towards the overall pending claim.

On October 28, 2016, we filed an initial Form 10 registration statement with the Securities and Exchange Commission (the "SEC") as part of the process to spin off our Pigments and Additives and Textile Effects businesses in a tax-free transaction. On January 17, 2017, we announced that we will retain our Textile Effects business and we amended the Form 10 registration statement. We also announced that the name of the spin-off entity will be Venator Materials Corporation ("Venator"). Venator shares are expected to trade on the New York Stock Exchange under the ticker VNTR after the distribution to our stockholders. The completion of the spin-off is subject to the satisfaction or waiver of a number of conditions, including the registration statement on Form 10 for Venator's common stock being declared effective by the SEC and certain other conditions described in the information statement included in the Form 10. The ongoing process to separate the Pigments and Additives business is proceeding and is targeted for the second quarter 2017. As noted above, there was fire damage sustained at our titanium dioxide facility in Pori, Finland. The potential impact of this interruption, if any, on the spin date is not yet known.

On December 30, 2016, our Performance Products segment completed the sale of its European surfactants business to Innospec Inc. for \$199 million in cash plus our retention of trade receivables and payables for an enterprise value of \$225 million. Under the terms of the transaction, Innospec acquired our manufacturing facilities located in Saint-Mihiel, France; Castiglione delle Stiviere, Italy; and Barcelona, Spain. The purchase price is subject to the finalization of working capital adjustments. We remain committed to our global surfactants business, including in the U.S. and Australia, where our differentiated surfactants businesses are backward integrated into essential feedstocks. Upon closing the transaction, we entered into supply and long-term tolling arrangements with Innospec in order to continue marketing certain core products strategic to our global agrochemicals, lubes and certain other

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

businesses. In connection with this sale, we recognized a pre-tax gain in the fourth quarter of 2016 of \$98 million.

On December 30, 2016, we made an early repayment of \$260 million on our 2015 extended term loan B facility due 2019 ("2015 Extended Term Loan B") using proceeds from the sale of the European surfactants business and existing cash.

### **OVERVIEW**

We operate in five segments: Polyurethanes, Performance Products, Advanced Materials, Textile Effects and Pigments and Additives. Our products comprise a broad range of chemicals and formulations which we market globally to a diversified group of consumer and industrial customers. Our products are used in a wide range of applications, including those in the adhesives, aerospace, automotive, construction products, personal care and hygiene, durable and non-durable consumer products, electronics, medical, packaging, paints and coatings, power generation, refining, synthetic fiber, textile chemicals and dye industries. We are a leading global producer in many of our key product lines, including MDI, amines, surfactants, maleic anhydride, epoxy-based polymer formulations, textile chemicals, dyes, titanium dioxide and color pigments. Our administrative, research and development and manufacturing operations are primarily conducted at the facilities listed in "Item 2. Properties" below, which are located in 29 countries.

As of December 31, 2016, we employed approximately 15,000 associates worldwide. Our revenues for the years ended December 31, 2016, 2015 and 2014 were \$9,657 million, \$10,299 million and \$11,578 million, respectively.

### **Our Products**

We produce differentiated organic and inorganic chemical products. Our Polyurethanes, Performance Products, Advanced Materials and Textile Effects segments produce differentiated organic chemical products and our Pigments and Additives segment produces primarily inorganic chemical products.

Growth in our differentiated products has been driven by the substitution of our products for other materials and by the level of global economic activity. Accordingly, the profitability of our differentiated products has been somewhat less influenced by the cyclical nature that typically impacts the petrochemical industry. Titanium dioxide, within our Pigments and Additives segment, is cyclical and influenced by seasonal demand patterns in the coatings industry.

Table of Contents

*2016 Segment Revenues(1)*

*2016 Segment Adjusted EBITDA(1)*

---

(1)

Percentage allocations in this chart do not give effect to Corporate and other unallocated items and eliminations. For a reconciliation of adjusted EBITDA to net income attributable to Huntsman Corporation and cash provided by operating activities, see "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Results of Operations."



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

The following table identifies the key products, their principal end markets and applications and representative customers of each of our business segments:

<b>Segment</b>	<b>Products</b>	<b>End Markets and Applications</b>	<b>Representative Customers</b>
Polyurethanes	MDI, PO, polyols, PG, TPU, aniline and MTBE	Refrigeration and appliance insulation, construction products, adhesives, automotive, footwear, furniture, cushioning, specialized engineering applications and fuel additives	BMW, CertainTeed, Electrolux, Firestone, Haier, Henkel, Johnson Controls, Louisiana Pacific, Norbord, PMI
Performance Products	Amines, surfactants, LAB, maleic anhydride, other performance chemicals, EG, olefins and technology licenses	Detergents, personal care products, agrochemicals, lubricant and fuel additives, energy, adhesives, paints and coatings, construction, marine and automotive products, composites, and PET fibers and resins	Afton, AOC, Chevron, Colgate, DAK, L'Oreal, Lubrizol, Monsanto, Procter & Gamble, Tate & Lyle, Unilever
Advanced Materials	Basic liquid and solid epoxy resins; high performance specialty resins and compounds; cross-linkers and curing agents; epoxy, acrylic and polyurethane-based formulations	Aerospace and industrial adhesives, composites for aerospace, automotive, oil and gas and wind power generation; construction and civil engineering; industrial coatings; electrical power transmission; consumer electronics and DIY adhesives	Akzo, Bodo Moeller, Bosch, Chenglai, Cytec, Dow Europe, Freeman, Hexcel, Lianyungang, Omya, PPG, Schneider, Sherwin Williams, Siemens, Syngenta, Speed Fair, Toray
Textile Effects	Textile chemicals, dyes and digital inks	Apparel, home and technical textiles	Aunde, Esquel Group, Fruit of the Loom, Guilford Mills, Hanesbrands, Kahatex, Nice Dyeing, Sage Automotive, Tencate, Trident, Y.R.C., Zaber & Zubair
Pigments and Additives	Titanium dioxide, functional additives, color pigments, timber treatment and water treatment chemicals	Paints and coatings, plastics, paper, printing inks, ceramics, pharmaceuticals, food, cosmetics, wood protection and water purity	AkzoNobel, BASF, Clariant, Jotun, PolyOne, PPG

Table of Contents

For additional information about our business segments, including related financial information, see "Note 26. Operating Segment Information" to our consolidated financial statements and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K.

**Polyurethanes**

***General***

We are a leading global manufacturer and marketer of a broad range of polyurethane chemicals, including MDI products, PO, polyols, PG and TPU (each discussed in more detail below under "Products and Markets"). Polyurethane chemicals are used to produce rigid and flexible foams, as well as coatings, adhesives, sealants and elastomers. We focus on the higher-margin, higher-growth markets for specialty MDI and MDI-based polyurethane systems. Growth in our Polyurethanes segment has been driven primarily by the continued substitution of MDI-based products for other materials across a broad range of applications. We operate five primary polyurethane manufacturing facilities in the U.S., Europe and China. We also operate 19 strategically located downstream polyurethane formulation facilities, commonly referred to in the chemical industry as "systems houses," located in close proximity to our customers worldwide (see facilities listed in "Item 2. Properties" below), which enables us to focus on customer support, technical service and a differentiated product offering. We also operate a specialty polyol manufacturing facility focused on the insulation market and three downstream TPU manufacturing facilities in the U.S., Europe and China.

Our customers produce polyurethane products through the combination of an isocyanate, such as MDI, with polyols, which are derived largely from PO and EO. We are able to produce over 2,000 distinct MDI-based polyurethane products by modifying the MDI molecule through varying the proportion and type of polyol used and by introducing other chemical additives to our MDI formulations. As a result, polyurethane products, especially those derived from MDI, are continuing to replace traditional products in a wide range of end-use markets, including insulation in construction and appliances, cushioning for automotive and furniture, coatings, adhesives, wood binders for construction and furniture, footwear and other specialized engineering applications.

We are one of three North American producers of PO. We and some of our customers process PO into derivative products, such as polyols for polyurethane products, PG and various other chemical products. End uses for these derivative products include applications in the home furnishings, construction, appliances, packaging, automotive and transportation, food, paints and coatings and cleaning products industries. We also produce MTBE as a co-product of our PO manufacturing process. MTBE is an oxygenate that is blended with gasoline to reduce harmful vehicle emissions and to enhance the octane rating of gasoline. See "Item 1A. Risk Factors."

In 1992, we were the first global supplier of polyurethane chemicals to open a technical service center in China. We have since expanded this facility to include an integrated polyurethanes formulation facility and a world scale research and development campus. In January 2003, we entered into two related joint ventures to build MDI production and finishing facilities near Shanghai, China in Caojing. In June 2006, HPS, a consolidated joint venture, began production at our MDI finishing plant. In September 2006, SLIC, an unconsolidated joint venture, began production at the MNB, aniline and crude MDI plants. We intend to expand the capacity of these facilities by 2018. These world-scale facilities strengthen our ability to service our customers in the critical Chinese market, the largest MDI market in the world, and will support the long-term demand growth that we believe this region will continue to experience. Additionally, in November 2012, we entered into an agreement with Sinopec to form a joint venture to build a world scale PO/MTBE plant in Nanjing, China. The facility is expected to be mechanically complete in early 2017 with beneficial commercial operations expected in the second half of 2017, and will utilize our proprietary PO/MTBE manufacturing technology. We own a 49%

Table of Contents

interest in the joint venture and account for our interest in the joint venture as an equity method investment.

***Products and Markets***

MDI is used primarily in rigid foam applications and in a wide variety of customized, higher-value flexible foam as well as coatings, adhesives, sealants and elastomers. Polyols, including polyether and polyester polyols, are used in conjunction with MDI in rigid foam, flexible foam and other non-foam applications. PO is one of the principal raw materials for producing polyether polyols. The following chart illustrates the range of product types and end uses for polyurethane chemicals.

Polyurethane chemicals are sold to customers who combine the chemicals to produce polyurethane products. Depending on their needs, customers will use either component polyurethane chemicals produced for mass sales or polyurethane systems tailored for their specific requirements. By varying the blend, additives and specifications of the polyurethane chemicals, manufacturers are able to develop and produce a breadth and variety of polyurethane products.

Our strategy is focused on growing our differentiated product offering (specialty MDI and polyols, formulated MDI systems and TPU), which requires a greater emphasis on formulating capability to provide our downstream customers with the end effect required in their applications. These differentiated products tend to require technical solutions, offer higher margins, lower volatility and are less dependent on industry utilization rates compared to sales of component MDI or component polyols.

**MDI.** MDI has grown substantially over the past three decades, increasing by a factor of 6% or 7% CAGR, well in excess of global GDP. MDI has a substantially larger market size and a higher growth rate than other polyurethane isocyanates. This is primarily because MDI can be used to make polyurethanes with a broader range of properties and can therefore be used in a wider range of applications. We believe that MDI and formulated MDI systems, which combine MDI and polyols, will continue to grow at approximately double the rate of global GDP driven by the mega trends of energy management, food preservation, demographics and urbanization/transportation. MDI offers key products benefits of energy efficiency, comfort and durability aligned with these megatrends. We believe that MDI and formulated MDI systems will continue to substitute for alternative materials such as fiberglass in insulation, phenol formaldehyde in wood binders and TDI in automotive and furniture.

Table of Contents

Specialty cushioning and insulation applications, thermoplastic polyurethanes and adhesives and coatings will further contribute to the continued growth of MDI. MDI experiences some seasonality in its sales reflecting its exposure to seasonal construction-related end markets such as insulation and composite wood products. Sales generally peak during the spring and summer months in the northern hemisphere, resulting in greater sales volumes during the second and third quarters of the year.

**TPU.** TPU is a high-quality, fully formulated thermal plastic derived from the reaction of MDI or an aliphatic isocyanate with polyols to produce unique qualities such as durability, flexibility, strength, abrasion-resistance, shock absorbency and chemical resistance. We can tailor the performance characteristics of TPU to meet the specific requirements of our customers. TPU is used in injection molding and small components for the automotive and footwear industries. It is also extruded into films for apparel, wires and cables for industrial use and in a wide variety of applications in the coatings, adhesives, sealants and elastomers markets.

**Polyols.** Polyols are combined with MDI and other isocyanates to create a broad spectrum of formulated polyurethane systems. Demand for specialty polyols has been growing at approximately the same rate at which MDI consumption has grown.

**Aniline.** Aniline is an intermediate chemical used primarily to manufacture MDI. The majority of our aniline is consumed internally with some sold to third parties. We believe that the lack of a significant spot market for aniline means that in order to remain competitive, MDI manufacturers must either be integrated with an aniline manufacturing facility or have a long-term, cost-competitive aniline supply contract.

**PO.** PO is an intermediate chemical used mainly to produce a wide range of polyols and PG. Demand for PO depends largely on overall economic demand, especially that of consumer durables. Strategically, we use PO produced at our world scale PO/MTBE facility in Port Neches, Texas, downstream in our formulated MDI systems. We are also currently constructing a PO/MTBE facility in Nanjing, China with the strategic aim of supplying PO downstream into our China business, accelerating our differentiated growth in the world's largest PU market. In addition, we also have an important internal strategic outlet for PO, downstream into our Performance Products amines business, which generates significant added value to the PO molecule.

**MTBE.** MTBE is an oxygenate that is blended with gasoline to reduce harmful vehicle emissions and to enhance the octane rating of gasoline. While MTBE has been effectively eliminated in the United States, demand continues to grow in other regions of the world. See "Item 1A. Risk Factors." In 2011, we announced the signing of a license agreement with Chinese chemicals manufacturer Yantai Wanhua Polyurethanes Co., Ltd, for the production of PO and MTBE. In November 2012, we entered into an agreement to form a joint venture with Sinopec to construct and operate a PO/MTBE facility in China. Under the joint venture agreement, we hold a 49% interest in the joint venture and Sinopec holds a 51% interest. See "Manufacturing and Operations" below and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

It is important to recognize the strategic link between PO, polyols and MDI. MTBE is a co-product of the PO manufacturing process which generates cash in the gasoline market. Our strategic focus is on growing our differentiated (specialty MDI and polyols, formulated MDI based systems and

Table of Contents

TPU) sales and the diagram below provides an overview of that focus with an approximation of the number of grades, formulations, products and stock keeping units which we produce and sell.

***Sales and Marketing***

We market our polyurethane chemicals to over 3,500 customers in more than 90 countries. Our sales, marketing and technical resources are organized to support major regional markets and key end-use markets, some of which requires a coordinated global approach, such as key accounts across the automotive sector. These key end-use markets include the commercial and residential insulation, appliance, automotive, footwear, furniture and coatings, adhesives, sealants and elastomers industries. We sell both directly and indirectly to customers, the latter via a network of distributors and agents who in turn sell our products to customers who cannot be served as cost effectively by our internal sales groups.

We provide a wide variety of polyurethane solutions as components (i.e., the isocyanate or the polyol) or in the form of "systems" in which we provide the total isocyanate and polyol formulation to our customers. Our ability to deliver a range of polyurethane solutions and technical support tailored to meet our customers' needs is critical to our long-term success. We have strategically located our downstream polyurethane systems houses close to our customers, enabling us to focus on customer support and technical service. We believe this customer support and technical service system contributes to customer retention and also provides opportunities for identifying further product and service needs of customers.

Our strategy is to grow the number of and capability of our downstream facilities both organically and inorganically. As a result, we have made a number of "bolt-on" acquisitions in recent years to expand our downstream footprint and align with our strategic intent.

We believe that the extensive market knowledge and industry experience of our sales teams and technical experts, in combination with our strong emphasis on customer relationships, have facilitated our ability to establish and maintain long-term customer supply positions. Our sales strategy is to continue to increase sales to existing customers and to attract new customers by providing innovative solutions, quality products, reliable supply, competitive prices and superior customer service.

## Table of Contents

### Manufacturing and Operations

Our world-scale MDI production facilities are located in Geismar, Louisiana; Rotterdam, The Netherlands; and through our joint ventures in Caojing, China. These facilities receive aniline, which is a primary material used in the production of MDI, from our facilities located in Geismar, Louisiana; Wilton, U.K.; and Caojing, China. We believe that this relative scale and product integration of our large facilities is necessary to provide cost competitiveness in MDI production. The following table sets forth the annual production capacity of polyurethane chemicals at each of our polyurethanes facilities:

	MDI	Polyols	TPU	Aniline	Nitrobenzene	PO	PG	MTBE (millions of gallons)
	(millions of pounds)							
Caojing, China	350(1)							
Geismar, Louisiana	1,060	160		750(2)	1,000(2)			
Houston, Texas		170						
Jinshan, China			29					
Osnabrück, Germany		26	59					
Port Neches, Texas						525	145	260
Ringwood, Illinois			20					
Rotterdam, The Netherlands	880	190						
Wilton, U.K.				783	1,045			
Total	2,290	546	108	1,533	2,045	525	145	260

- 
- (1) Represents our 50% share of capacity from SLIC.
- (2) Represents our approximately 85% share of capacity under our consolidated Rubicon LLC manufacturing joint venture with Chemtura Corporation.

At our Geismar, Rotterdam and Caojing facilities we utilize sophisticated proprietary technology to produce MDI. This technology contributes to our position as a low cost MDI producer. In addition to MDI, we use a proprietary manufacturing process to manufacture PO. We own or license all technology and know-how developed and utilized at our PO facility. Our process combines isobutane and oxygen in proprietary oxidation (peroxidation) reactors, thereby forming TBHP and TBA, which are further processed into PO and MTBE, respectively. Because our PO production process is less expensive relative to other technologies and allows PO co-products to be processed into saleable or useable materials, we believe that our PO production technology possesses several distinct advantages over its alternatives.

### Joint Ventures

**Rubicon Joint Venture.** Chemtura Corporation is our joint venture partner in Rubicon LLC, which owns aniline, nitrobenzene and DPA manufacturing facilities in Geismar, Louisiana. We are entitled to approximately 85% of the nitrobenzene and aniline production capacity of Rubicon LLC, and Chemtura Corporation is entitled to 100% of the DPA production. In addition to operating the joint venture's aniline, nitrobenzene and DPA facilities, Rubicon LLC operates our wholly-owned MDI, polyol and maleic anhydride facilities at Geismar and is responsible for providing other auxiliary services to the entire Geismar complex. As a result of this joint venture, we are able to achieve greater scale and lower costs for our products than we would otherwise have been able to obtain. Rubicon LLC is consolidated in our financial statements.

Table of Contents

**Chinese MDI Joint Ventures.** We are involved in two related joint ventures which operate MDI production facilities in Caojing, China. SLIC, our manufacturing joint venture with BASF and three Chinese chemical companies, produces MNB, aniline and crude MDI. We effectively own 35% of SLIC and account for our investment under the equity method. HPS, our splitting joint venture with Shanghai Chlor-Alkali Chemical Company, Ltd, manufactures pure MDI, polymeric MDI, MDI variants and formulated MDI systems. We own 70% of HPS and it is consolidated in our financial statements. These projects have been funded by a combination of equity invested by the joint venture partners and borrowed funds. The total production capacity of the SLIC facilities is 700 million pounds per year of MDI, of which HPS is entitled to 50%, and the splitting capacity of the HPS facility is 350 million pounds per year of MDI.

SLIC is in the process of expanding capacity in Caojing by 530 million pounds per year of MDI and HPS is also expanding splitting capacity. We anticipate that the expansion will be complete with beneficial commercial operations in the first half of 2018.

**Chinese PO/MTBE Joint Venture.** In November 2012, we entered into an agreement to form a joint venture with Sinopec. The joint venture involves the construction and operation of a PO/MTBE facility in China. Under the joint venture agreement, we hold a 49% interest in the joint venture and Sinopec holds a 51% interest. Our total equity investment is anticipated to be approximately \$85 million, net of license fees from the joint venture. At the end of 2016, cumulative capital contributions were approximately \$85 million, net of license fees from the joint venture. Mechanical completion of the project is expected in early 2017. We expect beneficial commercial operations during the second half of 2017 as soon as supply for the key raw material isobutane is available.

**Raw Materials**

The primary raw materials for MDI-based polyurethane chemicals are benzene and PO. Benzene is a widely available commodity that is the primary feedstock for the production of MDI and aniline. Historically, benzene has been the largest component of our raw material costs. We purchase benzene from third parties to manufacture nitrobenzene and aniline, almost all of which we then use to produce MDI.

A major cost in the production of polyols is attributable to the costs of PO. The integration of our PO business with our polyurethane chemicals business gives us access to a competitively priced, strategic source of PO and the opportunity to develop polyols that enhance our range of MDI products. The primary raw materials used in our PO production process are butane/isobutane, propylene, methanol and oxygen.

**Competition**

Our major competitors in the polyurethane chemicals market include BASF, Covestro, Dow, Wanhua Chemical Group and LyondellBasell. While these competitors and others produce various types and quantities of polyurethane chemicals, we focus on MDI and MDI-based formulated polyurethane systems. Our polyurethane chemicals business competes in two basic ways: (1) where price is the dominant element of competition, our polyurethane chemicals business differentiates itself by its high level of customer support, including cooperation on technical and safety matters; and (2) elsewhere, we compete on the basis of product performance, our ability to react quickly to changing customer needs and providing customers with innovative solutions to their needs.

Table of Contents

**Performance Products**

***General***

Our Performance Products segment has leading global positions in the manufacture and sale of amines, surfactants and maleic anhydride and serves a wide variety of consumer and industrial end markets. Our Performance Products segment is organized by region and product family. Our product families are: Amines; Maleic Anhydride (including catalyst and licensing); Surfactants (including LAB); and Upstream Intermediates.

We produce a wide range of amines, many of which are sold into specialty markets such as epoxy curing agents, oil exploration and production, agrochemicals, and fuel and lubricant additives. We believe we are the largest global producer of polyetheramines, one of the largest producers of 2-(2-amino ethoxy) ethanol, sold under our DGA® brand, the second largest producer of ethyleneamines and morpholine and the second largest North American producer of ethanolamines. We are the only producer and largest supplier of propylene carbonate and ethylene carbonate in North America. Many of the markets for these products have growth rates in excess of global GDP.

We believe we are the largest global producer of maleic anhydride, a highly versatile chemical intermediate that is used to produce UPRs, which are mainly used in the production of fiberglass reinforced resins for marine, automotive and construction products. Maleic anhydride is also used in the production of lubricants, food additives and artificial sweeteners. We are also the leading licensor of maleic anhydride manufacturing technology and the largest supplier of butane fixed bed catalyst used in maleic anhydride manufacturing.

We consume internally produced and third-party-sourced base petrochemicals in the manufacture of our surfactants, LAB and ethanolamines products. We produce a broad range of surfactants, which are primarily used in detergency, personal care, agrochemical, oilfield and industrial applications. We manufacture LAB for use as an intermediate in laundry detergents and a higher molecular weight alkylate used as a lubricant additive.

We also use internally produced and third-party-sourced base petrochemicals to produce EG, which is primarily used in the production of polyester fibers, PET packaging and antifreeze.

Beginning in 2013, our Performance Products segment initiated a restructuring program to refocus its surfactants business in Europe. In connection with this program, in 2014 we completed the sale of our European commodity surfactants business, including the ethoxylation facility in Laverre, France to Wilmar. Additionally, in 2014 we ceased production at our Patrica, Italy surfactants facility. In December 2015, we announced plans for a reorganization of our commercial and technical functions and a refocused divisional business strategy to better position our segment for growth in coming years and we launched a program to capture growth opportunities, improve manufacturing cost efficiency and reduce inventories. In 2016, we expanded our EO capacity by 265 million pounds at our Port Neches, Texas facility. On December 30, 2016, we completed the sale of our European surfactants business to Innospec Inc. for \$199 million in cash plus our retention of trade receivables and payables for an enterprise value of \$225 million. We remain committed to our global surfactants business, including in the U.S. and Australia, where our differentiated surfactants businesses are backward integrated into essential feedstocks.

We operate 14 Performance Products manufacturing facilities in North America, Europe, the Middle East, Asia and Australia.



Table of Contents

The following chart illustrates the primary raw materials used and range of product types produced by the Performance Products segment:

**Products and Markets**

**Amines.** Amines are a family of intermediate chemicals that are produced by reacting ammonia with various ethylene and propylene derivatives. Generally, amines are valued for their properties as a reactive agent, emulsifier, dispersant, solvent or corrosion inhibitor. Growth in demand for amines is highly correlated with GDP growth. However, certain segments of the amines market, such as polyetheramines, have historically grown at rates in excess of GDP growth due to new product development, technical innovation and end-use substitution. As amines are generally sold based upon the performance characteristics that they provide to customer-specific end-use applications, pricing does not generally fluctuate directly with movements in underlying raw materials. Our Amines business is organized around the following product groups:

Product Group	Applications
Polyetheramines	Epoxy composites, polyurethane foams and insulation, construction and flooring, paints and coatings, lubricant and fuel additives, adhesives, agrochemicals, oilfield chemicals, printing inks, pigment dispersion
Ethyleneamines	Chemical building block used in lubricant and fuel additives, epoxy hardeners, wet strength resins, chelating agents, fungicides
Ethanolamines	Wood preservatives, herbicides, construction products, gas treatment, metalworking, personal care
Other specialty Amines, including DGA® Agent	Gas treating, ag chemicals, personal care, lubricant and fuel additives, polyurethane foams, fabric softeners, paints and coatings, refinery processing, water treating

Polyetheramines are produced by reacting polyol with ammonia. They provide sophisticated performance characteristics as an additive in the manufacture of highly customized epoxy formulations, enabling customers to penetrate new markets and substitute for traditional curing materials.

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Our ethyleneamines are manufactured by reacting EDC and caustic soda with ammonia to produce a range of various ethyleneamines homologues having different molecular weights. Most other producers utilize a reductive amination process, which yields a light slate of ethyleneamines. We believe our heavier slate of homologues allows access to a greater range of markets.

Ethanolamines are a range of chemicals produced by the reaction of EO with ammonia. There are a limited number of competitors due to the technical and cost barriers to entry.

Our amines are used in a wide variety of mainly industrial applications, including composites, paints and coatings, polyurethane foam, fuel and lubricant additives, and solvents. Our key amines customers include Proctor & Gamble, Chevron, Lubrizol, Air Products, Hexion, Afton, Infineum, Univar, Monsanto and PPG.

**Maleic Anhydride (including catalyst and licensing).** Maleic anhydride is a highly versatile chemical intermediate that is used to produce UPRs, which are the main ingredient in fiberglass reinforced resins used for marine and automotive applications and commercial and residential construction products. Maleic anhydride is also used in the production of lubricants, food additives and artificial sweeteners.

#### **Product Group**

Maleic Anhydride

#### **Applications**

Boat hulls, automotive, construction, lubricant and fuel additives, countertops, agrochemicals, paper and food additives

Maleic Anhydride Catalyst and Technology Licensing

Maleic anhydride, BDO and its derivatives, and PBT manufacturers

Maleic anhydride is produced by oxidizing either benzene or normal butane through the use of a catalyst. Our maleic anhydride technology is a proprietary fixed bed butane process with solvent. We believe that our process is superior in the areas of feedstock, energy efficiency and solvent recovery. The maleic anhydride-based route to BDO manufacture is currently the preferred process technology and is favored over the other routes, which include PO, butadiene and acetylene as feedstocks. As a result, the growth in demand for BDO has resulted in increased demand for our maleic anhydride technology and catalyst. Generally, changes in price have resulted from a combination of changes in industry capacity utilization and underlying raw material costs.

We license our maleic anhydride technology and supply our catalysts to licensees and to worldwide merchant customers. Revenue from licensing and catalyst comes from new plant commissioning, as well as current plant retrofits and catalyst change schedules. Our licensing group also licenses technology on behalf of other Performance Products businesses and other segments.

Our key maleic anhydride customers include AOC, Reichhold, Tate & Lyle, Afton, CCP Composites, Cranston, Dixie, Gulf Chemical, Lubrizol and MFG Chemical.

**Surfactants (including LAB).** Surfactants or "surface active agents" are substances that combine a water soluble component with a water insoluble component in the same molecule. While surfactants are most commonly used for their detergency in cleaning applications, they are also valued for their emulsification, foaming, dispersing, penetrating and wetting properties in a variety of industries.

We are a leading global manufacturer of nonionic, anionic, cationic and amphoteric surfactants products and are characterized by our breadth of product offering and market coverage. Following the

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

sale of our European surfactants business to Innospec at the end of 2016, we now have certain products toll manufactured in Europe.

Product Group	Applications
Surfactants	Home and personal care, agricultural chemicals, construction, paper de-inking, lubricants
Specialty Alkylates	Precursors for lubricant additives
LAB	Consumer detergents, industrial and institutional detergents

Demand growth for surfactants used in basic detergency applications is relatively stable and exhibits little cyclicalality. However, many product applications for surfactants can demand new formulations with improved performance characteristics, which affords considerable opportunity for innovative surfactants manufacturers like us to provide surfactants and blends with differentiated specifications and properties. We continue to strengthen and diversify our surfactant product offering into formulated specialty surfactant products for use in various industrial applications such as leather and textile treatment, foundry and construction, agrochemicals, fuels and lubricants, personal care and polymers and coatings.

For basic surfactants, pricing tends to have a strong relationship to underlying raw material prices and usually lags raw material price movements. Surfactants used in more specialty applications are generally sold based upon the performance characteristics that they provide to customer-specific end-use application. Our key surfactants customers include L'Oreal, Monsanto, Nufarm, Clorox, Henkel, Colgate, Procter & Gamble and Unilever.

LAB is a surfactant intermediate, which is produced through the reaction of benzene with either normal paraffins or linear alpha olefins. Nearly all the LAB produced globally is converted into LAS, a major anionic surfactant used worldwide for the production of consumer, industrial and institutional laundry detergents. We also manufacture a higher-molecular-weight alkylate, which is used as an additive to lubricants. Our key customers for LAB and specialty alkylates include Colgate, Lubrizol, Procter & Gamble and Unilever.

**Upstream Intermediates.** We consume internally produced and third-party-sourced base petrochemicals in the manufacture of our surfactants, LAB, and ethanolamines products, which are primarily used in detergency, consumer products and industrial applications. We also produce EG, which is primarily used in the production of polyester fibers and PET packaging.

We consume our internally produced EO to produce three types of EG: MEG, DEG and TEG. MEG is consumed primarily in the polyester (fiber and bottle resin) and antifreeze end markets and is also used in a wide variety of industrial applications including synthetic lubricants, plasticizers, solvents and emulsifiers. DEG is consumed internally for the production of Morpholine and DGA® Agent and polyols. TEG is used internally for the production of polyols and is sold into the market for dehydration of natural gas. We continue to optimize our EO and EG operations depending on the fundamental market demand for EG.

Product Group	Applications
EG	Polyester fibers and PET bottle resins, heat transfer and hydraulic fluids, chemical intermediates, natural gas and hydrocarbon treating agents, unsaturated polyester resins, polyester polyols, plasticizers, solvent

Table of Contents

***Sales and Marketing***

We sell over 1,500 products to over 3,000 customers globally through our Performance Products regional sales and marketing organizations, which have extensive market knowledge, considerable chemical industry experience and well established customer relationships.

In more specialty markets (e.g. energy, materials, additives, processing chemicals and agrochemicals), our marketing efforts are focused on how our product offerings perform in certain customer applications. We believe that this approach enhances the value of our product offerings and creates opportunities for ongoing differentiation in our development activities with our customers.

Our intermediate surfactants are sold mainly into the home and personal care market for which we have a dedicated marketing group. We also sell EG directly.

We provide extensive pre- and post-sales technical service support to our customers where our technical service professionals work closely with our research and development functions to tailor our product offerings to meet our customers unique and changing requirements. These technical service professionals interact closely with our marketing managers and business leadership teams to help guide future offerings and market approach strategies. In addition to our focused direct sales efforts, we maintain an extensive global network of distributors and agents that also sell our products. These distributors and agents typically promote our products to smaller end-use customers who cannot be served cost effectively by our direct sales forces.

***Manufacturing and Operations***

Our Performance Products segment has the capacity to produce more than six billion pounds annually of a wide variety of products and formulations at 14 manufacturing locations in North America, EAME, Asia and Australia. These production capacities are as follows:

Product Area	North America	Current capacity		Total
		EAME	APAC(1)	
		(millions of pounds)		
Amines	663	227(2)	107	997
Carbonates	52			52
Surfactants	613		126	739
Maleic anhydride	340	231(3)		571
EG	890		55	945
EO	1,265		100	1,365
Ethanolamines	400			400
LAB	400			400
Ethylene	460			460
Propylene	300			300

(1) Asia-Pacific region including India ("APAC").

(2) Includes up to 30 million pounds of ethyleneamines that are made available from Dow's Terneuzen, The Netherlands facility by way of a long-term supply arrangement and 60 million pounds from AAC, our consolidated 50%-owned joint venture, located in Jubail, Saudi Arabia.

(3) Represents total capacity of a facility owned by Sasol-Huntsman, of which we own a 50% equity interest and Sasol owns the remaining 50% interest. We have consolidated the financial results of this entity since April 2011.

Table of Contents

Our amines facilities are located globally. These facilities have a competitive cost base and use modern manufacturing units that allow for flexibility in production capabilities and technical innovation.

Almost all of our surfactants facilities in the U.S. and Asia have integrated EO supply, which we believe gives us a competitive cost advantage.

Our primary ethylene, propylene, EO, EG and ethanolamines facilities are located in Port Neches, Texas alongside our Polyurethanes PO/MTBE facility. The Port Neches, Texas facility benefits from extensive logistics infrastructure, which allows for efficient sourcing of other raw materials and distribution of finished products.

A number of our facilities are located within large integrated petrochemical manufacturing complexes. We believe this results in greater scale and lower costs for our products than we would be able to obtain if these facilities were stand-alone operations. These include our LAB facility in Chocolate Bayou, Texas; our maleic anhydride facilities in Pensacola, Florida, Geismar, Louisiana and Moers, Germany and our ethyleneamines facility in Freeport, Texas.

***Joint Ventures***

***Ethyleneamines Joint Venture.*** Since July 1, 2010, we have consolidated the results of AAC, our 50%-owned joint venture with the Zamil Group. AAC operates an ethyleneamines manufacturing plant in Jubail, Saudi Arabia. The plant has an approximate annual capacity of 60 million pounds. We purchase and sell all of the production from this joint venture.

***Maleic Anhydride Joint Venture.*** Since the second quarter of 2011, we have consolidated the results of Sasol-Huntsman, our 50%-owned maleic anhydride joint venture. This entity operates a manufacturing facility in Moers, Germany with the capacity to produce 232 million pounds of maleic anhydride. The output from the facility is sold in the European region.

***Raw Materials***

We have the capacity to produce 460 million pounds of ethylene and 300 million pounds of propylene, depending on feedstocks, at our Port Neches, Texas facility. All of the ethylene is used to produce EO and all of the propylene is used to produce PO at our Port Neches, Texas facility (primarily for our Polyurethanes segment). We have the capacity to use approximately 1,000 million pounds of ethylene each year in the production of EO and ethyleneamines. Accordingly, we purchase or toll the remainder of our ethylene requirements from third parties. We consume all of our EO in the manufacture of our EG, surfactants, carbonates and amines products. We also use internally produced PO and DEG in the manufacture of these products.

In addition to internally produced raw materials, the main raw materials used in the production of our amines are EDC, caustic soda, ammonia, hydrogen, methylamines and acrylonitrile. The majority of these raw materials are available from multiple sources in the merchant market at competitive prices.

Maleic anhydride is produced by the reaction of normal butane with oxygen using our proprietary catalyst. The principal raw material is normal butane, which is purchased pursuant to long-term contracts and delivered to our Pensacola, Florida site by barge, to our facility in Geismar, Louisiana via pipeline and to our Moers, Germany site by railcar. Our maleic anhydride catalyst is toll-manufactured by a third party under a long-term contract according to our proprietary methods. These raw materials are available from multiple sources at competitive prices.

In the production of surfactants and LAB, our primary raw materials, in addition to internally produced and third-party sourced EO and ethylene, are synthetic and natural alcohols, paraffin, alpha olefins, benzene and nonylphenol. All of these raw materials are widely available in the merchant market at competitive prices.

Table of Contents

**Competition**

There are a small number of competitors for many of our amines due to the considerable customization of product formulations, the proprietary nature of many of our product applications and manufacturing processes and the relatively high research and development and technical costs involved. Our global competitors include BASF, Air Products, Dow, Tosoh and AkzoNobel. We compete primarily on the basis of product performance, new product innovation and, to a lesser extent, on the basis of price.

In our maleic anhydride market, we compete primarily on the basis of price, customer service, technical support and logistics management. Our competitors include Lanxess, Flint Hills Resources, Bartek, Polynt and Ashland. We are the leading global supplier of maleic anhydride catalyst. Competitors in our maleic anhydride catalyst market include Scientific Design, Ineos, BASF and Polynt. In our maleic anhydride technology licensing market, our primary competitor is Scientific Design. We compete primarily on the basis of technological performance and service.

In surfactants, we compete in a broad range of markets with major global suppliers as well as various smaller or more local competitors. Our major competitors include Clariant, Shell, Stepan, Croda and Sasol. For our more specialty offerings into markets such as agrochemicals, oilfield and personal care, we compete on the basis of the performance of our product in customer applications, service and price. Competition in much of the detergency market is based principally on price and reliability of supply.

There are numerous global producers of EG. Our main competitors include global companies such as Dow/MEGlobal, Sasol, BASF and Petresa, as well as various smaller or more local competitors. We compete primarily on the basis of price.

**Advanced Materials**

**General**

Our Advanced Materials segment is a leading global manufacturer and marketer of technologically advanced epoxy, acrylic and polyurethane-based polymer products. We focus on formulations and systems that are used to address customer-specific needs in a wide variety of industrial and consumer applications. Our products are used either as replacements for traditional materials or in applications where traditional materials do not meet demanding engineering specifications. For example, structural adhesives are used to replace metal rivets and advanced composites are used to replace traditional aluminum panels and other steel materials to lighten structures in aerospace, automotive and other transportation. Our Advanced Materials segment is characterized by the breadth of our product offering, our expertise in complex chemistry, our long-standing relationships with our customers, our ability to develop and adapt our technology and our applications expertise for new markets and new applications.

We operate synthesis, formulating and production facilities in North America, Europe, Asia, and South America. We sell to more than 1,900 customers in the following end markets: aerospace, automotive, liquid natural gas transport, coatings and construction, printed circuit boards, consumer and industrial electronics, consumer and industrial appliances, wind power generation, consumer/do it yourself ("DIY"), electrical power transmission and distribution, recreational sports equipment, medical appliances and food and beverage packaging.

**Products and Markets**

**Aerospace.** Our Advanced Materials segment is a leading global supplier of advanced, high-performance materials for the fabrication and repair of aircraft components. We supply leading aerospace companies with innovations in composites, adhesives, laminating and repair systems.

Table of Contents

We offer a wide range of materials to the aerospace market under the ARALDITE®, EPIBOND®, EPOCAST® and URALANE® brands. Many of these products are qualified under the specification of major aerospace original equipment manufacturers ("OEM") , complying with appropriate regulations governing large civil aircraft."

**Automotive, Wind and Industrial Composites.** We offer the automotive, wind, recreational sports equipment and industrial composite markets high end composite formulations including to leading automotive OEM's and Tier 1 suppliers. Lightweight, strength, flexibility, shorter cycle time and fatigue resistance are key requirements of our industrial partners. Our Advanced Materials segment has been awarded by the JEC Composite Association for product performances as well as applications and process innovation to the composite industry.

Our products are used by leading wind blade manufacturers on a large range of applications from plugs to complete composite turbine blade production, as well as its assembly and repair. Our portfolio includes standard products as well as custom-made solutions formulated to meet specific customer requirements.

**Electrical Engineering and Electronics.** We are a leading global supplier of insulating materials for motors, generators, switchgears, distribution and instrument transformers, and insulators and bushings for utility and industrial applications. The products formulated by our Advanced Materials segment are designed to provide an extended service life and meet specific industry requirements for electrical insulation in indoor and outdoor environments.

In the field of electronics, our Advanced Materials segment has a long history delivering a wide range of solutions meeting stringent requirements for electronics applications, such as high temperature and chemical resistance, flame-retardancy and excellent mechanical and dielectric properties.

**Structural Adhesives.** ARALDITE® is an important brand in high-performance adhesive technologies. We offer formulation expertise in various chemistries, including epoxies, polyurethanes, methacrylates and phenolics.

Our materials address requirements such as long open times for large area applications, fast-curing adhesives for early removal and rapid through-put, resistance to high temperature, water and chemicals, thixotropy for gap-filling or vertical applications, and toughness, impact-resistance and elasticity to cope with different thermal expansions when bonding larger structures.

***Sales and Marketing***

We maintain multiple routes to market to service our diverse and fragmented customer base throughout the world. These routes to market range from using our own direct sales force for targeted, technically-oriented distribution to mass distribution. Our direct sales force focuses on engineering solutions for our major customers who purchase significant amount of product. We use technically-oriented specialist distributors to augment our sales effort in niche markets and applications where we do not believe it is appropriate to develop direct sales resources. We use mass general distribution channels to sell our products into a wide range of general applications where technical expertise is less important, which reduces our overall selling expenses. We believe our use of multiple routes to market enables us to reach a broader customer base at an efficient cost.

We conduct sales activities through dedicated regional sales teams in EAME, Asia and the Americas. Our global customers are covered by key account managers who are familiar with the specific requirements of these customers. The management of long-standing customer relationships is critical to the sales and marketing process.

For our consumer/DIY range, with the exception of the Indian market, we have entered into branding and distribution arrangements. Under these arrangements, our distribution partners fund

Table of Contents

advertising and sales promotions, negotiate and sell to major retail chains, own inventories and provide store deliveries (and sometimes shelf merchandising) in exchange for ARALDITE® branded, ready-to-sell packaged products.

***Manufacturing and Operations***

We are a global business serving customers in three principal geographic regions: EAME, Asia and the Americas. To service our customers efficiently, we maintain manufacturing plants around the world with a strategy of global, regional and local manufacturing employed to optimize the level of service and minimize the cost to our customers. Our facilities in Asia are well-positioned to take advantage of the market growth that is expected in these regions. The following table summarizes the plants that we operate:

Location	Description of Facility
Bad Saeckingen, Germany	Formulating Facility
Bergkamen, Germany	Synthesis Facility
Duxford, U.K.	Formulating Facility
East Lansing, Michigan	Formulating Facility
Los Angeles, California	Formulating Facility
McIntosh, Alabama	Resins and Synthesis Facility
Monthey, Switzerland	Resins and Synthesis Facility
Nanjing, China(1)	Formulating Facility
Pamplona, Spain	Synthesis Facility
Panyu, China(1)(2)	Formulating and Synthesis Facility
Taboão da Serra, Brazil	Formulating Facility

- (1) Leased land and/or building.
- (2) 95%-owned and consolidated manufacturing joint venture with Guangzhou Sheng'an Package Company Limited.

***Raw Materials***

The principal raw materials we purchase for the manufacture of basic and advanced epoxy resins are epichlorohydrin, bisphenol A, MDA, phenol and aminophenols. We also purchase amines, polyols, isocyanates, acrylic materials, hardeners and fillers for the production of our formulated polymer systems and complex chemicals and additives. Raw material costs constitute a sizeable percentage of the costs for certain applications. We have supply contracts with a number of suppliers. The terms of our supply contracts vary, but, in general, these contracts contain provisions that set forth the quantities of product to be supplied and purchased. Formula pricing is sometimes used if advantageous for the business.

Additionally, we produce large volumes of some of our most important raw materials, such as BLR and its basic derivatives, which are the basic building blocks of many of our products. Approximately 63% of the BLR we produce is consumed internally in our downstream products. The balance of our BLR is sold in the merchant market, allowing us to increase the utilization of our production plants and lower our overall BLR production cost. We believe that manufacturing a large proportion of our own BLR gives us a competitive advantage over other epoxy-based polymer systems formulators, who buy BLR from third-party suppliers. This position helps protect us from pricing pressure from BLR suppliers and aids in providing us a stable supply of BLR in difficult market conditions.

We consume certain amines produced by our Performance Products segment and isocyanates produced by our Polyurethanes segment, which we use to formulate Advanced Materials products.



Table of Contents

**Competition**

The markets in which Advanced Materials competes are diverse and require an appropriate human capital and asset footprint to compete effectively. The competitive intensity, capital investment and development of proprietary technology and maintenance of product research and development are all market specific. We operate dedicated technology centers in Basel, Switzerland; The Woodlands, Texas; and Shanghai, China in support of our product and technology development. Among our competitors are some of the world's largest chemical companies with integrated raw material value chains to formulation companies that leverage intellectual and highly proprietary technology for problem solving.

**Aerospace.** Our leading market position is driven by our specialty resins and formulations offerings backed by customer-specific certifications, quality and consistency. These products are value-added, and differentiated, backed by many years of reliable global supply and service. Our major competitors include Mitsui, Sumitomo, Wakayama Seika, 3M and Henkel Loctite.

**Automotive, Wind and Industrial Composites.** These dynamic growth markets for thermoset resins are being driven by light weighting and energy efficiency, and are serviced by our leading positions in systems formulations backed by application and process manufacturing knowledge. Our product offering allows for competitively priced solutions with a robust supply chain to fulfill customers' expectant demand for service and quality. Our major competitors include Olin, Hexion, BASF, Swancor, Wells and Nagase.

**Electrical Engineering and Electronics.** Our competitive position in these diverse markets is primarily based on formulations expertise, product reliability and performance, process expertise and technical support. Our competitive strengths result from our focus on defined market segment needs, our long-standing customer relationships, product reliability and technical performance, and reputation and recognition as a quality supplier. Our major competitors in these markets are Altana, Hexion, Wuxi Bluestar, Shanghai Xiongrun, Dexter-Hysol, Hitachi Chemical, Nagase Chemtex, Toshiba Chemical, Peters, Taiyo Ink, Tamura and Sun Chemicals.

**Coatings & Construction.** Our long standing position in these mature markets is served by our basic epoxy and specialty resins and additives products. Basic liquid and solid epoxy resins are driven by global supply-and-demand and industry consolidation and rationalization continues as a trend as macro-economic factors affect profitability and supply balance. Our additives and specialty resins offerings, including epoxy hardeners, are value-added products that allow our customers to differentiate their own products. Our major competitors include Olin, Hexion, NanYa, Kukdo, Versum, Evonik, Cray Valley, Allnex and BASF.

**Textile Effects**

Our Textile Effects segment is a major global solutions provider in the wet processing of textiles across pretreatment, coloration, printing and finishing and provides a diverse portfolio of textile chemicals, dyes and digital inks. Our textile solutions provide color and enhance the fashion, durability and performance of finished textiles, including functionality such as wrinkle resistance and water and stain repellence. Our Textile Effects segment is characterized by the breadth of our product offering and long-standing relationships with our customers and downstream brands and retailers and OEMs (e.g., the automotive sector).

We market products to customers in multiple end-markets, including consumer fashion apparel, sportswear, career and uniform apparel, military, automotive, home and institutional textiles and furnishings, carpet and other functional textiles. Competition within these markets is generally fragmented with few competitors who can offer complete solutions for each market. We develop and adapt our technology and our applications expertise for new markets and new applications to improve our competitive offering. Increased environmental regulations, particularly in China, and consumer

Table of Contents

awareness about the environmental impact of the apparel industry has resulted in increased demand for sustainably produced textiles. We are at the forefront of developing sustainable textiles with advanced technology such as non-fluorinated durable water repellence, waterless dyeing and eco-friendly digital printing. Our award-winning AVITERA® reactive dyeing technology meets global industry environmental standards and helps textile mills increase yield, improve productivity and reduce processing costs by significantly reducing water and energy consumption. We operate 13 synthesis and formulation production sites in Asia, Europe and the Americas.

Since 2011, our Textile Effects segment has implemented a plan ("the Textile Effects Restructuring Plan") to significantly restructure its business including geographically and commercially repositioning operations, optimizing supply chains and improving operational efficiency. The segment closed large, inefficient operations, transferred most of its production to facilities located closer to its customers, formed strategic partnerships and expanded in Mexico, Thailand and India, which has resulted in improved cash flows in the segment. In connection with the Textile Effects Restructuring Plan, during 2016, we recorded charges of \$20 million for decommissioning and \$8 million for non-cancelable long-term contract termination costs associated with this initiative.

***Products and Markets***

***Textile Chemicals.*** Our product offering in textile chemicals covers process and effect chemicals for the entire wet processing of textiles, such as pretreatment, optical brightener, dyeing and printing processes and finishing effects such as UV-protection, flame-retardancy, wrinkle resistance, water and oil repellency, moisture management and enhanced textile comfort.

We own a portfolio of textile chemical brands such as PHOBOTEX®, which is used in the sportswear sector and for outdoor textiles for products that provide non-fluorinated durable water repellency, UVITEX®, which is used for products that provide lasting white in the apparel sector to T-shirts and formal shirts as well as in the home textile sector for towels and bed sheeting, and PYROVATEX®, which is used for products that provide non-halogenated flame-retardancy to functional textiles like protective workwear and textile insulation material used in the automotive sector.

***Dyes.*** We provide dyes for all major fibers, including cotton, polyester, wool, nylon, silk and acrylic, each of which requires different dye chemistry for optimum results. We develop and offer processes for technological applications of dyes that enable our customers to improve their production yield and reduce their water and energy consumption. We focus on high-quality specialty dyes, which sets us apart from our Asian competitors who are primarily focused on commodity dyes. Because we provide dyes for all major fibers, we are able to differentiate ourselves from industry competitors by providing solutions for a broad range of fiber blended fabrics.

We own a portfolio of dye brands such as AVITERA®, for dyes used in T-shirts, formal shirts and towels for achieving sustainability, NOVACRON®, for dyes used widely across casual wear and home textiles, LANASOL®, for dyes used in wool formal suits, TERASIL®, for dyes used in sportswear, outerwear, home textiles and furnishings, ERIOFAST®, for dyes used in high-end intimate apparel and lingerie, TERATOP®, for dyes used across the automotive industry and NOVASOL®, for dyes used across military, protective wear and other technical textiles.

***Digital Inks.*** We are at the forefront of the emerging trend in digital textile printing, including the time-to-market pressures of rapidly changing fashion trends and environmental concerns. Our range of digital inks solutions cover cotton, polyester, nylon, silk and other types of fiber blends, and are available for all mainstream digital printing technologies from plotters to industrial printers. Our innovative and sustainable digital inks technology is designed to help mills improve process efficiency, print reliability and improve overall environmental performance.

Table of Contents

We own a portfolio of digital inks brands such as LANASET® and TERASIL® used for inks primarily for apparel and sportswear, and LYOSPERSE®, TERASIL® and NOVACRON® used for inks for apparel and home textiles. We have digital ink solutions designed for the fast-growing segments of soft-signage and technical textiles.

**Markets.** Textiles generally involve a complex matrix of fibers, colors, effects and functionality, and the resulting products range from fashion apparel to bulletproof vests, home and institutional textiles to carpet, and upholstery to automotive interiors. Our broad range of dyes, chemicals and digital inks enhance both the aesthetic appearance of these products and the functionality needed to ensure that they perform in their end-use markets. To meet the emerging digital market landscape and increasing demands for sustainable textiles, our Textile Effects segment has a comprehensive range of digital inks to meet this trend and new market opportunity. Since the requirements for these markets vary dramatically, our business strategy focuses on three major end markets apparel, home and institutional furnishings, and functional and technical textiles. We work to provide the right balance of products and service to meet the technical and environmental challenges in each of these markets.

The apparel market focuses on products that provide an aesthetic effect through colors, as well as comfort and performance effects. Our solutions also extend to improving the processing efficiency within the textile mill. We offer a complete range of colors for cotton, polyester, wool and nylon that cover the range of shades needed for casualwear, sportswear, intimate apparel, and formal wear. Our dyes have been developed to ensure that they offer the highest levels of color durability currently available in the market. The Textile Effects segment's AVITERA® dyes meet global industry environmental standards and helps textile mills increase yield, improve productivity and reduce processing costs by reducing water and energy consumption. Pretreatment and dyeing auxiliaries ensure that these fabrics are processed efficiently and effectively cleaning the fabrics with fewer chemicals, less energy and less water and thereby minimizing the environmental footprint and reducing the processing costs. Silicone softeners may be used to enhance the feel of products. Textile Effects has developed advanced non-fluorinated durable water repellent technology that enhances the performance levels of sportswear and outdoor wear offering comfort and durability.

Home and institutional textiles include bed linen, towels, curtains carpets, upholstery, mattress ticking and other textiles that are used within the home or institutions such as hotels. Dyes, chemicals and digital ink technology for these applications enhance color and shape durability, comfort, prevent color fading and enable limitless design possibilities for consumers. Optical brighteners and other pretreatment products provide "bright white" effects for towels and sheeting.

Functional and technical textiles include automotive textiles, carpet, military fabrics protective wear, nonwoven and other technical fabrics. Though the product groups may differ in their end uses, the articles must provide a high-level of functionality, durability and performance in their respective markets. High-lightfast dyes and UV absorbers are used in automotive interiors and outdoor furnishings to provide colors that do not fade when exposed to sunlight and heat. Powerful stain repellent and release technology imparts durable protection for upholstery, military and medical fabrics, without affecting the color, breathability or feel of the fabric. Specialized dyes and prints create unique camouflage patterns for military uniforms, backpacks and tarps that will not fade through wash and wear or during exposure to the elements.

Textile Effects is at the forefront of the emerging trend in digital textile printing including the time-to-market pressures of rapidly changing fashion trends and environmental concerns. The segment's range of digital ink solutions cover cotton, polyester, silk and other types of fiber blends. The innovative and sustainable digital ink technology is designed to help mills improve process efficiency, print reliability and improve overall environmental performance.

Table of Contents

***Sales and Marketing***

During 2016, approximately 75% of our sales were generated with approximately 2,050 direct customers through our global sales and technical services network and the remaining 25% is generated through our distribution partners. Our sales and technical services representatives work directly with our existing customers forming strong relationships and uncovering new opportunities.

In determining the markets on which we focus, we look at growth opportunity and value proposition. Consumption markets are primarily in developed economies such as Europe and North America, while production markets are primarily in Asia like China, India, Taiwan, Vietnam, Indonesia, Turkey and Bangladesh. Our downstream marketing team engages with leading brands and retailers in developed economies while our sales force and manufacturing footprint are primarily in Asia, closer to the manufacturing and sourcing base for textiles. We believe that this set-up also enables us to take advantage of continuous demand growth due to demographic and lifestyle changes in emerging markets.

For our textile effects products, we focus on providing effect competence and process competence to our customers. Effect competence, which we define as delivering value-added effects to our customers' products, enables us to capitalize on new and innovative technologies and to assist our customers in their efforts to differentiate themselves from competitors. Process competence, which we define as applying know-how and expertise to improve customers' processes, allows us to utilize our technical service to reduce cost, enhance efficiency and offer recommendations to improve the ecological and environmental footprint in the wet processing of textiles.

We maintain strong customer relationships through the delivery of high levels of technical service and product innovation. There are 14 technical services laboratories in North America, South America, Europe and Asia that are close to our customers in these markets, which enables us to serve our customers with greater speed and flexibility.

***Manufacturing and Operations***

We are a global business serving customers in three principal geographic regions: EAME, the Americas and Asia. To service our customers efficiently, we maintain manufacturing plants around the world with a strategy of global, regional and local manufacturing employed to optimize the level of

Table of Contents

service and minimize the cost to our customers. The following table summarizes the capabilities of each of the plants that we operate:

Location	Description of Facility				
	Textile Chemicals		Textile Dyes		Inks
	Synthesis	Formulation	Synthesis	Formulation	Formulation
Atotonilquillo, Mexico	ü	ü	ü	ü	
Baroda, India		ü	ü	ü	
Bogota, Colombia		ü			
Charlotte, North Carolina		ü			
Fraijanes, Guatemala		ü			
Gandaria, Jakarta, Indonesia		ü		ü	
Hangzhou, China(1)		ü			
Corlu, Turkey(1)(3)		ü			
Karachi, Pakistan(1)		ü			
Langweid am Leich, Germany	ü	ü			ü
Panyu, China(1)(2)	ü	ü			
Samutsakorn (Mahachai), Thailand			ü	ü	ü
Taboão da Serra, Brazil		ü			ü

- (1) Leased land and/or building.
- (2) 95%-owned and consolidated manufacturing joint venture with Guangzhou Sheng'an Package Company Limited.
- (3) Chemical Formulations operations were transferred to Huntsman Pursan Chemicals, a majority-owned joint venture, in 2016.

***Joint Venture***

In September 2015, the Textile Effects segment established a joint venture agreement with Huntsman Pursan Chemicals, a 60%-owned consolidated joint venture, for the manufacture, formulation and sale of textile chemicals and dyes in Turkey. The joint venture extends the long-term partnership between the two companies to a strategic level of collaboration and strengthens Textile Effects' competitive position in the Turkish textile sector.

***Raw Materials***

The manufacture of textile effects products requires a wide selection of raw materials (approximately 1,000 different chemicals), including amines, ethoxylates, acrylics and sulfones. No one raw material represents greater than 5% of our textile effects raw material expenditures. Raw material costs constitute a sizeable percentage of sales for certain applications. We have tolling arrangements with several Chinese suppliers, but the majority of our raw materials are not purchased under long-term contracts. The terms of our supply contracts vary, but, in general, these contracts contain provisions that set forth the quantities of product to be supplied and purchased.

***Competition***

We are a major global solutions provider for textile chemicals, dyes and digital inks in our chosen markets. Competition within the textile chemicals and dyes markets is generally fragmented with few competitors who can offer complete solutions for the entire textile markets. Our major competitors that compete in both textile chemicals and dyes are Archroma (businesses formerly owned by Clariant and BASF) and Dystar (owned by Kiri-Longsheng). Key competitors within dyes include Longsheng, Runtu, Jihua and Dystar. For textile chemicals, key competitors include Archroma, Transfar/Tannatex and CHT, while key competition in Digital Inks includes Kiian/Jteck/Sawgrass, Sensient/Xennia and DuPont.

Table of Contents

We believe that our competitive strengths include our product offering, which is characterized by its broad and deep technology range, high quality, significant integration between products and service, reliable technical expertise, long-standing relationships with customers, and strong business infrastructure in Asia. We are a leader in environmentally sustainable chemistry with products that help customers enhance efficiency and reduce their environmental footprint. We believe that we have more customer service capability and account management capability than any of our competitors worldwide. In addition, we engage regularly with downstream brands and retailers on industry and sustainability issues.

**Pigments and Additives**

Our Pigments and Additives segment manufactures titanium dioxide, functional additives, color pigments, timber treatment and water treatment products. Our broad product range, coupled with our ability to develop and supply specialized products into technically exacting end-use applications, has positioned us as a leader in the markets we serve. In 2014, we acquired the Performance Additives and Titanium Dioxide businesses ("Rockwood Acquisition") of Rockwood Holdings, Inc. ("Rockwood"), broadening our specialty titanium dioxide product offerings and adding significant scale and capacity to our titanium dioxide facilities. The Rockwood Acquisition positioned us as a leader in the specialty and differentiated titanium dioxide industry segments, which includes products that sell at a premium and have more stable margins. The Rockwood Acquisition also provided us with complementary functional additives, color pigments, timber treatment and water treatment businesses.

Our Pigments and Additives segment has 27 manufacturing facilities operating in 10 countries with a total production capacity of approximately 1.3 million metric tons per year. We operate eight titanium dioxide manufacturing facilities in Europe, North America and Asia and 19 color pigments, functional additives, water treatment and timber treatment manufacturing and processing facilities in Europe, North America, Asia and Australia.

We have substantially transformed our Pigments and Additives segment in recent years and have firmly established ourselves as a market leader in the industries in which we operate. Our Pigments and Additives segment spent \$1.3 billion from January 1, 2014 to December 31, 2016 on acquisitions, restructuring and integration. We have recently identified plans for additional business improvements in our Pigments and Additives segment, which are expected to be completed by the end of 2018 and deliver additional adjusted EBITDA to our business. As a result of these efforts, we believe we are well-positioned to capitalize on market recovery and growth opportunities, and maximize profitability as demand and prices increase.

On October 28, 2016, we filed an initial Form 10 registration statement with the SEC as part of the process to spin off our Pigments and Additives and Textile Effects businesses in a tax-free transaction. On January 17, 2017, we announced that we will retain our Textile Effects business and we amended the Form 10 registration statement. We also announced that the name of the spin-off entity will be Venator. Venator shares are expected to trade on the New York Stock Exchange under the ticker VNTR after the distribution to our stockholders. The completion of the spin-off is subject to the satisfaction or waiver of a number of conditions, including the registration statement on Form 10 for Venator's common stock being declared effective by the SEC and certain other conditions described in the information statement included in the Form 10. The ongoing process to separate the Pigments and Additives business is proceeding and is targeted for the second quarter 2017. As noted in "Recent Developments" above, there was fire damage sustained at our titanium dioxide facility in Pori, Finland. The potential impact of this interruption, if any, on the spin date is not yet known.

Table of Contents

***Products and Markets***

***Titanium Dioxide.*** Titanium dioxide is derived from titanium bearing ores and is a white inert pigment that provides whiteness, opacity and brightness to thousands of everyday items, including coatings, plastics, paper, printing inks, fibers, food and personal care products. We are one of the six major producers of titanium dioxide that collectively account for approximately 60% of global TiO<sub>2</sub> production capacity according to TZ Mineral International Pty Ltd. ("TZMI"), an independent consulting company that reports market data for the chemicals sector. Producers of the remaining 40% are primarily single-plant producers that focus on regional sales. We are among the three largest global titanium dioxide producers, with nameplate production capacity of approximately 782,000 metric tons per year, accounting for approximately 11% of global titanium dioxide production capacity. We are able to manufacture a broad range of titanium dioxide products from functional to specialty. Our specialty products sell at a premium into specialized applications such as fibers, catalysts, food, pharmaceuticals and cosmetics. By operating both sulfate and chloride processes, we also have the ability to use a wide range of titanium feedstocks, which enhances the competitiveness of our manufacturing operations, by providing flexibility in the selection of raw materials. This helps insulate us from price fluctuations for any particular feedstock and allows us to reduce our raw material costs.

Global TiO<sub>2</sub> demand growth rates tend to track GDP growth rates over the medium term; however, this varies by region. Developed markets such as the U.S. and Western Europe exhibit higher consumption per person but lower demand growth rates, while emerging markets such as Asia exhibit much higher demand growth rates. The TiO<sub>2</sub> industry experiences some seasonality in its sales reflecting the high exposure to seasonal coatings end-use markets. Coating sales generally peak during the spring and summer months in the northern hemisphere, resulting in greater sales volumes during the second and third quarters of the year.

We own a portfolio of brands including TIOXIDE®, HOMBITAN®, HOMBITEC®, UVTITAN® and ALTIRIS® used in connection with materials, which are produced in our eight manufacturing facilities around the globe. We service over 2,300 customers in most major industries and geographic regions. Our global manufacturing footprint allows us to service the needs of both local and global customers, including A. Schulman, AkzoNobel, Ampacet, BASF, Clariant, DSM, Flint, PPG, PolyOne, Sherwin-Williams and Sun Chemical.

There are two manufacturing processes for the production of titanium dioxide, the sulfate process and the chloride process. We believe that the chloride process accounts for approximately 45% of global production capacity. Our production capabilities are distinguished from some of our competitors because of our ability to manufacture titanium dioxide using both sulfate and chloride manufacturing processes, which gives us the flexibility to tailor our products to meet our customers' needs. Most end-use applications can use pigments produced by either process, although there are markets that prefer pigment from a specific manufacturing route for example, the inks market prefers sulfate products and the automotive coatings market prefers chloride products. Regional customers typically favor products that are available locally. The sulfate process produces titanium dioxide in both the rutile and anatase forms, the latter being used in certain high-value specialty applications.

Once an intermediate titanium dioxide pigment has been produced using either the chloride or sulfate process, it is "finished" into a product with specific performance characteristics for particular end-use applications. Co-products from both processes require treatment prior to disposal in order to comply with environmental regulations. In order to reduce our disposal costs and to increase our cost competitiveness, we have developed and marketed the co-products of our titanium dioxide manufacturing. We sell approximately 60% of the co-products generated by our business.

We have an established broad customer base and have successfully differentiated ourselves by establishing ourselves as a market leader in a variety of niche market segments where the innovation

Table of Contents

and specialization of our products is rewarded with higher growth prospects and strong customer relationships.

Product Type	Rutile titanium dioxide	Anatase titanium dioxide	Nano titanium dioxide
Characteristics	Most common crystal form of titanium dioxide; harder and more durable	Softer, less abrasive pigment, preferred for some specialty applications	Ultra-fine titanium dioxide and other titanium dioxide specialties
Applications	Coatings, printing inks, PVC window frames and plastic masterbatches	Cosmetics, pharmaceuticals, food, polyester fibers and polyamide fibers	Catalysts and cosmetics

**Functional Additives.** Functional additives are barium and zinc based inorganic chemicals used to make colors more brilliant, coatings shine, plastic more stable and protect products from fading. We believe we are the leading global manufacturer of zinc and barium functional additives. The demand dynamics of functional additives are closely aligned with those of functional titanium dioxide given the overlap in applications served, including coatings, plastics and pharmaceuticals.

Product Type	Barium and Zinc Additives
Characteristics	Specialty pigments and fillers based on barium and zinc based chemistry
Applications	Coatings, films, pharmaceuticals, paper and glass fiber reinforced plastics

**Color Pigments.** We are a leading global producer of colored inorganic pigments for the construction, coating, plastics and specialty markets. We are one of three global leaders in the manufacture and processing of liquid, powder and granulated forms of iron oxide color pigments. We also sell natural and synthetic inorganic pigments and metal carboxylate driers. The cost effectiveness, weather resistance, chemical and thermal stability and coloring strength of iron oxide make it an ideal colorant for construction materials, such as concrete, brick and roof tile, and for coatings and plastics. We produce a wide range of color pigments and are the world's second largest manufacturer of technical grade ultramarine blue pigments, which have a unique blue shade and are widely used to correct colors, giving them a desirable clean, blue undertone. These attributes have resulted in ultramarine blue being used world-wide for polymeric applications such as construction plastics, food packaging, automotive polymers, consumer plastics, coatings and cosmetics.

Our products are sold under a portfolio of brands used in connection with items that are targeted to the construction sector such as DAVIS COLORS , GRANUFIN and FERROXIDE and the following brands HOLLIDAY PIGMENTS , COPPERAS RED® and MAPICO used for products focused predominantly on the coatings and plastics sectors.

Our products are also used by manufacturers of colorants, rubber, paper, cosmetics, pet food, digital ink, toner and other industrial uses delivering benefits in other applications such as corrosion protection and catalysis.



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Our construction customers value our broad product range and benefit from our custom blending, color matching and color dosing systems. Our coatings customers benefit from a consistent and quality product.

Product Type	Iron Oxides	Ultramarines	Specialty Inorganics Chemicals	Driers
Characteristics	Powdered, granulated or in liquid form are synthesized using a range of feedstocks	Range of ultramarine blue and violet and also manganese violet pigments	Complex inorganic pigments and cadmium pigments	Range of metal carboxylates and driers
Applications	Construction, coatings, plastics, cosmetics, inks, catalyst and laminates	Predominantly used in plastics, coatings and cosmetics	Coatings, plastics and inks	Predominantly coatings

Iron oxide pigment's cost effectiveness, weather resistance, chemical and thermal stability and coloring strength make it an ideal colorant for construction materials, such as concrete, brick and roof tile, and for coatings such as paints and plastics. We are one of the three largest synthetic inorganic color pigments producers which together represent more than 50% of the global market for iron oxide pigments. The remaining market share consists primarily of Chinese competitors.

Made from clay, our ultramarine blue pigments are non-toxic, weather resistant and thermally stable. Ultramarine blue is used world-wide for food contact applications. Our synthetic ultramarines are permitted for unrestricted use in certain cosmetics applications. Ultramarine blue is used extensively in plastics and the paint industry. We focus on supplying our customers with technical grade ultramarine blues and violets to high specification markets such as the cosmetics industry.

We are now commissioning a new production facility in Augusta, Georgia for the synthesis of iron oxide pigments, which we purchased from Rockwood. During commissioning, the facility has experienced delays producing products at the expected specifications and quantities, causing us to question the capabilities of the Augusta technology. Based on the facility's performance during the commissioning process, we have concluded that production capacity at our Augusta facility will be substantially lower than originally anticipated. On February 6, 2017, we filed a lawsuit against Rockwood, Albemarle Corporation (as Rockwood's successor) and certain former Rockwood executives to recover damage for fraud and breach of contract involving the Augusta technology.

**Timber Treatment and Water Treatment.** We manufacture wood protection chemicals used primarily in residential and commercial applications to prolong the service life of wood through protection from decay and fungal or insect attack. Wood that has been treated with our products is sold to consumers through major branded retail outlets such as Lowe's.

We manufacture our timber treatment chemicals in the U.S. and market our products primarily in North America through Viance, LLC ("Viance"), our 50%-owned joint venture with Dow Chemical formed in 2007. Our residential construction products such as ACQ, ECOLIFE® and Copper Azole are sold for use in decking, fencing and other residential outdoor wood structures. Our industrial construction products such as Chromated Copper Arsenate (CCA) are sold for use in telephone poles and salt water piers and pilings.

We manufacture our water treatment chemicals in Germany, and these products are used to improve water purity in industrial, commercial and municipal applications. We are one of Europe's largest suppliers of polyaluminium chloride (PAC) based flocculants with approximately 140,000 metric

Table of Contents

tons of production capacity. Our main markets are municipal and industrial waste water treatment and the paper industry.

***Sales and Marketing***

We serve over 9,000 customers through our Pigments and Additives segment. These customers produce paints and coatings, plastics, paper, printing inks, fibers and films, pharmaceuticals, food, cosmetics, materials for the construction industry, catalyst applications and protect wood and treat water with our chemicals. Approximately 85% of our Pigments and Additives sales are made directly to customers through our own global sales and technical services network. This network enables us to work directly with our customers and develop a deep understanding of our customers' needs and to develop valuable relationships. The remaining 15% of sales are made through our distribution network. We maximize the reach our distribution network by utilizing specialty distributors in selected markets.

Larger customers are typically served via our own sales network and these customers often have annual volume targets with associated pricing mechanisms. Smaller customers are served through a combination of our global sales teams and a distribution network, and the route to market decision is often dependent upon customer size and end application.

We sell iron oxides primarily through our global sales force whereas our ultramarine sales are predominantly through specialty distributors. We sell the majority of our timber treatment products directly to end customers via our joint venture Viance.

Our focus is on marketing products and services to higher growth and higher value applications. For example, we believe that our Pigments and Additives segment is well-positioned to benefit from growth sectors, such as fibers and films, catalysts, cosmetics, pharmaceuticals and food, where customers' needs are complex resulting in fewer companies that have the capability to support them. We maximize reach through specialty distributors in selected markets. Our focused sales effort, technical expertise, strong customer service and local manufacturing presence have allowed us to achieve leading market positions in a number of the countries where we manufacture our products.

***Manufacturing and Operations***

As of December 31, 2016, our Pigments and Additives segment has 27 manufacturing facilities operating in 10 countries with a total production capacity of approximately 1.3 million metric tons per year.

Product Area	Annual Capacity (metric tons)			Total
	EAME(1)	North America	APAC(2)	
Titanium dioxide	647,000	75,000	60,000	782,000
Functional additives	100,000			100,000
Color pigments	85,000	55,000	20,000	160,000
Timber treatment		140,000		140,000
Water treatment	140,000			140,000

(1) "EAME" refers to Europe, Africa and the Middle East.

(2) "APAC" refers to the Asia-Pacific region including India.

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Production capacities of our eight titanium dioxide manufacturing facilities are listed below. Approximately 80% of our titanium dioxide capacity is in Western Europe.

Site	Annual Capacity (metric tons)			Process
	EAME(1)	North America	APAC	
Greatham, U.K.	150,000			Chloride
Pori, Finland	130,000			Sulfate
Uerdingen, Germany	107,000			Sulfate
Duisburg, Germany	100,000			Sulfate
Huelva, Spain	80,000			Sulfate
Scarlino, Italy	80,000			Sulfate
Lake Charles, Louisiana(2)		75,000		Chloride
Teluk Kalung, Malaysia			60,000	Sulfate
<b>Total</b>	<b>647,000</b>	<b>75,000</b>	<b>60,000</b>	

- (1) Excludes a Sulfate plant in Umbogintwini, South Africa, which closed in the fourth quarter of 2016, and our titanium dioxide finishing plant in Calais, France.
- (2) This facility is owned and operated by LPC, a manufacturing joint venture that is owned 50% by us and 50% by Kronos. The capacity shown reflects our 50% interest in LPC.

### **Joint Ventures**

**U.S. Titanium Dioxide Joint Venture.** LPC is our 50%-owned unconsolidated joint venture with Kronos. We share production offtake and operating costs of the plant with Kronos, though we market our share of the production independently. The operations of the joint venture are under the direction of a supervisory committee on which each partner has equal representation. Our investment in LPC is accounted for using the equity method.

**U.S. Timber Treatment Joint Venture.** Viance is our 50%-owned joint venture with Dow Chemical. Viance markets our timber treatment products. Our joint venture interest in Viance was acquired as part of the Rockwood Acquisition on October 1, 2014. The joint venture sources all of its products through a contract manufacturing arrangement at our Harrisburg, North Carolina facility, and we bear a disproportionate amount of working capital risk of loss due to the supply arrangement whereby we control manufacturing on Viance's behalf. As a result, we concluded that we are the primary beneficiary and began consolidating Viance upon the Rockwood Acquisition on October 1, 2014.

### **Raw Materials**

The primary raw materials used in our Pigments and Additives segment are as follows:

	Titanium Dioxide	Functional Additives	Color Pigments	Timber Treatment	Water Chemicals
Primary raw materials	Titanium bearing ore, sulfuric acid, chlorine	Barium and zinc based inorganics	Iron oxide particles, scrap iron, copperas alkali	DCOIT, copper, monoethanolamine	Aluminum oxide

The primary raw materials that are used to produce titanium dioxide are various types of titanium feedstock, which include ilmenite, rutile, titanium slag (chloride slag and sulfate slag) and synthetic rutile. According to TZMI, the world market for titanium-bearing ores has a diverse range of suppliers with the four largest accounting for approximately 40% of global supply. The majority of our titanium-bearing ores are sourced from India, Africa, Canada and Norway. Ore accounts for approximately 45%



## Table of Contents

of titanium dioxide variable manufacturing costs, while utilities (electricity, gas and steam), sulfuric acid and chlorine collectively account for approximately 30% of variable manufacturing costs.

The majority of the titanium-bearing ores market is transacted on short-term contracts, or longer-term volume contracts with market-based pricing re-negotiated several times per year. This form of market-based ore contract provides flexibility and responsiveness in terms of pricing and quantity obligations.

The primary raw materials for functional additives production are barite and zinc. We currently source material barite from China, where we have long standing supplier relationships and pricing is negotiated largely on a purchase by purchase basis. The quality of zinc required for our business is mainly mined in Australia but can also be sourced from Canada and South America. The majority of our zinc is sourced from two key suppliers with whom we have long standing relationships.

We source our raw material for the majority of our color pigments business from China, the U.S., France and Italy. Key raw materials are iron powder and metal scrap that are sourced from various mid-size and smaller producers primarily on a spot contract basis.

The primary raw materials for our timber treatment business are dichloro-octylisothiazolinone ("DCOIT") and copper. We source the raw materials for the majority of our timber treatment business from China and the U.S. DCOIT is sourced on a long term contract whereas copper is procured from various mid-size and larger producers primarily on a spot contract basis.

The primary raw materials for our water treatment business are aluminum hydroxide, hydrochloric acid and nitric acid, which are widely available from a number of sources and typically sourced through long term contracts. We also use sulfuric acid which we source internally.

## ***Competition***

The global markets in which our Pigments and Additives segment operates are highly competitive and vary according to product.

Competition within the standard grade titanium dioxide market is based on price, product quality and service. Our key competitors are Chemours, Tronox, Kronos and Cristal, each of which is a major global producer with the ability to service all global markets and Billions, a Chinese titanium dioxide producer. If any of our current or future competitors develops proprietary technology that enables them to produce products at a significantly lower cost, our technology could be rendered uneconomical or obsolete. Moreover, the sulfate based titanium dioxide technology used by our Pigments and Additives segment is widely available. Accordingly, barriers to entry, apart from capital availability, may be low and the entrance of new competitors into the industry may reduce our ability to capture improving margins in circumstances where capacity utilization in the industry is increasing.

Competition within the specialty titanium dioxide market and the color pigments market is based on customer service, technical expertise in the customers' applications, product attributes (such as product form and quality) and price. Product quality is particularly critical in the technically demanding applications in which we focus as inconsistent product quality adversely impacts consistency in the end-product. Our primary competitors within specialty titanium dioxide include Fuji Titanium Industry, Kronos and Precheza. Our primary competitors within color pigments include Lanxess AG, Cathay Pigments Group, Ferro Corporation and Shanghai Yipin Pigments Co., Ltd.

Competition within the functional additives market is primarily based on application know-how, brand recognition, product quality and price. Key competitors for barium-based additives include Solvay S.A., Sakai Chemical Industry Co., Ltd., 20 Microns Ltd. and Chinese barium producers. Key competitors for zinc-based additives include Chinese lithopone producers.

Table of Contents

Competition within the timber treatment market is based on price, customer support services, innovative technology and product range. Our primary competitors are Lonza Group and Koppers. Competition within the water treatment market is based on proximity to customers and price. Our primary competitors are Kemira and Feralco.

**RESEARCH AND DEVELOPMENT**

For the years ended December 31, 2016, 2015 and 2014, we spent \$152 million, \$160 million and \$158 million, respectively, on research and development.

We support our business with a major commitment to research and development, technical services and process engineering improvement. Our research and development centers are located in The Woodlands, Texas; Everberg, Belgium; and Shanghai, China. Other regional development/technical service centers are located in Wynyard, England and Duisburg, Germany (pigments and additives); Auburn Hills, Michigan (polyurethanes for the automotive industry); Derry, New Hampshire, Shanghai, China, Deggendorf, Germany and Ternate, Italy (polyurethanes); Melbourne, Australia (surfactants); Port Neches, Texas (process engineering support); Basel, Switzerland and Panyu, China (advanced materials and textile effects); and Mumbai, India (textile effects).

**INTELLECTUAL PROPERTY RIGHTS**

Proprietary protection of our processes, apparatuses, and other technology and inventions is important to our businesses. We own approximately 3,015 unexpired global patents and have approximately 1,370 patent applications (including provisionals) currently pending. While a presumption of validity exists with respect to issued U.S. patents, we cannot assure that any of our patents will not be challenged, invalidated, circumvented or rendered unenforceable. Furthermore, we cannot assure the issuance of any pending patent application, or that if patents do issue, that these patents will provide meaningful protection against competitors or against competitive technologies. Additionally, our competitors or other third parties may obtain patents that restrict or preclude our ability to lawfully produce or sell our products in a competitive manner.

We also rely upon unpatented proprietary know-how and continuing technological innovation and other trade secrets to develop and maintain our competitive position. There can be no assurance, however, that confidentiality and other agreements into which we enter and have entered will not be breached, that they will provide meaningful protection for our trade secrets or proprietary know-how, or that adequate remedies will be available in the event of an unauthorized use or disclosure of such trade secrets and know-how. In addition, there can be no assurance that others will not obtain knowledge of these trade secrets through independent development or other access by legal means.

In addition to our own patents and patent applications and proprietary trade secrets and know-how, we are a party to certain licensing arrangements and other agreements authorizing us to use trade secrets, know-how and related technology and/or operate within the scope of certain patents owned by other entities. We also have licensed or sub-licensed intellectual property rights to third parties.

We have associated brand names with a number of our products, and we have approximately 4,080 global trademark registrations and 235 pending registrations. Some of these registrations and applications include filings under the Madrid system for the international registration of marks and may confer rights in multiple countries. However, there can be no assurance that the trademark registrations will provide meaningful protection against the use of similar trademarks by competitors, or that the value of our trademarks will not be diluted.

Because of the breadth and nature of our intellectual property rights and our business, we do not believe that any single intellectual property right (other than certain trademarks for which we intend to

Table of Contents

maintain the applicable registrations) is material to our business. Moreover, we do not believe that the termination of intellectual property rights expected to occur over the next several years, either individually or in the aggregate, will materially adversely affect our business, financial condition or results of operations.

**EMPLOYEES**

As of December 31, 2016, we employed approximately 15,000 associates in our operations around the world. Approximately 3,000 of these employees are located in the U.S., while approximately 12,000 are located in other countries. We believe our relations with our employees are good.

**GEOGRAPHIC DATA**

For sales revenue and long-lived assets by geographic areas, see "Note 26. Operating Segment Information" to our consolidated financial statements.

**ENVIRONMENTAL, HEALTH AND SAFETY MATTERS**

**General**

We are subject to extensive federal, state, local and international laws, regulations, rules and ordinances relating to safety, pollution, protection of the environment, product management and distribution, and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials. In the ordinary course of business, we are subject to frequent environmental inspections and monitoring and occasional investigations by governmental enforcement authorities. In addition, our production facilities require operating permits that are subject to renewal, modification and, in certain circumstances, revocation. Actual or alleged violations of safety laws, environmental laws or permit requirements could result in restrictions or prohibitions on plant operations or product distribution, substantial civil or criminal sanctions, as well as, under some environmental laws, the assessment of strict liability and/or joint and several liability. Moreover, changes in environmental regulations could inhibit or interrupt our operations, or require us to modify our facilities or operations. Accordingly, environmental or regulatory matters may cause us to incur significant unanticipated losses, costs or liabilities. Information related to environmental, health and safety ("EHS") matters may also be found in other areas of this report including "Item 1A. Risk Factors," "Note 2. Summary of Significant Accounting Policies Environmental Expenditures" to our consolidated financial statements and "Note 21. Environmental Health and Safety Matters" to our consolidated financial statements.

**Environmental, Health and Safety Systems**

We are committed to achieving and maintaining compliance with all applicable EHS legal requirements, and we have developed policies and management systems that are intended to identify the multitude of EHS legal requirements applicable to our operations, enhance compliance with applicable legal requirements, improve the safety of our employees, contractors, community neighbors and customers and minimize the production and emission of wastes and other pollutants. Although EHS legal requirements are constantly changing and are frequently difficult to comply with, these EHS management systems are designed to assist us in our compliance goals while also fostering efficiency and improvement and reducing overall risk to us.

**Environmental Remediation**

We have incurred, and we may in the future incur, liability to investigate and clean up waste or contamination at our current or former facilities or facilities operated by third parties at which we may have disposed of waste or other materials. Similarly, we may incur costs for the cleanup of waste that

Table of Contents

was disposed of prior to the purchase of our businesses. Under some circumstances, the scope of our liability may extend to damages to natural resources.

In cases where our potential liability arises from historical contamination based on operations and other events occurring prior to our ownership of a business or specific facility, we frequently obtain an indemnity agreement from the prior owner addressing remediation liabilities arising from pre-closing conditions. We have successfully exercised our rights under these contractual covenants for a number of sites and, where applicable, mitigated our ultimate remediation liability. We cannot assure you, however, that the liabilities for all such matters subject to indemnity will be honored by the prior owner or that our existing indemnities will be sufficient to cover our liabilities for such matters.

Based on available information and the indemnification rights we believe are likely to be available, we believe that the costs to investigate and remediate known contamination will not have a material effect on our financial statements. However, if such indemnities are not honored or do not fully cover the costs of investigation and remediation or we are required to contribute to such costs, then such expenditures may have a material effect on our financial statements. At the current time, we are unable to estimate the total cost, exclusive of indemnification benefits, to remediate contamination sites.

**Regulatory Matters**

***Greenhouse Gas Regulation and Climate Change***

Globally, our operations are increasingly subject to regulations that seek to reduce emissions of greenhouse gases ("GHGs"), such as carbon dioxide and methane, which may be contributing to changes in the earth's climate. At the Durban negotiations of the Conference of the Parties to the Kyoto Protocol in 2012, a limited group of nations, including the European Union (the "EU"), agreed to a second commitment period for the Kyoto Protocol, an international treaty that provides for reductions in GHG emissions. More significantly, the EU GHG Emissions Trading System ("ETS"), established pursuant to the Kyoto Protocol to reduce GHG emissions in the EU, continues in its third phase. The EU parliament has used a process to formalize "backloading" the withholding of GHG allowances during the trading period from 2014 to 2016 with additional allowances auctioned during 2019 to 2020 to prop up carbon prices. As backloading is only a temporary measure, a sustainable solution to the imbalance between supply and demand requires structural changes to the ETS. The European Commission proposes to establish a market stability reserve to address the current surplus of allowances and improve the system's resilience. The reserve will start operating in 2019. In addition, the EU has announced the binding target to reduce domestic GHG emissions by at least 40% below the 1990 level by 2030. The European Commission proposed an objective of increasing the share of renewable energy to at least 27% of the EU's energy consumption by 2030. The European Council endorsed this target, which is binding at the EU level. The European Commission also proposed a 30% energy savings target for 2030. The European Council, however, endorsed an indicative target of 27% to be reviewed in 2020 having in mind a 30% target.

In addition, at the 2015 United Nations Framework Convention on Climate Change in Paris, the U.S. and nearly 200 other nations entered into an international climate agreement, which entered into effect in November 2016. Although the agreement does not create any binding obligations for nations to limit their GHG emissions, it does include pledges to voluntarily limit or reduce future emissions. The U.S. is one of over 100 nations that have indicated an intent to comply with the agreement.

Federal climate change legislation in the U.S. appears unlikely in the near-term. As a result, domestic efforts to curb GHG emissions will continue to be led by the U.S. Environmental Protection Agency's (the "EPA") GHG regulations and the efforts of states. To the extent that our domestic operations are subject to the EPA's GHG regulations, we may face increased capital and operating costs associated with new or expanded facilities. Significant expansions of our existing facilities or construction of new facilities may be subject to the Clean Air Act's (the "CAA") requirements for



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

pollutants regulated under the Prevention of Significant Deterioration and Title V programs. Some of our facilities are also subject to the EPA's Mandatory Reporting of Greenhouse Gases rule, and any further regulation may increase our operational costs. In addition, under a consent decree with states and environmental groups, the EPA is due to propose new source performance standards for GHG emissions from refineries. These standards could significantly increase the costs of constructing or adding capacity to refineries and may ultimately increase the costs or decrease the supply of refined products. Either of these events could have an adverse effect on our business.

We are already managing and reporting GHG emissions, to varying degrees, as required by law for our sites in locations subject to U.S. federal and state requirements, Kyoto Protocol obligations and/or ETS requirements. Although these sites are subject to existing GHG legislation, few have experienced or anticipate significant cost increases as a result of these programs, although it is possible that GHG emission restrictions may increase over time. Potential consequences of such restrictions include capital requirements to modify assets to meet GHG emission restrictions and/or increases in energy costs above the level of general inflation, as well as direct compliance costs. Currently, however, it is not possible to estimate the likely financial impact of potential future regulation on any of our sites.

Finally, it should be noted that some scientists have concluded that increasing concentrations of GHGs in the earth's atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, droughts, and floods and other climatic events. If any of those effects were to occur, they could have an adverse effect on our assets and operations

### **AVAILABLE INFORMATION**

We maintain an internet website at <http://www.huntsman.com>. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports are available free of charge through our website as soon as reasonably practicable after we file this material with the SEC. We also provide electronic or paper copies of our SEC filings free of charge upon request.

Table of Contents

**GLOSSARY OF CHEMICAL TERMS**

BDO butane diol  
 BLR base liquid resin  
 DEG di-ethylene glycol  
 DGA® Agent DIGLYCOLAMINE® agent  
 DPA diphenylamine  
 EA ethyleneamines  
 EDC ethylene dichloride  
 EG ethylene glycol  
 EO ethylene oxide  
 EOA ethanolamines  
 LAB linear alkyl benzene  
 LAS linear alkylbenzene sulfonate  
 LER liquid epoxy resins  
 LNG liquefied natural gas  
 MDA methylene dioxy amphetamine  
 MDI methyl diphenyl diisocyanate  
 MEG mono-ethylene glycol  
 MNB mononitrobenzene  
 MTBE methyl tertiary-butyl ether  
 PBT polybutylene terephthalate  
 PEA polyetheramines  
 PET polyethylene terephthalate  
 PG propylene glycol  
 PO propylene oxide  
 Polyols a substance containing several hydroxyl groups. A diol, triol and tetrol contain two, three and four hydroxyl groups, respectively.  
 TBA tertiary butyl alcohol  
 TBHP tert-butyl hydroperoxide  
 TDI toluene diisocyanate  
 TEG tri-ethylene glycol  
 TiO<sub>2</sub> titanium dioxide pigment  
 TPU thermoplastic polyurethane  
 UPR unsaturated polyester resin

**ITEM 1A. RISK FACTORS**

*Any of the following risks could materially and adversely affect our business, results of operations, financial condition and liquidity.*

***RISKS RELATED TO THE PROPOSED SPIN-OFF***

*The proposed spin-off of our Pigments and Additives businesses is contingent upon the satisfaction of a number of conditions, may require significant time and attention of our management and may have an adverse effect on us if not completed.*

On October 28, 2016, we announced plans to spin off our Pigments and Additives business into a separate, publicly traded company, Venator. Completion of the proposed spin-off is subject to various conditions and may be affected by unanticipated developments or changes in market conditions that could delay, prevent, or otherwise adversely affect the spin-off. Completion of the spin-off will be contingent upon several factors, including, but not limited to, authorization and approval of our Board of Directors, receipt of a private letter ruling from the IRS, receipt of a tax opinion regarding the

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

tax-free status of the spin-off, completion of new financing arrangements, execution of ancillary agreements, and the effectiveness of a registration statement with the SEC. There can be no assurance that the spin-off will be completed as expected, if at all.

In pursuing the proposed spin-off, our ongoing businesses may be adversely affected, and we may be subject to certain risks and consequences, including, but not limited to, the following:

execution of the proposed spin-off will require significant time and attention from management, which may postpone the execution of other initiatives that may have been beneficial to us;

completion of the spin-off will require strategic, structural and process realignment and restructuring actions within our operations, which could lead to a disruption of our operations and loss of, or inability to recruit key personnel needed to operate and grow our businesses and to complete the proposed spin-off;

completion of the spin-off may require certain management and procedural redundancies as we prepare for the spin-off, which may result in operating inefficiencies; and

we will be required to pay certain costs and expenses relating to the spin-off, such as legal, accounting, and other professional fees, whether or not it is completed.

We may also experience negative reactions from the financial markets if we fail to complete the spin-off. Any of these factors could have a material adverse effect on our financial condition, results of operations, cash flows, and the price of our common stock.

***We may be unable to achieve some or all of the anticipated benefits from the proposed spin-off.***

We may not achieve some or all of the financial, operational, managerial, and other anticipated benefits from the proposed spin-off, or the spin-off may not provide such benefits on the scale we anticipate for a variety of reasons. In addition, we will incur one-time costs in connection with the spin-off that may negate some of the benefits we expect to achieve.

***If the proposed spin-off of our Pigments and Additives business is completed, the trading price of our common stock will likely decline.***

We expect the trading price of our common stock immediately following the proposed spin-off to be lower than immediately preceding the spin-off, as the trading price of our common stock will no longer reflect the value of our Pigments and Additives business. In addition, we can not assure you that that the combined value of the common stock of the two publicly-traded companies following the completion of the spin-off, as adjusted for any changes in the combined capitalization of these companies, will be equal to or greater than what the value of our common stock would have been had the proposed spin-off not occurred. Until the market has fully evaluated the business of our Company without its Pigments and Additives segment, the price at which our common stock trades may fluctuate significantly. Similarly, until the market has fully evaluated Venator, the price at which Venator's common stock trades may fluctuate significantly.

***The proposed spin-off could result in substantial tax liability.***

The proposed spin-off is intended to qualify for tax-free treatment under Section 355, 361 and/or 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended (the "Code"). We are seeking, and completion of the spin-off is conditioned upon the receipt of, a private letter ruling from the U.S. Internal Revenue Service ("IRS") to the effect that our retention of Venator Class A common stock will not be in pursuance of a plan having as one of its principal purposes the avoidance of federal income tax, that certain post-spin-off exchanges of such Venator stock for our Company's indebtedness will be treated as tax-free under Section 355 and 361 of the Code and that certain payments or

Table of Contents

transfers of assets and liabilities that may occur following the spin-off will be treated as part of the spin-off transaction (the "IRS Ruling"). If the IRS Ruling is received, our tax counsel is expected to issue an opinion that our pro rata distribution of all outstanding Venator Class B common stock to our stockholders qualifies as a tax-free transaction under Sections 355, 361 and/or 368(a)(1)(D) of the Code and that certain elements of the restructuring transactions undertaken as part of the spin-off will also qualify for tax-free treatment under Sections 355, 361 and/or 368(a)(1)(D) of the Code (the "Tax Opinion").

The tax-free treatment of the spin-off will be contingent on the continued validity of the IRS Ruling and the Tax Opinion, both of which will be based on certain facts, representations and undertakings. If any of such facts, representations or undertakings are not correct, are incomplete, or are violated, the IRS Ruling could be revoked or modified by the IRS and our Company's ability to rely on the Tax Opinion could be jeopardized. If the spin-off distribution, and/or related internal transactions, were determined to be taxable, Huntsman or Venator could incur significant U.S. federal income tax liabilities. In addition, if the spin-off were deemed to be taxable, each holder of Huntsman common stock who received shares of Venator would generally be treated as receiving a taxable distribution of property in an amount equal to the fair market value of the shares of Venator received.

Even if the distribution otherwise qualifies for tax-free treatment, the distribution may result in a corporate-level taxable gain to our Company if 50 percent or more, by vote or value, of Huntsman or Venator common stock, is treated as acquired or issued as part of a plan or series of related transactions that includes the distribution. In that event, while our Company would recognize a taxable gain as described above, the distribution would be tax-free to our common stockholders.

**RISKS RELATED TO OUR BUSINESS**

*Our industry is affected by global economic factors including risks associated with volatile economic conditions.*

Our financial results are substantially dependent on overall economic conditions in the U.S., Europe and Asia. Declining economic conditions in all or any of these locations or negative perceptions about economic conditions could result in a substantial decrease in demand for our products and could adversely affect our business. The timing and extent of any changes to currently prevailing market conditions is uncertain, and supply and demand may be unbalanced at any time. For example, our operations in Asia have been impacted by slower growth in China, which continues to adversely affect demand for some of our products. Uncertain economic conditions and market instability make it particularly difficult for us to forecast demand trends. As a consequence, we may not be able to accurately predict future economic conditions or the effect of such conditions on our financial condition or results of operations. We can give no assurances as to the timing, extent or duration of the current or future economic cycles impacting the industries in which we operate.

*The markets for many of our products are cyclical and volatile, and we may experience depressed market conditions for such products.*

The cyclical nature of the markets for many of our products occurs as a result of alternating periods of tight supply, causing prices and margins to increase, followed by periods of lower capacity utilization, resulting in oversupply and declining prices and margins. The volatility these markets experience occurs as a result of changes in the demand for products as a consequence of global economic activity, changes in energy prices and changes in customers' requirements. For example, demand for our products depends in part on the housing and construction industries, which are cyclical in nature and have historically been impacted by downturns in the economy. In addition, margins for MTBE sales are volatile and seasonal. The supply-demand balance is also impacted by capacity additions or reductions that result in changes in utilization rates. The cyclical nature and volatility

Table of Contents

of our industry results in significant fluctuations in profits and cash flow from period to period and over the business cycle.

Primarily as a result of oversupply in the market, global prices for titanium dioxide declined throughout 2015 before reaching a trough in the first quarter of 2016. Although this market has experienced recent success in implementing price increases and increasing margins, there can be no assurances that the market will recover fully to historically normalized levels. Furthermore, the market could deteriorate to conditions worse than the trough experienced in the first quarter of 2016. If selling prices and margins do not recover fully to historically normalized levels or worsen, our results of operations and/or financial condition could be negatively impacted.

***Disruptions in production at our manufacturing facilities may have a material adverse impact on our business, results of operations and/or financial condition.***

Manufacturing facilities in our industry are subject to planned and unplanned production shutdowns, turnarounds, outages and other disruptions. Any serious disruption at any of our facilities could impair our ability to use our facilities and have a material adverse impact on our revenues and increase our costs and expenses. Alternative facilities with sufficient capacity may not be available, may cost substantially more or may take a significant time to increase production or qualify with our customers, any of which could negatively impact our business, results of operations and/or financial condition. Long-term production disruptions may cause our customers to seek alternative supply which could further adversely affect our profitability.

Unplanned production disruptions may occur for external reasons including natural disasters, weather, disease, strikes, transportation interruption, government regulation, political unrest or terrorism, or internal reasons, such as fire, unplanned maintenance or other manufacturing problems. Any such production disruption could have a material impact on our operations, operating results and financial condition.

In addition, we rely on a number of vendors, suppliers, and in some cases sole-source suppliers, service providers, toll manufacturers and collaborations with other industry participants to provide us with chemicals, feedstocks and other raw materials, along with energy sources and, in certain cases, facilities that we need to operate our business. If the business of these third parties is disrupted, some of these companies could be forced to reduce their output, shut down their operations or file for bankruptcy protection. If this were to occur, it could adversely affect their ability to provide us with the raw materials, energy sources or facilities that we need, which could materially disrupt our operations, including the production of certain of our products. Moreover, it could be difficult to find replacements for certain of our business partners without incurring significant delays or cost increases. All of these risks could have a material adverse effect on our business, results of operations, financial condition and liquidity.

While we maintain business recovery plans that are intended to allow us to recover from natural disasters or other events that could disrupt our business, we cannot provide assurances that our plans would fully protect us from the effects of all such disasters or from events that might increase in frequency or intensity due to climate change. In addition, insurance may not adequately compensate us for any losses incurred as a result of natural or other disasters. In areas prone to frequent natural or other disasters, insurance may become increasingly expensive or not available at all. Furthermore, some potential climate-driven losses, particularly inundation due to sea-level rise, may pose long-term risks to our physical facilities such that operations cannot be restored in their current locations.

Table of Contents

***Our results of operations may be adversely affected by international business risks, including fluctuations in currency exchange rates, legal restrictions and taxes.***

We conduct a majority of our business operations outside the U.S., and these operations are subject to risks normally associated with international operations. These risks include the need to convert currencies that may be received for our products into currencies in which we purchase raw materials or pay for services, which could result in a gain or loss depending on fluctuations in exchange rates. We transact business in many foreign currencies, including euros, Swiss francs, Chinese renminbi, Indian rupees, Brazilian reals and Thai bahts. We translate our local currency financial results into U.S. dollars based on average exchange rates prevailing during the reporting period or the exchange rate at the end of that period. During times of a strengthening U.S. dollar, our reported international sales and earnings may be reduced because the local currency may translate into fewer U.S. dollars. Because we currently have significant operations located outside the U.S., we are exposed to fluctuations in global currency rates which may result in gains or losses on our financial statements.

Other risks of international operations include trade barriers, tariffs, exchange controls, cash repatriation restrictions, national and regional labor strikes, social and political risks, general economic risks and required compliance with a variety of U.S. and foreign laws, including monetary policies, tax laws, the Foreign Corrupt Practices Act (and foreign equivalents), export controls and regulations administered by the Office of Foreign Assets Control. Any changes in tariffs or trade barriers could make our products less competitive compared to other producers not subject to the same tariffs or trade barriers. Any decision to repatriate cash as dividends could subject us to foreign and U.S. federal and state income taxes without any offsetting foreign tax credit relief. Although we maintain an anti-corruption compliance program throughout our Company, violations of our compliance program may result in criminal or civil sanctions, including material monetary fines, penalties and other costs against us or our employees, and may have a material adverse effect on our business. Furthermore, in foreign jurisdictions where legal processes may vary from country to country, we may experience difficulty in enforcing agreements. In jurisdictions where bankruptcy laws and practices vary, we may experience difficulty collecting foreign receivables through foreign legal systems. The occurrence of these risks, among others, could disrupt the businesses of our international subsidiaries, which could significantly affect their ability to make distributions to us.

We operate in a significant number of jurisdictions, which contributes to the volatility of our effective tax rate. Changes in tax laws or the interpretation of tax laws in the jurisdictions in which we operate may affect our effective tax rate. In addition, generally accepted accounting principles in the U.S. ("GAAP" or "U.S. GAAP") have required us to place valuation allowances against our net operating losses and other deferred tax assets in a significant number of tax jurisdictions. These valuation allowances result from analysis of positive and negative evidence supporting the realization of tax benefits. Negative evidence includes a cumulative history of pre-tax operating losses in specific tax jurisdictions. Changes in valuation allowances have resulted in material fluctuations in our effective tax rate. Economic conditions may dictate the continued imposition of current valuation allowances and, potentially, the establishment of new valuation allowances. While significant valuation allowances remain, our effective tax rate will likely continue to experience significant fluctuations. Furthermore, certain foreign jurisdictions may take actions to delay our ability to collect value-added tax refunds.

***Our efforts to grow and transform our businesses may require significant investments; if our strategies are unsuccessful, our business, results of operations and/or financial condition may be materially adversely affected.***

We continuously evaluate opportunities for growth and change. These initiatives may involve making acquisitions, entering into partnerships and joint ventures, divesting assets, restructuring our existing operations and assets, creating new financial structures and building new facilities any of which could require a significant investment and subject us to new kinds of risks. We have incurred

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

indebtedness to finance these opportunities, and we may incur additional indebtedness to finance future initiatives. We could also issue additional shares of stock of our Company or our subsidiaries to finance such initiatives. If our strategies for growth and change are not successful, we could face increased financial pressure, such as increased cash flow demands, reduced liquidity and diminished access to financial markets, and the equity value of our businesses could be diluted.

The implementation of strategies for growth and change may create additional risks, including:

diversion of management time and attention away from existing operations;

requiring capital investment that could otherwise be used for the operation and growth of our existing businesses;

disruptions to important business relationships;

increased operating costs;

limitations imposed by various governmental entities;

use of limited investment and other baskets under our debt covenants; and

difficulties due to lack of or limited prior experience in any new markets we may enter.

Our inability to mitigate these risks or other problems encountered in connection with our strategies for growth and change could have a material adverse effect on our business, results of operations and financial condition. In addition, we may fail to fully achieve the savings or growth projected for current or future initiatives notwithstanding the expenditure of substantial resources in pursuit thereof. See "Risks Related to the Proposed Spin-Off" above for specific risks related to the proposed spin-off of our Pigments and Additives business.

***We may have difficulties integrating acquired businesses and as a result, our business, results of operations and/or financial condition may be materially adversely affected.***

We have completed a number of acquisitions and we will continue to acquire additional businesses and enter into joint ventures as part of our business strategy. Growth through acquisitions and joint ventures involves risks, including:

inability to efficiently operate new businesses or to integrate acquired businesses and products;

inability to accurately predict delays in realizing the costs and benefits of acquisitions, partnerships, or joint ventures;

unexpected losses of customers or suppliers of an acquired or existing business;

difficulties in retaining key employees of acquired businesses;

difficulties in realizing projected synergies; and

## Edgar Filing: Huntsman CORP - Form 10-K

exposure to unanticipated liabilities, including unexpected environmental exposures, product liability or illegal activities conducted by an acquired company or a joint venture partner.

Our inability to address these risks could cause us to fail to realize the anticipated benefits of such acquisitions or joint ventures and could have a material adverse effect on our business, results of operations and financial condition.

***Significant price volatility or interruptions in supply of our raw materials may result in increased costs that we may be unable to pass on to our customers, which could reduce our profitability.***

We purchase a substantial portion of our raw materials from third-party suppliers and the cost of these raw materials represents a substantial portion of our operating expenses. The prices for a number



Table of Contents

of these raw materials generally follow price trends of, and vary with market conditions for, crude oil and natural gas feedstocks, which are highly volatile and cyclical. For example, the market for crude oil and natural gas feedstocks experienced depressed pricing throughout 2015 and 2016, leading to favorable prices for the raw materials that we purchase from third parties. Lower raw material prices, however, can lead to downward pressure on selling prices for certain of our products leading to reduced revenue. Any rebound in the pricing for such feedstocks could adversely affect our operating expenses. Our supply agreements typically provide for market-based pricing and provide us only limited protection against price volatility. While we attempt to match cost increases with corresponding product price increases, we are not always able to raise product prices immediately or at all. Timing differences between raw material prices, which may change daily, and contract product prices, which in many cases are negotiated only monthly or less often, have had and may continue to have a negative effect on our cash flow. Any cost increase that we are not able to pass on to our customers could have a material adverse effect on our business, results of operations, financial condition and liquidity.

In general, the feedstocks and other raw materials we consume are organic chemical commodity products that are readily available at market prices. There are, however, several raw materials for which there are only a limited number of suppliers or a single supplier. For example, titanium-containing feedstocks suitable for use in our titanium dioxide facilities are available from a limited number of suppliers around the world. To mitigate potential supply constraints, we frequently enter into supply agreements with particular suppliers, evaluate alternative sources of supply and evaluate alternative technologies to avoid reliance on limited or sole-source suppliers. In addition, where supply relationships are concentrated, particular attention is paid by the parties to ensure strategic intentions are aligned to facilitate long-term planning. If certain of our suppliers are unable to meet their obligations under present supply agreements, we may be forced to pay higher prices to obtain the necessary raw materials from other sources and we may not be able to increase prices for our finished products to recoup the higher raw materials costs. Any interruption in the supply of raw materials could increase our costs or decrease our revenues, which could reduce our cash flow. The inability of a supplier to meet our raw material needs could have a material adverse effect on our financial statements and results of operations.

The number of sources for and availability of certain raw materials is also specific to the particular geographical region in which a facility is located. Political and economic instability in the countries from which we purchase our raw material supplies could adversely affect their availability. In addition, if raw materials become unavailable within a geographic area from which they are now sourced, then we may not be able to obtain suitable or cost effective substitutes. We may also experience higher operating costs such as energy costs, which could affect our profitability. We may not always be able to increase our selling prices to offset the impact of any higher production costs or reduced production levels, which could reduce our earnings and decrease our liquidity.

***The industries in which we compete are highly competitive, and we may not be able to compete effectively with our competitors that have greater financial resources, which could have a material adverse effect on our business, results of operations and financial condition.***

The industries in which we operate are highly competitive. Among our competitors are some of the world's largest chemical companies and major integrated petroleum companies that have their own raw material resources. Changes in the competitive landscape could make it difficult for us to retain our competitive position in various products and markets throughout the world. Some of the companies with whom we compete may be able to produce products more economically than we can. Furthermore, some of our competitors have greater financial resources, which may enable them to invest significant capital into their businesses, including expenditures for research and development.

While we are engaged in a range of research and development programs to develop new products and processes, to improve and refine existing products and processes, and to develop new applications

Table of Contents

for existing products, the failure to develop new products, processes or applications could make us less competitive. Moreover, if any of our current or future competitors develops proprietary technology that enables them to produce products at a significantly lower cost, our technology could be rendered uneconomical or obsolete.

Further, it is possible that we could abandon certain products, processes, or applications due to potential infringement of third party intellectual property rights or that we could be named in future litigation for the infringement or misappropriation of a competitor's or other third party's intellectual property rights, which could include a claim for injunctive relief and damages, and, if so, such adverse results could have a material adverse effect on our business, results of operations and financial position. In addition, certain of our competitors in various countries in which we do business, including China, may be owned by or affiliated with members of local governments and political entities. These competitors may get special treatment with respect to regulatory compliance and product registration, while certain of our products, including those based on new technologies, may be delayed or even prevented from entering into the local market.

Certain of our businesses use technology that is widely available. Accordingly, barriers to entry, apart from capital availability, may be low in certain product segments of our business. The entrance of new competitors into any of our businesses may reduce our ability to maintain margins or capture improving margins in circumstances where capacity utilization in the industry is increasing. Further, petroleum-rich countries have become more significant participants in the petrochemical industry and may expand their roles significantly in the future. Increased competition in any of our businesses could compel us to reduce the prices of our products, which could result in reduced margins and loss of market share and have a material adverse effect on our business, results of operations, financial condition and liquidity.

***We are subject to risks relating to our information technology systems, and any failure to adequately protect our critical information technology systems could materially affect our operations.***

We rely on information technology systems across our operations, including for management, supply chain and financial information and various other processes and transactions. Our ability to effectively manage our business depends on the security, reliability and capacity of these systems. Information technology system failures, network disruptions or breaches of security could disrupt our operations, cause delays or cancellations of customer orders or impede the manufacture or shipment of products, processing of transactions or reporting of financial results. An attack or other problem with our systems could also result in the disclosure of proprietary information about our business or confidential information concerning our customers or employees, which could result in significant damage to our business and our reputation.

We have put in place security measures designed to protect against the misappropriation or corruption of our systems, intentional or unintentional disclosure of confidential information, or disruption of our operations. Current employees have, and former employees may have, access to a significant amount of information regarding our operations which could be disclosed to our competitors or otherwise used to harm us. Moreover, our operations in certain locations, such as China, may be particularly vulnerable to security attacks or other problems. Any breach of our security measures could result in unauthorized access to and misappropriation of our information, corruption of data or disruption of operations or transactions, any of which could have a material adverse effect on our business.

In addition, we could be required to expend significant additional amounts to respond to information technology issues or to protect against threatened or actual security breaches. We may not be able to implement measures that will protect against all of the significant risks to our information technology systems.

Table of Contents

***Our significant debt level, a portion of which is subject to variable interest rates, makes us vulnerable to downturns and may limit our ability to respond to market conditions, to obtain additional financing or to refinance our debt.***

We have significant outstanding debt. As of December 31, 2016, our total consolidated outstanding debt was \$4,196 million (including current portion of debt); our debt to total capitalization ratio was approximately 74%; our combined outstanding variable rate borrowings were approximately \$2.2 billion; and our current portion of debt totaled \$60 million. Our debt level and the fact that a significant percentage of our cash flow is required to make payments on our debt could have important consequences for our business, including but not limited to the following:

we may be more vulnerable to business, industry or economic downturns, making it more difficult to respond to market conditions;

cash flow available for other purposes, including the growth of our business, may be reduced;

our ability to refinance or obtain additional financing may be constrained, particularly during periods when the capital markets are unsettled;

our competitors with lower debt levels may have a competitive advantage relative to us; and

part of our debt is subject to variable interest rates, which makes us more vulnerable to increases in interest rates (for example, a 1% increase in interest rates, without giving effect to interest rate hedges or other offsetting items, would increase our annual interest rate expense by approximately \$22 million).

Our debt level also impacts our credit ratings. Any decision by credit rating agencies to downgrade our debt ratings could restrict our ability to obtain additional financing and could result in increased interest and other costs.

***Agreements governing our debt may restrict our ability to engage in certain business activities or to obtain additional financing.***

The agreements governing our debt arrangements contain certain restrictive covenants. These covenants may limit or prohibit our ability to among other things, incur additional indebtedness; make certain prepayments of debt; pay dividends, redeem stock or make other distributions; issue stock; make investments; create liens; enter into transactions with affiliates; enter into sale and leaseback transactions; merge or consolidate; and transfer or sell assets. Some of our strategies may necessitate receiving consents or waivers under our debt arrangements, which could be withheld.

Our failure to comply with any of our debt covenants, or our failure to make payments of principal or interest on our debt, could result in a default, or trigger cross-default or acceleration provisions, under our debt agreements. An event of default could result in our debt obligations becoming immediately due and payable, cause our creditors to terminate their lending commitments, or force us or one or more of our subsidiaries into bankruptcy or liquidation. Any of the foregoing occurrences could have a material adverse effect on our business, results of operations and financial condition. For more information regarding our debt covenants, see "Note 15. Debt Compliance with Covenants" to our consolidated financial statements.

***Economic conditions and regulatory changes following the United Kingdom's likely exit from the EU could adversely impact our operations, operating results and financial condition.***

Following a referendum in June 2016 in which voters in the United Kingdom (the "U.K.") approved an exit from the EU, it is expected that the U.K. government will initiate a process to leave the EU (often referred to as Brexit). The referendum triggered short-term financial volatility, including a decline in the value of the pound sterling in comparison to both the U.S. dollar and euro. The future

Table of Contents

effects of Brexit will depend on any agreements the U.K. makes to retain access to the EU or other markets either during a transitional period or more permanently. Given the lack of comparable precedent and the uncertainty around when the U.K. government will initiate the process to leave the EU, it is unclear what financial, trade and legal implications the withdrawal of the U.K. from the EU would have and how such withdrawal would affect our Company.

We derive a significant portion of our revenues from sales outside the U.S., including 29% from Europe. The consequences of Brexit, together with what may be protracted negotiations around the terms of Brexit, could introduce significant uncertainties into global financial markets and adversely impact the markets in which we and our customers operate. Brexit could also create uncertainty with respect to the legal and regulatory requirements to which we and our customers in the U.K. are subject and lead to divergent national laws and regulations as the U.K. government determines which EU laws to replace or replicate.

While we are not experiencing any immediate adverse impact on our financial condition as a result of Brexit, adverse consequences such as deterioration in economic conditions, volatility in currency exchange rates or adverse changes in regulation could have a negative impact on our future operations, operating results and financial condition. All of these potential consequences could be further magnified if additional countries were to exit the EU.

***Our operations involve risks that may increase our operating costs, which could reduce our profitability.***

Although we take precautions to enhance the safety of our operations and minimize the risk of disruptions, our operations are subject to hazards inherent in the manufacturing and marketing of chemical and other products. These hazards include: chemical spills, pipeline leaks and ruptures, storage tank leaks, discharges or releases of toxic or hazardous substances or gases and other hazards incident to the manufacturing, processing, handling, transportation and storage of dangerous chemicals. We are also potentially subject to other hazards, including natural disasters and severe weather; explosions and fires; transportation problems, including interruptions, spills and leaks; mechanical failures; unscheduled downtimes; labor difficulties; remediation complications; and other risks. In addition, some equipment and operations at our facilities are owned or controlled by third parties who may not be fully integrated into our safety programs and over whom we are able to exercise limited control. Many potential hazards can cause bodily injury and loss of life, severe damage to or destruction of property and equipment and environmental damage, and may result in suspension of operations and the imposition of civil or criminal penalties and liabilities. Furthermore, we are subject to present and future claims with respect to workplace exposure, exposure of contractors on our premises as well as other persons located nearby, workers' compensation and other matters.

We maintain property, business interruption, products liability and casualty insurance policies which we believe are in accordance with customary industry practices, as well as insurance policies covering other types of risks, including pollution legal liability insurance, but we are not fully insured against all potential hazards and risks incident to our business. Each of these insurance policies is subject to customary exclusions, deductibles and coverage limits, in accordance with industry standards and practices. As a result of market conditions, premiums and deductibles for certain insurance policies can increase substantially and, in some instances, certain insurance may become unavailable or available only for reduced amounts of coverage. If we were to incur a significant liability for which we were not fully insured, it could have a material adverse effect on our business, results of operations, financial condition and liquidity.

In addition, we are subject to various claims and litigation in the ordinary course of business. We are a party to various pending lawsuits and proceedings. For more information, see " Item 3. Legal Proceedings" below.

Table of Contents

***We are subject to many environmental, health and safety regulations that may result in unanticipated costs or liabilities, which could reduce our profitability.***

We are subject to extensive federal, state, local and foreign laws, regulations, rules and ordinances relating to pollution, protection of the environment and human health and safety, and the generation, storage, handling, transportation, treatment, disposal and remediation of hazardous substances and waste materials. Actual or alleged violations of environmental, health and safety, or EHS, laws or permit requirements could result in restrictions or prohibitions on plant operations and substantial civil or criminal sanctions, as well as, under some EHS laws, the assessment of strict liability and/or joint and several liability.

Many of our products and operations are subject to the chemical control laws of the countries in which they are located. These laws include the regulation of chemical substances and inventories under the Toxic Substances Control Act ("TSCA") in the United States and the Registration, Evaluation and Authorization of Chemicals ("REACH") and the Classification, Labelling and Packaging of substances and mixtures ("CLP") regulations in Europe. Analogous regimes exist in other parts of the world, including China, South Korea, and Taiwan. In addition, a number of countries where we operate, including the United Kingdom, have adopted rules to conform chemical labeling in accordance with the globally harmonized system. Many of these foreign regulatory regimes are in the process of a multi-year implementation period for these rules.

Additional new laws and regulations may be enacted or adopted by various regulatory agencies globally. For example, in the U.S., the EPA finalized revisions to its Risk Management Program in January 2017. The revisions include new requirements for certain facilities to perform hazard analyses, third-party auditing, incident investigations and root cause analyses, emergency response exercises, and to publically share chemical and process information. Compliance for many of the rule's new requirements will be required beginning in 2021. In January 2017, the EPA temporarily delayed the rule's effect until March 21, 2017, and has indicated that it may further delay the rule's implementation. The U.S. Occupational Safety and Health Administration is likewise considering changes to its Process Safety Management standards. In addition, TSCA reform legislation was enacted in June 2016, and the EPA has begun the process of issuing new chemical control regulations. The costs of compliance with any new laws or regulations cannot be estimated until the manner in which they will be implemented has been more precisely defined.

Our international operations may also be impacted by new laws or regulations. For example, pursuant to the CLP, an EU Member State can propose a classification for a substance to the European Chemicals Agency ("ECHA"), which upon review by ECHA's Committee for Risk Assessment ("RAC"), can be submitted to the European Commission for adoption by regulation. On May 31, 2016, the French Agency for Food, Environmental and Occupational Health and Safety ("ANSES") submitted a proposal to ECHA that would classify titanium dioxide a Category 1B Carcinogen classification as presumed to have carcinogenic potential for humans by inhalation. Potential outcomes before both the RAC and the Commission is a final classification as a Category 1B Carcinogen (described by the EU regulation as "presumed to have carcinogenic potential for humans, classification is largely based on human evidence"), a Category 2 Carcinogen classification (described by the EU regulation as "suspected human carcinogens," classification on the basis of evidence obtained from human and/or animal studies, but which is not sufficiently convincing to place the substance in category 1A or 1B), or a decision of no classification, with the Commission making the final decision. Our Company, together with other companies, relevant trade associations and the European Chemical Industry Council ("Cefic") sector group, the Titanium Dioxide Manufacturers Association ("TDMA"), submitted comments opposing any classification of titanium dioxide as carcinogenic, based on evidence from multiple epidemiological studies covering more than 24,000 production workers at 18 titanium dioxide manufacturing sites over several decades that found no increased incidence of lung cancer as a result of workplace exposure to titanium dioxide and other

Table of Contents

scientific studies that concluded that the response to lung overload studies with poorly soluble particles upon which the ANSES proposed classification is based is unique to the rat and is not seen in other animal species or humans. If ECHA were to recommend, and the European Commission were to subsequently adopt, either a Category 1B or Category 2 Carcinogen classification, it could require that many end-use products manufactured would be classified as containing a potential carcinogenic component, which could negatively impact public perception of products containing titanium dioxide, limit the marketability of and demand for titanium dioxide or products containing titanium dioxide and potentially have spill-over, restrictive effects under other EU laws, e.g., those affecting medical and pharmaceutical applications, cosmetics, food packaging and food additives. Such classifications would also affect manufacturing operations by subjecting us to new work place requirements that could significantly increase costs. The resulting restrictions in the market place and impact on operations and profitability would be less significant in the event of a Category 2 classification for titanium dioxide compared to the Category 1B classification proposed by ANSES.

Furthermore, governmental, regulatory and societal demands for increasing levels of product safety and environmental protection could result in increased pressure for more stringent regulatory control with respect to the chemical industry. In addition, these concerns could influence public perceptions regarding our products and operations, the viability of certain products, our reputation, the cost to comply with regulations, and the ability to attract and retain employees. Moreover, changes in EHS regulations could inhibit or interrupt our operations, or require us to modify our facilities or operations. Accordingly, environmental or regulatory matters may cause us to incur significant unanticipated losses, costs or liabilities, which could reduce our profitability. For example, several of our products are being evaluated under REACH and CLP regulations and actions thereunder could negatively impact sales.

***Regulatory requirements to reduce GHG emissions could have an adverse effect on our results of operations.***

Our operations are increasingly subject to regulations that seek to reduce emissions of GHGs, such as carbon dioxide and methane, which may be contributing to changes in the Earth's climate. There are existing efforts to address GHG emissions at the international, national, and regional levels. For example, the 2015 Paris climate summit agreement resulted in voluntary commitments by numerous countries to reduce their GHG emissions. The agreement entered into force on November 4, 2016 and could result in additional firm commitments by various nations with respect to future GHG emissions. The EU also regulates GHGs under the EU ETS and China has begun pilot programs for carbon taxes and trading of GHG emissions in selected areas. Domestically, the EPA issued its final Clean Power Plan rules in 2015 that establish carbon pollution standards for power plants, called CO<sub>2</sub> emission performance rates. In February 2016, the U.S. Supreme Court granted a stay of the implementation of the Clean Power Plan. This stay will remain in effect until the conclusion of the appeals process. It is not yet clear how the courts will rule on the legality of the Clean Power Plan. If the rules are upheld at the conclusion of this appellate process, and depending on how states decide to implement these rules, they may result in national or regional credit trading schemes. Collectively, these rules and agreements may affect the long term price and supply of electricity and natural gas and demand for products that contribute to energy efficiency and renewable energy. These various regulations and agreements are likely to result in increased costs to purchased energy, additional capital costs for installation or modification of GHG emitting equipment, and additional costs associated directly with GHG emissions (such as cap and trade systems or carbon taxes), which are primarily related to energy use. Compliance with these regulations and any more stringent restrictions in the future may increase our operational costs.

In addition, some scientists have concluded that increasing concentrations of GHGs in the Earth's atmosphere may produce climate changes, such as increased frequency and severity of storms, droughts,

Table of Contents

floods and other climatic events. If any such effects were to occur in areas where we or our clients operate, they could have an adverse effect on our assets and operations.

We could incur significant expenditures in order to comply with existing or future EHS laws. Capital expenditures and costs relating to EHS matters will be subject to evolving regulatory requirements and will depend on the timing of the promulgation and enforcement of specific standards which impose requirements on our operations. Capital expenditures and costs beyond those currently anticipated may therefore be required under existing or future EHS laws.

Furthermore, we may be liable for the costs of investigating and cleaning up environmental contamination on or from our properties or at off-site locations where we disposed of or arranged for the disposal or treatment of hazardous materials or from disposal activities that pre-dated our purchase of our businesses. We may therefore incur additional costs and expenditures beyond those currently anticipated to address all such known and unknown situations under existing and future EHS laws.

***Our operations, financial condition and liquidity could be adversely affected by legal claims against us, including antitrust claims.***

We face risks arising from various legal actions, including matters relating to antitrust, product liability, intellectual property and environmental claims. It is possible that judgments could be rendered against us in these cases or others for which we could be uninsured or not covered by indemnity, or which may be beyond the amounts that we currently have reserved or anticipate incurring for such matters. Over the past few years, antitrust claims have been made against chemical companies, and we have been named as a defendant in the antitrust suits discussed in " Item 3. Legal Proceedings Antitrust Matters." In this type of litigation, the plaintiffs generally seek treble damages, which may be significant. An adverse outcome in any antitrust claim could be material and significantly impact our operations, financial condition and liquidity.

***Financial difficulties and related problems experienced by our customers, vendors, suppliers and other business partners could have a material adverse effect on our business.***

During periods of economic disruption, more of our customers than normal may experience financial difficulties, including bankruptcies, restructurings and liquidations, which could affect our business by reducing sales, increasing our risk in extending trade credit to customers and reducing our profitability. A significant adverse change in a customer relationship or in a customer's financial position could cause us to limit or discontinue business with that customer, require us to assume more credit risk relating to that customer's receivables or limit our ability to collect accounts receivable from that customer.

***Our business is dependent on our intellectual property. If our intellectual property rights cannot be enforced or our trade secrets become known to our competitors, our ability to compete may be adversely affected.***

Proprietary protection of our processes, apparatuses and other technology is important to our business. While a presumption of validity exists with respect to patents issued to us in the U.S., there can be no assurance that any of our patents will not be challenged, invalidated, circumvented or rendered unenforceable. Furthermore, if any pending patent application filed by us does not result in an issued patent, or if patents are issued to us, but such patents do not provide meaningful protection of our intellectual property, then our ability to compete may be adversely affected. Additionally, our competitors or other third parties may obtain patents that restrict or preclude our ability to lawfully produce or sell our products in a competitive manner, which could have a material adverse effect on our business, results of operations, financial condition and liquidity.

We also rely upon unpatented proprietary know-how and continuing technological innovation and other trade secrets to develop and maintain our competitive position. While it is our policy to enter

Table of Contents

into agreements imposing confidentiality obligations upon our employees and third parties to protect our intellectual property, these confidentiality obligations may be breached, may not provide meaningful protection for our trade secrets or proprietary know-how, or adequate remedies may not be available in the event of an unauthorized access, use or disclosure of our trade secrets and know-how. In addition, others could obtain knowledge of our trade secrets through independent development or other access by legal means.

We may have to rely on judicial enforcement of our patents and other proprietary rights. We may not be able to effectively protect our intellectual property rights from misappropriation or infringement in countries where effective patent, trademark, trade secret and other intellectual property laws and judicial systems may be unavailable, or may not protect our proprietary rights to the same extent as U.S. law.

The failure of our patents or confidentiality agreements to protect our processes, apparatuses, technology, trade secrets or proprietary know-how or the failure of adequate legal remedies for related actions could have a material adverse effect on our business, results of operations, financial condition and liquidity.

***Conflicts, military actions, terrorist attacks, political events and general instability, along with increased security regulations related to our industry, could adversely affect our business.***

Conflicts, military actions, terrorist attacks and political events have precipitated economic instability and turmoil in international commerce and the global economy. The uncertainty and economic disruption resulting from hostilities, military action or acts of terrorism may impact any or all of our facilities and operations or those of our suppliers or customers. Accordingly, any conflict, military action or terrorist attack that impacts us or any of our suppliers or customers, could have a material adverse effect on our business, results of operations, financial condition and liquidity. Furthermore, instability and turmoil, particularly in energy-producing nations, may result in raw material cost increases.

Changes in social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment in the territories and countries where we currently develop and sell products, could adversely affect our business. For example, a number of governments have instituted regulations attempting to increase the security of chemical plants and the transportation of hazardous chemicals, which could result in higher operating costs and could have a material adverse effect on our financial condition and liquidity.

***If our subsidiaries do not make sufficient distributions to us, then we will not be able to make payment on our debts.***

Our debt is generally the exclusive obligation of Huntsman International and our guarantor subsidiaries. Because a significant portion of our operations are conducted by nonguarantor subsidiaries, our cash flow and our ability to service indebtedness, including our ability to pay the interest on our debt when due and principal of such debt at maturity, are dependent to a large extent upon cash dividends and distributions or other transfers from such nonguarantor subsidiaries. Any payment of dividends, distributions, loans or advances by our nonguarantor subsidiaries to us could be subject to restrictions on dividends or repatriation of earnings under applicable local law, monetary transfer restrictions and foreign currency exchange regulations in the jurisdictions in which our subsidiaries operate, and any restrictions imposed by the current and future debt instruments of our nonguarantor subsidiaries. In addition, payments to us by our subsidiaries are contingent upon our subsidiaries' earnings.

Our subsidiaries are separate legal entities and, except for our guarantor subsidiaries, have no obligation, contingent or otherwise, to pay any amounts due on our debt or to make any funds



Table of Contents

available for those amounts, whether by dividends, loans, distributions or other payments, and do not guarantee the payment of interest on, or principal of, our debt. Any right that we have to receive any assets of any of our subsidiaries that are not guarantors upon the liquidation or reorganization of any such subsidiary, and the consequent right of holders of notes to realize proceeds from the sale of their assets, will be structurally subordinated to the claims of that subsidiary's creditors, including trade creditors and holders of debt issued by that subsidiary.

***Regulatory or market changes with respect to MTBE may materially reduce our sales and/or materially increase our costs.***

We produce MTBE, an oxygenate that is blended with gasoline to reduce vehicle air emissions and to enhance the octane rating of gasoline. Because of the allegations that MTBE has contaminated some water supplies, its use has become controversial in the U.S. and elsewhere, and its use has been effectively eliminated in the U.S. market. We currently market MTBE, either directly or through third parties, to gasoline additive customers located outside the U.S. This business has been profitable to us over time, and future legislative or regulatory initiatives or changing consumer opinion outside the U.S. restricting MTBE or changing consumer opinion could materially adversely affect our ability to market and sell MTBE and our profitability. Expansion of our PO/MTBE operations, including our joint venture with Sinopec in China, will further expose us to these risks.

While we could use all or a portion of our precursor TBA to produce saleable products other than MTBE, this would require significant capital expenditures to modify our facilities. Moreover, the sale of other products would produce a lower level of cash flow than that historically produced from the sale of MTBE.

***Our pension and postretirement benefit plan obligations are currently underfunded, and under certain circumstances we may have to significantly increase the level of cash funding to some or all of these plans, which would reduce the cash available for our business.***

We have unfunded and underfunded obligations under some of our domestic and foreign pension and postretirement benefit plans. The funded status of our pension plans is dependent upon many factors, including returns on invested assets, the level of certain market interest rates and the discount rates used to determine pension obligations. Unfavorable returns on the plan assets or unfavorable changes in applicable laws or regulations could materially change the timing and amount of required plan funding, which would reduce the cash available for our business. In addition, a decrease in the discount rate used to determine pension obligations could result in an increase in the valuation of pension obligations, which could affect the reported funding status of our pension plans and future contributions, as well as the periodic pension cost in subsequent fiscal years.

With respect to our domestic pension and postretirement benefit plans, the Pension Benefit Guaranty Corporation ("PBGC") has the authority to terminate an underfunded tax-qualified pension plan under limited circumstances in accordance with the Employee Retirement Income Security Act of 1974, as amended. In the event our tax-qualified pension plans are terminated by the PBGC, we could be liable to the PBGC for the entire amount of the underfunding and, under certain circumstances, the liability could be senior to our notes. With respect to our foreign pension and postretirement benefit plans, the effects of underfunding depend on the country in which the pension and postretirement benefit plan is established. For example, in the United Kingdom and Germany semi-public pension protection programs have the authority in certain circumstances to assume responsibility for underfunded pension schemes, including the right to recover the amount of the underfunding from us.

Table of Contents**RISKS RELATED TO OUR COMMON STOCK AND DEBT SECURITIES**

*Certain provisions contained in our certificate of incorporation and bylaws could discourage a takeover attempt, which may reduce or eliminate the likelihood of a change of control transaction and, therefore, limit your ability to sell our common stock at a price higher than the current market value.*

Certain provisions contained in our certificate of incorporation and bylaws, such as limitations on stockholder proposals at meetings of stockholders, the inability of stockholders to call special meetings and certain provisions of Delaware law, could make it more difficult for a third party to acquire control of our Company, even if some of our stockholders were to consider such a change of control to be beneficial. Our certificate of incorporation also authorizes our Board of Directors to issue preferred stock without stockholder approval. Therefore, our Board of Directors could elect to issue preferred stock that has special voting or other rights that could make it even more difficult for a third party to acquire us, which may reduce or eliminate your ability to sell our common stock at a price higher than the current market value.

*We have purchased, and may continue to purchase, a portion of our equity and debt securities, which could impact the market for our equity and debt securities and likely would negatively affect our liquidity.*

Consistent with past practices, we may from time to time seek to repurchase or redeem our equity and debt securities in open market purchases, accelerated repurchase programs, privately negotiated transactions, tender offers, partial or full calls for redemption or otherwise. Any such repurchases or redemptions and the timing and amount thereof would depend on prevailing market conditions, liquidity requirements, contractual restrictions and other factors. Such transactions could negatively affect our liquidity.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

As of the date of this filing, we did not have any unresolved comments from the staff of the SEC.

**ITEM 2. PROPERTIES**

We own or lease chemical manufacturing and research facilities in the locations indicated in the list below which we believe are adequate for our short-term and anticipated long-term needs. We own or lease office space and storage facilities throughout the U.S. and in many foreign countries. Our principal executive offices are located at 10003 Woodloch Forest Drive, The Woodlands, Texas 77380. The following is a list of our principal owned or leased properties where manufacturing, research and main office facilities are located.

Location	Business Segment	Description of Facility
The Woodlands, Texas(1)	Various	Executive Offices, Operating Headquarters, Global Technology Center and Shared Services Center
Salt Lake City, Utah(1)	Corporate and other	Administrative Offices
Kuala Lumpur, Malaysia(1)	Various	Shared Services Center and Pigments and Additives Administrative Offices
Mumbai, India(1)	Various	Technology Center, Administrative Offices, Labs and Accounting Shared Services Center
Sao Paulo, Brazil(1)	Various	Administrative Offices, Labs and Accounting Shared Services Center
Geismar, Louisiana(2)	Polyurethanes and Performance Products	MDI, Nitrobenzene(2), Aniline(2), Polyols and Maleic Anhydride Manufacturing Facilities, Polyurethane Systems House
Rotterdam, The Netherlands(1)	Polyurethanes and other various	MDI Manufacturing Facility, Polyols Manufacturing Facilities, Polyurethanes Systems House and Accounting Shared Services Center

# Edgar Filing: Huntsman CORP - Form 10-K

## Table of Contents

Location	Business Segment	Description of Facility
Caojing, China	Polyurethanes	MDI Finishing Facilities
Caojing, China(3)	Polyurethanes	Precursor MDI Manufacturing Facility
Jinshan, China(1)	Polyurethanes	TPU Manufacturing Facility
Deer Park, Australia	Polyurethanes	Polyurethane Systems House
Cartagena, Colombia	Polyurethanes	Polyurethane Systems House
Deggendorf, Germany	Polyurethanes	Polyurethane Systems House and Technology Center
Ternate, Italy	Polyurethanes	Polyurethane Systems House and Technology Center
Shanghai, China(1)	Polyurethanes, Performance Products and Advanced Materials	Polyurethane Systems House, Global Technology Center and Performance Products Regional Headquarters
Azeglio, Italy	Polyurethanes	Polyurethane Systems House
Pune, India(1)	Polyurethanes	Polyurethane Systems House
Buenos Aires, Argentina(1)	Polyurethanes	Polyurethane Systems House
Samutprakarn, Thailand(1)	Polyurethanes	Polyurethane Systems House
Istanbul, Turkey	Polyurethanes	Polyurethane Systems House
Kuan Yin, Taiwan(1)	Polyurethanes	Polyurethane Systems House
Tlalnepantla, Mexico	Polyurethanes	Polyurethane Systems House
Mississauga, Canada	Polyurethanes	Polyurethane Systems House
Obninsk, Russia	Polyurethanes	Polyurethane Systems House
Dammam, Saudi Arabia(4)	Polyurethanes	Polyurethane Systems House
Georgsmarienhütte, Germany	Polyurethanes	Polyurethane Systems House
Castelfranco Emilia, Italy	Polyurethanes	Polyurethane Systems House
Auburn Hills, Michigan(1)	Polyurethanes	Polyurethane Research Facility
Everberg, Belgium	Polyurethanes and Performance Products	Polyurethane and Performance Products Regional Headquarters, Global Technology Center and Shared Service Center
Houston, Texas(1)	Polyurethanes	Polyols Manufacturing Facility
Derry, New Hampshire(1)	Polyurethanes	TPU Research Facility
Ringwood, Illinois(1)	Polyurethanes	TPU Manufacturing Facility
Osnabrück, Germany	Polyurethanes	TPU Manufacturing Facility
Wilton, U.K.	Polyurethanes and other various	Aniline and Nitrobenzene Manufacturing Facilities
Nanjing, China(5)	Polyurethanes	PO and MTBE Manufacturing Facilities
Port Neches, Texas	Polyurethanes and Performance Products	Olefins, EO, EG, Surfactants, Amines, PO and MTBE Manufacturing Facilities
Conroe, Texas	Performance Products	Amines Manufacturing Facility
Petfurdo, Hungary(1)	Performance Products	Amines Manufacturing Facility
Llanelli, U.K.	Performance Products	Amines Manufacturing Facility
Freeport, Texas(1)	Performance Products	Amines Manufacturing Facility
Jurong Island, Singapore(1)	Performance Products	Amines Manufacturing Facility
Jubail, Saudi Arabia(6)	Performance Products	Amines Manufacturing Facility
Chocolate Bayou, Texas(1)	Performance Products	LAB Manufacturing Facility
Pensacola, Florida(1)	Performance Products	Maleic Anhydride Manufacturing Facility
Moers, Germany(7)	Performance Products	Maleic Anhydride Manufacturing Facility
Dayton, Texas	Performance Products	Surfactant Manufacturing Facility
Botany, Australia	Performance Products	Surfactant/EG Manufacturing Facility
Ankleshwar, India(1)	Performance Products	Surfactant/Amines Manufacturing Facility
Melbourne, Australia	Performance Products	Research Facility
Bergkamen, Germany	Advanced Materials	Synthesis Facility
Monthey, Switzerland	Advanced Materials	Resins and Synthesis Facility
Pamplona, Spain	Advanced Materials	Synthesis Facility
McIntosh, Alabama	Advanced Materials	Resins and Synthesis Facility
Bad Saeckingen, Germany	Advanced Materials	Formulating Facility
Duxford, U.K.	Advanced Materials	Formulating Facility
Taboão da Serra, Brazil	Advanced Materials, Polyurethanes and Textile Effects	Formulating Facility, Polyurethane Systems House and Chemicals and Inks Formulations Facility
Panyu, China(1)(8)	Advanced Materials and Textile Effects	Formulating and Synthesis Facility, Technology Center and Accounting Shared Services Center
Nanjing, China(1)	Advanced Materials	Formulating Facility
East Lansing, Michigan	Advanced Materials	Formulating Facility
Los Angeles, California	Advanced Materials	Formulating Facility

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

<b>Location</b>	<b>Business Segment</b>	<b>Description of Facility</b>
Basel, Switzerland	Advanced Materials and Textile Effects	Advanced Materials Regional Headquarters, Technology Center
Langweid am Leich, Germany	Textile Effects	Chemicals Synthesis and Chemicals and Inks Formulation Facility
Charlotte, North Carolina	Textile Effects	Chemicals Formulations Facility
Samutsakorn (Mahachai), Thailand	Textile Effects	Textiles Dyes Synthesis and Dyes and Inks Formulations Facility
Atotonilquillo, Mexico	Textile Effects	Textile Dyes and Chemicals Synthesis and Formulations Facility
Baroda, India	Textile Effects	Textile Dyes Synthesis and Dyes and Chemicals Formulations Facility
Gandaria, Jakarta, Indonesia	Textile Effects and Polyurethanes	Textile Dyes and Chemicals Formulations Facility and Polyurethane Systems House
Fraijanes, Guatemala	Textile Effects	Chemicals Formulations Facility
Bogota, Colombia	Textile Effects	Chemicals Formulations Facility
Hangzhou, China(1)	Textile Effects	Chemicals Formulations Facility
Karachi, Pakistan(1)	Textile Effects	Chemicals Formulations Facility
Corlu, Turkey(1)	Textile Effects	Chemicals Formulations Facility
Singapore(1)	Textile Effects and Performance Products	Textile Effects Headquarters and Performance Products Administrative Offices
Wynyard, U.K.(1)	Pigments and Additives	Administrative Offices, Research Facility and Shared Services Center
Greatham, U.K.	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Birtley, U.K.	Pigments and Additives	Color Pigments Manufacturing Facility
Kidsgrove, U.K.	Pigments and Additives	Color Pigments Manufacturing Facility
Sudbury, U.K.	Pigments and Additives	Color Pigments Manufacturing Facility
Duisburg, Germany	Pigments and Additives	Titanium Dioxide, Functional Additives, Water Treatment Manufacturing and Research Facility and Administrative Offices
Ibbenbueren, Germany	Pigments and Additives	Water Treatment Manufacturing Facility
Uerdingen, Germany(1)	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Schwarzheide, Germany(1)	Pigments and Additives	Water Treatment Manufacturing Facility
Walluf, Germany(1)	Pigments and Additives	Color Pigments Manufacturing Facility
Calais, France	Pigments and Additives	Titanium Dioxide Finishing Facility
Comines, France	Pigments and Additives	Color Pigments Manufacturing Facility
Huelva, Spain	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Scarlino, Italy	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Turin, Italy	Pigments and Additives	Color Pigments Manufacturing Facility
Pori, Finland	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Taichang, China(1)	Pigments and Additives	Color Pigments Manufacturing Facility
Teluk Kalung, Malaysia	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Augusta, Georgia	Pigments and Additives	Color Pigments Manufacturing Facility
Lake Charles, Louisiana(9)	Pigments and Additives	Titanium Dioxide Manufacturing Facility
Beltsville, Maryland(1)	Pigments and Additives	Color Pigments Manufacturing Facility
Los Angeles, California	Pigments and Additives	Color Pigments Manufacturing Facility
St. Louis, Missouri(1)	Pigments and Additives	Color Pigments Manufacturing Facility
Harrisburg, North Carolina	Pigments and Additives	Timber Treatments Manufacturing Facility
Easton, Pennsylvania(1)	Pigments and Additives	Color Pigments Manufacturing Facility
Freeport, Texas	Pigments and Additives	Timber Treatments Manufacturing Facility

(1) Leased land and/or building.

(2) The Geismar facility is owned as follows: we own 100% of the MDI, polyol and maleic anhydride facilities, and Rubicon LLC, a consolidated manufacturing joint venture with Chemtura Corporation in which we own a 50% interest, owns the aniline and nitrobenzene facilities. Rubicon LLC is a separate legal entity that operates both the assets that we own jointly with Chemtura Corporation and our wholly owned assets at Geismar.

(3) 35% interest in SLIC, our unconsolidated manufacturing joint venture with BASF and three Chinese chemical companies.

(4) 51%-owned consolidated manufacturing joint venture with Basic Chemicals Industries Ltd.

(5)

## Edgar Filing: Huntsman CORP - Form 10-K

49% interest in Nanjing Jinling Huntsman New Material Co., Ltd., our unconsolidated manufacturing joint venture with Sinopec. Beneficial commercial operations is expected in the second half of 2017.

(6)

50% interest in AAC, our consolidated manufacturing joint venture with the Zamil Group.

Table of Contents

- (7) 50% interest in Sasol-Huntsman, our consolidated manufacturing joint venture with Sasol.
- (8) 95%-owned consolidated manufacturing joint venture with Guangzhou Sheng'an Package Company Limited.
- (9) Owned by LPC, our 50%-owned unconsolidated manufacturing joint venture with Kronos.

**ITEM 3. LEGAL PROCEEDINGS**

**Antitrust Matters**

See "Note 20. Commitments and Contingencies Antitrust Matters" to our consolidated financial statements.

**Product Delivery Claim**

See "Note 20. Commitments and Contingencies Product Delivery Claim" to our consolidated financial statements.

**Indemnification Matters**

See "Note 20. Commitments and Contingencies Indemnification Matters" to our consolidated financial statements.

**Port Neches Flaring Matter**

See "Note 21. Environmental Health and Safety Matters Port Neches Flaring Matter" to our consolidated financial statements.

**ITEM 4. MINE SAFETY DISCLOSURES**

**Not applicable.**

**EXECUTIVE OFFICERS OF THE REGISTRANT**

The following is information concerning our executive officers and significant employees as of the date of this report.

*Jon M. Huntsman*, age 79, is the Executive Chairman of the Board of Directors of our Company. Prior to his appointment as Executive Chairman in February 2009, Mr. Huntsman served as Chairman of the Board of our company since its formation in 2004 and the predecessors to our company since 1970, when he founded his first plastics company. Mr. Huntsman served as Chief Executive Officer of our company and our affiliated companies from 1970 to 2000. Mr. Huntsman is a director or manager, as applicable, of Huntsman International and certain of our other subsidiaries. In addition, Mr. Huntsman serves or has served as Chairman or as a member of numerous corporate, philanthropic and industry boards, including the American Red Cross, The Wharton School, University of Pennsylvania, Primary Children's Medical Center Foundation, the Chemical Manufacturers Association and the American Plastics Council. Mr. Huntsman was selected in 1994 as the chemical industry's top Chief Executive Officer for all businesses in Europe and North America. Mr. Huntsman was awarded the American Chemical Society's Lifetime Achievement Award in 2013. Mr. Huntsman formerly served as Special Assistant to the President of the United States and as Vice Chairman of the U.S. Chamber of Commerce. He is the founding and principal benefactor of the Huntsman Cancer Institute. Mr. Huntsman is the father of our Chief Executive Officer, Peter R. Huntsman.

*Peter R. Huntsman*, age 53, is President, Chief Executive Officer and a Director of our Company. Mr. Huntsman also serves on our Litigation Committee. Prior to his appointment in July 2000 as Chief Executive Officer, Mr. Huntsman had served as President and Chief Operating Officer since 1994. In 1987, Mr. Huntsman joined Huntsman Polypropylene Corporation as Vice President before serving as

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Senior Vice President and General Manager. Mr. Huntsman has also served as President of Olympus Oil, as Senior Vice President of Huntsman Chemical Corporation and as a Senior Vice President of Huntsman Packaging Corporation, a former subsidiary of our Company. Mr. Huntsman is a director or manager, as applicable, of Huntsman International and certain of our other subsidiaries. Mr. Huntsman is the son of our Executive Chairman, Jon M. Huntsman.

*Sean Douglas*, age 52, is Executive Vice President and Chief Financial Officer. Mr. Douglas was appointed to this position in January 2017. Mr. Douglas was previously Vice President, Corporate Development and Treasurer from July 2015 to July 2016. Mr. Douglas left the Company in July 2012 to perform charitable services and rejoined the Company in July 2015. He previously served as our Vice President, Corporate Development from December 2009 until July 2012. Mr. Douglas served as Vice President and Treasurer from 2002 to December 2009, Vice President, Finance from July 2001 to 2002 and Vice President, Administration from January 1997 to July 2001. Mr. Douglas is a Certified Public Accountant and, prior to joining Huntsman in 1990, worked for the accounting firm of PricewaterhouseCoopers.

*J. Kimo Esplin*, age 54, is Executive Vice President, Strategy and Investment. Mr. Esplin was appointed to this position in January 2017. Prior to this appointment, Mr. Esplin served as Chief Financial Officer of all of the Huntsman companies from 1999 to December 2016. From 1994 to 1999, Mr. Esplin served as our Treasurer. Prior to joining Huntsman in 1994, Mr. Esplin was a Vice President in the Investment Banking Division of Bankers Trust Company, where he worked for seven years. Mr. Esplin also serves as a director of Nutraceutical International Corporation and Savage Services Corporation.

*David M. Stryker*, age 58, is Executive Vice President, General Counsel and Secretary. Mr. Stryker was appointed to this position in June 2013. Prior to joining Huntsman, Mr. Stryker served as Senior Vice President, General Counsel, Secretary and Chief Compliance Officer of the BASF Corporation since 2004. Previously, he was Associate General Counsel and Chief Compliance Officer at Siemens Corporation and, prior to that, a partner at the law firm of Kirkland & Ellis. Mr. Stryker started his legal career as a judicial clerk to the Honorable Robert H. Bork on the U.S. Court of Appeals for the D.C. Circuit.

*Anthony P. Hankins*, age 59, is Division President, Polyurethanes and Chief Executive Officer, Asia-Pacific. Mr. Hankins was appointed to these positions in March 2004 and February 2011, respectively. From May 2003 to February 2004, Mr. Hankins served as President, Performance Products, from January 2002 to April 2003, he served as Global Vice President, Rigids Division for our Polyurethanes segment, from October 2000 to December 2001, he served as Vice President Americas for our Polyurethanes segment, and from March 1998 to September 2000, he served as Vice President Asia-Pacific for our Polyurethanes segment. Mr. Hankins worked for ICI from 1980 to February 1998, when he joined our Company. At ICI, Mr. Hankins held numerous management positions in the plastics, fibers and polyurethanes businesses. He has extensive international experience, having held senior management positions in Europe, Asia and the U.S.

*Rohit Aggarwal*, age 49, is Division President, Textile Effects. Mr. Aggarwal was appointed to this position in July 2016. Mr. Aggarwal was previously Vice President and Managing Director of Indian Subcontinent for Huntsman from July 2015 to July 2016 and served in various positions within Huntsman's Advanced Materials and Textile Effects segments from 2005 to 2013. In 2013, Mr. Aggarwal left Huntsman to join Louis Dreyfus Commodities B.V. as Chief Executive Officer of Asia Region, a position he held until his return to our Company in 2015.

*Monte G. Edlund*, age 61, is Division President, Performance Products. Prior to his appointment to this position in July 2015, Mr. Edlund served as Vice President Americas, Advanced Materials since July 2011. From December 2007 to July 2011, Mr. Edlund served as Vice President Global Specialty Textiles, Textile Effects, from April 2002 to December 2007, he served as Vice President, Polymers and

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

from June 1999 to April 2002, he served as Vice President, Marketing, Base Chemicals and Polymers. Prior to joining Huntsman in 1997 as Vice President Marketing, Rexene, Mr. Edlund held numerous positions with Rexene Corporation.

*Simon Turner*, age 53, is Division President, Pigments and Additives. Prior to his appointment to this position in November 2008, Mr. Turner served as Senior Vice President, Pigments and Additives since April 2008. From September 2004 to April 2008, Mr. Turner served as Vice President of Global Sales and from July 1999 to September 2004, he held positions including General Manager Co-Products and Director Supply Chain and Shared Services. Prior to joining Huntsman in July 1999, Mr. Turner held various positions with ICI.

*Scott J. Wright*, age 45, is Division President, Advanced Materials. Mr. Wright was appointed to this position in June 2016. Prior to that time, Mr. Wright served as Vice President of Huntsman Advanced Materials Europe, Middle East & Africa since 2011. Before joining Huntsman's Advanced Materials segment, Mr. Wright spent 15 years in Huntsman's Pigments and Additives segment in a number of roles of increasing responsibility including product development, business planning, marketing and sales. Prior to joining Huntsman in July 1999, Mr. Wright worked with ICI.

*Ronald W. Gerrard*, age 57, is Senior Vice President, Environmental, Health & Safety and Manufacturing Excellence. Mr. Gerrard was appointed to this position in June 2009. He also serves as our Corporate Sustainability Officer. From May 2004 to June 2009, Mr. Gerrard served as Vice President, Global Operations and Technology in our Polyurethanes segment. From 1999 to May 2004, Mr. Gerrard served as Vice President, Asia; Business Director, Flexible Foams; and Director, EHS and Engineering, also within our Polyurethanes segment. Prior to joining Huntsman in 1999, Mr. Gerrard had worked for ICI and for EVC, a joint venture between ICI and Enichem. Mr. Gerrard is a Chartered Engineer.

*Brian V. Ridd*, age 59, is Senior Vice President, Purchasing. Mr. Ridd has held this position since July 2000. Mr. Ridd served as Vice President, Purchasing from December 1995 until he was appointed to his current position. Mr. Ridd joined Huntsman in 1984.

*R. Wade Rogers*, age 51, is Senior Vice President, Global Human Resources. Mr. Rogers has held this position since August 2009. From May 2004 to August 2009, Mr. Rogers served as Vice President, Global Human Resources, from October 2003 to May 2004, Mr. Rogers served as Director, Human Resources Americas and from August 2000 to October 2003, he served as Director, Human Resources for our Polymers and Base Chemicals businesses. From the time he joined Huntsman in 1994 to August 2000, Mr. Rogers served as Area Manager, Human Resources Jefferson County Operations. Prior to joining Huntsman, Mr. Rogers held a variety of positions with Texaco Chemical Company.

*Russ R. Stolle*, age 54, is Senior Vice President and Deputy General Counsel. Mr. Stolle was appointed to this position in January 2010. From October 2006 to January 2010, Mr. Stolle served as our Senior Vice President, Global Public Affairs and Communications, from November 2002 to October 2006, he served as Vice President and Deputy General Counsel, from October 2000 to November 2002 he served as Vice President and Chief Technology Counsel and from April 1994 to October 2000 he served as Chief Patent and Licensing Counsel. Prior to joining Huntsman in 1994, Mr. Stolle had been an attorney with Texaco Inc. and an associate with the law firm of Baker & Botts.

*Randy W. Wright*, age 58, is Vice President and Controller. Prior to his appointment to this position in February 2012, Mr. Wright served as Assistant Controller and Director of Financial Reporting since July 2004. Prior to joining Huntsman in 2004, Mr. Wright held various positions with Georgia-Pacific Corporation, Riverwood International, Johns Manville and PricewaterhouseCoopers. Mr. Wright is a Certified Public Accountant.

*Delaney Bellinger*, age 58, is Vice President and Chief Information Officer. Ms. Bellinger was appointed to this position in July 2016. Prior to joining Huntsman, Ms. Bellinger served as Chief



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Information Officer for EP Energy (formerly El Paso Corporation) from May 2012 to May 2016 and as Vice President, Business Solutions from May 2011 to May 2012. Previously, Ms. Bellinger was Chief Information Officer at YUM Brands and held various positions at PEPSICO, Electronic Data Systems (EDS) and Exxon.

*Brandon M. Gray*, age 41, is Vice President and Treasurer. Prior to his appointment to this position in February 2017, Mr. Gray served as Assistant Treasurer since April 2007. Prior to joining Huntsman in 2004, Mr. Gray held various positions with Novell and PricewaterhouseCoopers. Mr. Gray is a Certified Public Accountant.

*Kevin C. Hardman*, age 53, is Vice President, Tax. Mr. Hardman served as Chief Tax Officer from 1999 until he was appointed to his current position in 2002. Prior to joining Huntsman in 1999, Mr. Hardman was a tax Senior Manager with the accounting firm of Deloitte & Touche LLP, where he worked for 10 years. Mr. Hardman is a Certified Public Accountant and holds a master's degree in tax accounting.

*Troy M. Keller*, age 46, is Vice President, Government Affairs and Associate General Counsel. He has held this position since August 2015. From 2008 to 2015, Mr. Keller served as Vice President, Associate General Counsel & Assistant Secretary and from 2005 to 2008 he served as Senior Corporate Counsel & Assistant Secretary. Prior to joining Huntsman, he had been an attorney at Qwest Communications International and an associate at the law firms of Brobeck, Phleger & Harrison LLP and Brown & Wood LLP.

*Kurt D. Ogden*, age 48, is Vice President, Investor Relations and Finance. Prior to his appointment to this position in February 2009, Mr. Ogden served as Director, Corporate Finance since October 2004. Prior to joining Huntsman in 2004, Mr. Ogden held various positions with Hillenbrand Industries, Pliant Corporation and Huntsman Chemical Corporation. Mr. Ogden is a Certified Public Accountant and holds a master's degree in business administration.

*Pierre Poukens*, age 54, is Vice President, Internal Audit, a position he has held since February 2012. Mr. Poukens was Director of Internal Audit from April 2005 to January 2012 and joined Huntsman as Internal Audit Manager in January 2000. Prior to joining Huntsman, Mr. Poukens held various accounting and auditing positions with European companies in Belgium. Mr. Poukens is a Certified Internal Auditor.

Table of Contents**PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****MARKET INFORMATION AND HOLDERS**

Our common stock is listed on the New York Stock Exchange under the symbol "HUN." As of February 8, 2017, there were approximately 62 stockholders of record and the closing price of our common stock on the New York Stock Exchange was \$20.05 per share.

The reported high and low sale prices of our common stock on the New York Stock Exchange for each of the periods set forth below are as follows:

<b>Period</b>	<b>High</b>	<b>Low</b>
<b>2016</b>		
First Quarter	\$ 13.83	\$ 7.46
Second Quarter	16.65	12.45
Third Quarter	18.11	12.40
Fourth Quarter	20.52	15.38

<b>Period</b>	<b>High</b>	<b>Low</b>
<b>2015</b>		
First Quarter	\$ 24.62	\$ 21.01
Second Quarter	23.83	21.46
Third Quarter	22.40	9.27
Fourth Quarter	14.02	9.84

**DIVIDENDS**

The following tables represent dividends on common stock for our Company for the years ended December 31, 2016 and 2015 (dollars in millions, except per share payment amounts):

	<b>2016</b>	
<b>Quarter ended</b>	<b>Per share payment amount</b>	<b>Approximate amount paid</b>
March 31, 2016	\$ 0.125	\$ 30
June 30, 2016	0.125	30
September 30, 2016	0.125	30
December 31, 2016	0.125	30

	<b>2015</b>	
<b>Quarter ended</b>	<b>Per share payment amount</b>	<b>Approximate amount paid</b>
March 31, 2015	\$ 0.125	\$ 31
June 30, 2015	0.125	31
September 30, 2015	0.125	31
December 31, 2015	0.125	30

The payment of dividends is a business decision made by our Board of Directors from time to time based on our earnings, financial position and prospects, and such other considerations as our Board of Directors considers relevant. Accordingly, while management currently expects that the Company will continue to pay the quarterly cash dividend, its dividend practice may change at any time.

Table of Contents**SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS**

See "Part III. Item 11. Executive Compensation" for information relating to our equity compensation plans.

**PURCHASES OF EQUITY SECURITIES BY THE COMPANY**

The following table provides information with respect to shares of restricted stock granted under our stock incentive plans that we withheld upon vesting to satisfy our tax withholding obligations during the three months ended December 31, 2016.

	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs(1)	Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs(1)
October		\$		\$ 50,000,000
November				50,000,000
December	2,227	19.08		50,000,000
Total	2,227	\$ 19.08		

---

(1)

On September 29, 2015, our Board of Directors authorized our Company to repurchase up to \$150 million in shares of our common stock. No shares were repurchased under our publicly announced stock repurchase program during the three months ended December 31, 2016. For more information, see "Note 22. Huntsman Corporation Stockholders' Equity Share Repurchase Program" to our consolidated financial statements.

**ITEM 6. SELECTED FINANCIAL DATA**

The selected historical financial data set forth below presents our historical financial data as of and for the dates and periods indicated. You should read the selected financial data in conjunction with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and accompanying notes.

Table of Contents
**Huntsman Corporation**

	Year ended December 31,				
(in millions, except per share amounts)	2016	2015	2014	2013	2012
<b>Statements of Operations Data:</b>					
Revenues	\$ 9,657	\$ 10,299	\$ 11,578	\$ 11,079	\$ 11,187
Gross profit	1,678	1,848	1,919	1,753	2,034
Restructuring, impairment and plant closing costs	81	302	158	151	92
Operating income	647	405	633	510	845
Income from continuing operations	361	130	353	154	378
Loss from discontinued operations, net of tax(a)	(4)	(4)	(8)	(5)	(7)
Extraordinary gain on the acquisition of a business, net of tax of nil(b)					2
Net income	357	126	345	149	373
Net income attributable to Huntsman Corporation	326	93	323	128	363
<b>Basic income (loss) per common share:</b>					
Income from continuing operations attributable to Huntsman Corporation common stockholders	\$ 1.40	\$ 0.40	\$ 1.36	\$ 0.55	\$ 1.55
Loss from discontinued operations attributable to Huntsman Corporation common stockholders, net of tax(a)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
Extraordinary gain on the acquisition of a business attributable to Huntsman Corporation common stockholders, net of tax(b)					0.01
Net income attributable to Huntsman Corporation common stockholders	\$ 1.38	\$ 0.38	\$ 1.33	\$ 0.53	\$ 1.53
<b>Diluted income (loss) per common share:</b>					
Income from continuing operations attributable to Huntsman Corporation common stockholders	\$ 1.38	\$ 0.40	\$ 1.34	\$ 0.55	\$ 1.53
Loss from discontinued operations attributable to Huntsman Corporation common stockholders, net of tax(a)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
Extraordinary gain on the acquisition of a business attributable to Huntsman Corporation common stockholders, net of tax(b)					0.01
Net income attributable to Huntsman Corporation common stockholders	\$ 1.36	\$ 0.38	\$ 1.31	\$ 0.53	\$ 1.51
<b>Other Data:</b>					
Depreciation and amortization	\$ 432	\$ 399	\$ 445	\$ 448	\$ 432
Capital expenditures	421	663	601	471	412
Dividends per share	0.50	0.50	0.50	0.50	0.40
<b>Balance Sheet Data (at period end):</b>					
Total assets	\$ 9,189	\$ 9,820	\$ 10,923	\$ 9,159	\$ 8,862
Total debt	4,196	4,796	5,127	3,887	3,684
Total liabilities	7,722	8,191	8,972	7,030	6,966

(a)

Loss from discontinued operations represents the operating results and loss on disposal of our former Australian styrenics business, our former U.S. base chemicals business and our former North American polymers business. The U.S. base chemicals business was sold on November 5, 2007 and the North American polymers business was sold on August 1, 2007.

(b)

The extraordinary gain on the acquisition of a business relates to the June 30, 2006 acquisition of our Textile Effects segment.



Table of Contents

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

**RECENT DEVELOPMENTS**

On January 30, 2017, our titanium dioxide manufacturing facility in Pori, Finland experienced fire damage and is currently not operational. The fire brigade responded quickly to extinguish the fire and there were no injuries. We have notified applicable customers and suppliers of this *force majeure* event. We do not currently have an estimated time frame for how long the facility will be off line, but we are committed to repairing the facility as quickly as possible. The Pori facility has a nameplate capacity of 130,000 metric tons, which represents approximately 15% of our total titanium dioxide capacity and approximately 10% of total European titanium dioxide demand. The site is insured for property damage as well as business interruption losses. According to our insurance policies, the respective retention levels (deductibles) for physical damage and business interruption are \$15 million and 60 days, respectively. On February 9, 2017, we received a €50 million (approximately \$52 million) payment from our insurer as an initial partial progress payment towards the overall pending claim.

On October 28, 2016, we filed an initial Form 10 registration statement with the SEC as part of the process to spin off our Pigments and Additives and Textile Effects businesses in a tax-free transaction. On January 17, 2017, we announced that we will retain our Textile Effects business and we amended the Form 10 registration statement. We also announced that the name of the spin-off entity will be Venator Materials Corporation. Venator shares are expected to trade on the New York Stock Exchange under the ticker VNTR after the distribution to our stockholders. The completion of the spin-off is subject to the satisfaction or waiver of a number of conditions, including the registration statement on Form 10 for Venator's common stock being declared effective by the SEC and certain other conditions described in the information statement included in the Form 10. The ongoing process to separate the Pigments and Additives business is proceeding and is targeted for the second quarter 2017. As noted above, there was fire damage sustained at our titanium dioxide facility in Pori, Finland. The potential impact of this interruption, if any, on the spin date is not yet known.

On December 30, 2016, our Performance Products segment completed the sale of its European surfactants business to Innospec Inc. for \$199 million in cash plus our retention of trade receivables and payables for an enterprise value of \$225 million. Under the terms of the transaction, Innospec acquired our manufacturing facilities located in Saint-Mihiel, France; Castiglione delle Stiviere, Italy; and Barcelona, Spain. The purchase price is subject to the finalization of working capital adjustments. We remain committed to our global surfactants business, including in the U.S. and Australia, where our differentiated surfactants businesses are backward integrated into essential feedstocks. Upon closing the transaction, we entered into supply and long-term tolling arrangements with Innospec in order to continue marketing certain core products strategic to our global agrochemicals, lubes and certain other businesses. In connection with this sale, we recognized a pre-tax gain in the fourth quarter of 2016 of \$98 million.

On December 30, 2016, we made an early repayment of \$260 million on our 2015 Extended Term Loan B using proceeds from the sale of the European surfactants business and existing cash.

**OUTLOOK**

We expect the following factors to impact our operating segments:

**Polyurethanes:**

Continued focus on downstream MDI differentiation

Improving MDI demand growth

Table of Contents

Low MTBE margins

Planned maintenance at Rotterdam production facility

**Performance Products:**

Amines and maleic anhydride showing signs of recovery

Margins lower than historical norms

Planned ethylene oxide maintenance during second half of 2017

**Advanced Materials:**

Strong aerospace market more than one-third of earnings

**Pigments and Additives:**

Increasing TiO<sub>2</sub> selling prices

Impact of fire at Pori, Finland manufacturing facility

Lawsuit against Rockwood and Albemarle for fraud and breach of contract related to Augusta facility

In 2017, we expect to spend approximately \$400 million on capital expenditures.

In 2016, our adjusted effective tax rate was 22%. We expect our long term adjusted effective tax rate will be approximately 30%. We believe our 2017 adjusted effective tax rate will be slightly less than the long term rate.

**RESULTS OF OPERATIONS**

For each of our Company and Huntsman International, the following tables set forth our consolidated results of operations for the years ended December 31, 2016, 2015 and 2014 (dollars in millions, except per share amounts).

# Edgar Filing: Huntsman CORP - Form 10-K

## Table of Contents

### Huntsman Corporation

	Year ended December 31,			Percent Change	
	2016	2015	2014	2016 vs. 2015	2015 vs. 2014
<b>Revenues</b>	\$ 9,657	\$ 10,299	\$ 11,578	(6)%	(11)%
<b>Cost of goods sold</b>	7,979	8,451	9,659	(6)%	(13)%
<b>Gross profit</b>	1,678	1,848	1,919	(9)%	(4)%
Operating expenses	1,072	1,142	1,132	(6)%	1%
Restructuring, impairment and plant closing costs	81	302	158	(73)%	91%
Spin-off separation expenses	18			NM	
Other operating income, net	(140)	(1)	(4)	NM	(75)%
<b>Operating income</b>	647	405	633	60%	(36)%
Interest expense	(202)	(205)	(205)	(1)%	
Equity in income of investment in unconsolidated affiliates	5	6	6	(17)%	
Loss on early extinguishment of debt	(3)	(31)	(28)	(90)%	11%
Other income (loss), net	1	1	(2)		NM
<b>Income from continuing operations before income taxes</b>	448	176	404	155%	(56)%
Income tax expense	(87)	(46)	(51)	89%	(10)%
<b>Income from continuing operations</b>	361	130	353	178%	(63)%
Loss from discontinued operations, net of tax	(4)	(4)	(8)		(50)%
<b>Net income</b>	357	126	345	183%	(63)%
<b>Reconciliation of net income to adjusted EBITDA:</b>					
Net income attributable to noncontrolling interests	(31)	(33)	(22)	(6)%	50%
Interest expense	202	205	205	(1)%	
Income tax expense from continuing operations	87	46	51	89%	(10)%
Income tax benefit from discontinued operations	(2)	(2)	(2)		
Depreciation and amortization	432	399	445	8%	(10)%
<b>Other adjustments:</b>					
Business acquisition and integration expenses and purchase accounting adjustments	23	53	67		
EBITDA from discontinued operations	6	6	10		
(Gain) loss on disposition of businesses/assets	(119)	2	(3)		
Loss on early extinguishment of debt	3	31	28		
Certain legal settlements and related expenses	3	4	3		
Amortization of pension and postretirement actuarial losses	65	74	51		
Net plant incident remediation costs	1	4			
Restructuring, impairment and plant closing and transition costs(4)	82	306	162		
Spin-off separation expenses	18				
<b>Adjusted EBITDA(1)</b>	\$ 1,127	\$ 1,221	\$ 1,340		
<b>Net cash provided by operating activities</b>	\$ 1,088	\$ 575	\$ 760	89%	(24)%
Net cash used in investing activities	(202)	(600)	(1,606)	(66)%	(63)%
Net cash (used in) provided by financing activities	(723)	(562)	1,197	29%	NM
Capital expenditures	(421)	(663)	(601)	(37)%	10%



# Edgar Filing: Huntsman CORP - Form 10-K

## Table of Contents

### Huntsman International

	Year ended December 31,			Percent Change	
	2016	2015	2014	2016 vs. 2015	2015 vs. 2014
<b>Revenues</b>	\$ 9,657	\$ 10,299	\$ 11,578	(6)%	(11)%
<b>Cost of goods sold</b>	7,975	8,447	9,651	(6)%	(12)%
<b>Gross profit</b>	1,682	1,852	1,927	(9)%	(4)%
Operating expenses	1,068	1,137	1,127	(6)%	1%
Restructuring, impairment and plant closing costs	81	302	158	(73)%	91%
Spin-off separation expenses	18			NM	
Other operating income, net	(140)		(4)	NM	(100)%
<b>Operating income</b>	655	413	646	59%	(36)%
Interest expense	(214)	(214)	(214)		
Equity in income of investment in unconsolidated affiliates	5	6	6	(17)%	
Loss on early extinguishment of debt	(3)	(31)	(28)	(90)%	11%
Other income (loss), net	1	2	(1)	(50)%	NM
<b>Income from continuing operations before income taxes</b>	444	176	409	152%	(57)%
Income tax expense	(86)	(45)	(43)	91%	5%
<b>Income from continuing operations</b>	358	131	366	173%	(64)%
Loss from discontinued operations, net of tax	(4)	(4)	(9)		(56)%
<b>Net income</b>	354	127	357	179%	(64)%
<b>Reconciliation of net income to adjusted EBITDA:</b>					
Net income attributable to noncontrolling interests	(31)	(33)	(22)	(6)%	50%
Interest expense	214	214	214		
Income tax expense from continuing operations	86	45	43	91%	5%
Income tax benefit from discontinued operations	(2)	(2)	(2)		
Depreciation and amortization	420	387	430	9%	(10)%
<b>Other adjustments:</b>					
Business acquisition and integration expenses and purchase accounting adjustments	23	53	67		
EBITDA from discontinued operations	6	6	10		
(Gain) loss on disposition of businesses/assets	(119)	2	(3)		
Loss on early extinguishment of debt	3	31	28		
Certain legal settlements and related expenses	3	4	3		
Amortization of pension and postretirement actuarial losses	73	82	59		
Net plant incident remediation costs	1	4			
Restructuring, impairment and plant closing and transition costs(4)	82	306	162		
Spin-off separation expenses	18				
<b>Adjusted EBITDA(1)</b>	\$ 1,131	\$ 1,226	\$ 1,346		
<b>Net cash provided by operating activities</b>	\$ 1,078	\$ 570	\$ 754	89%	(24)%
Net cash used in investing activities	(195)	(599)	(1,607)	(67)%	(63)%
Net cash (used in) provided by financing activities	(721)	(408)	1,059	77%	NM
Capital expenditures	(421)	(663)	(601)	(37)%	10%

Table of Contents**Huntsman Corporation**

	Year ended ended December 31, 2016			Year ended ended December 31, 2015			Year ended ended December 31, 2014		
	Gross	Tax(3)	Net	Gross	Tax(3)	Net	Gross	Tax(3)	Net
<b>Reconciliation of net income to adjusted net income</b>									
<b>Net income</b>			\$ 357			\$ 126			\$ 345
Net income attributable to noncontrolling interests			(31)			(33)			(22)
Business acquisition and integration expenses and purchase accounting adjustments	\$ 23	\$ (7)	16	\$ 53	\$ (13)	40	\$ 67	\$ (10)	57
Impact of certain foreign tax credit elections								(94)	(94)
Loss from discontinued operations	6	(2)	4	6	(2)	4	10	(2)	8
(Gain) loss on disposition of businesses/assets	(119)	16	(103)	2		2	(3)	1	(2)
Loss on early extinguishment of debt	3	(1)	2	31	(11)	20	28	(10)	18
Certain legal settlements and related expenses	3	(1)	2	4	(1)	3	3		3
Amortization of pension and postretirement actuarial losses	65	(12)	53	74	(17)	57	51	(10)	41
Net plant incident remediation costs	1		1	4	(1)	3			
Restructuring, impairment and plant closing and transition costs(4)	82	(19)	63	306	(36)	270	162	(38)	124
Spin-off separation expenses	18	(5)	13						
<b>Adjusted net income(2)</b>			\$ 377			\$ 492			\$ 478
<b>Other non-GAAP measures:</b>									
<b>Adjusted net income per share(2):</b>									
Basic			\$ 1.38			\$ 0.38			\$ 1.33
Diluted			1.36			0.38			1.31
<b>Other non-GAAP measures:</b>									
<b>Adjusted net income per share(2):</b>									
Basic			\$ 1.60			\$ 2.03			\$ 1.97
Diluted			1.57			2.00			1.94
Capital expenditures, net of reimbursements(5)			\$ (390)			\$ (648)			\$ (564)
Net cash provided by operating activities			\$ 1,088			\$ 575			\$ 760
Capital expenditures			(421)			(663)			(601)
All other investing activities, excluding acquisition and disposition activities			11			58			(60)
Spin-off separation costs			8						
<b>Free cash flow(6)</b>			\$ 686			\$ (30)			\$ 99

Table of Contents**Huntsman International**

	Year ended ended December 31, 2016			Year ended ended December 31, 2015			Year ended ended December 31, 2014		
	Gross	Tax(3)	Net	Gross	Tax(3)	Net	Gross	Tax(3)	Net
<b>Reconciliation of net income to adjusted net income</b>									
<b>Net income</b>			\$ 354			\$ 127			\$ 357
Net income attributable to noncontrolling interests			(31)			(33)			(22)
Business acquisition and integration expenses and purchase accounting adjustments	\$ 23	\$ (7)	16	\$ 53	\$ (13)	40	\$ 67	\$ (10)	57
Impact of certain foreign tax credit elections								(105)	(105)
Loss from discontinued operations	6	(2)	4	6	(2)	4	10	(2)	8
(Gain) loss on disposition of businesses/assets	(119)	16	(103)	2		2	(3)	1	(2)
Loss on early extinguishment of debt	3	(1)	2	31	(11)	20	28	(10)	18
Certain legal settlements and related expenses	3	(1)	2	4	(1)	3	3		3
Amortization of pension and postretirement actuarial losses	73	(13)	60	82	(18)	64	59	(11)	48
Net plant incident remediation costs	1		1	4	(1)	3			
Restructuring, impairment and plant closing and transition costs(4)	82	(19)	63	306	(36)	270	162	(38)	124
Spin-off separation expenses	18	(5)	13						
<b>Adjusted net income(2)</b>			\$ 381			\$ 500			\$ 486
<b>Other non-GAAP measures:</b>									
Capital expenditures, net of reimbursements(5)			\$ (390)			\$ (648)			\$ (564)

NM Not meaningful

- (1) Our management uses adjusted EBITDA to assess financial performance. Adjusted EBITDA is defined as net income of Huntsman Corporation or Huntsman International, as appropriate, before interest, income tax, depreciation and amortization, net income attributable to noncontrolling interests and certain Corporate and other items, as well as eliminating the following adjustments: (a) business acquisition and integration expenses and purchase accounting adjustments; (b) EBITDA from discontinued operations; (c) (gain) loss on disposition of businesses/assets; (d) loss on early extinguishment of debt; (e) certain legal settlements and related expenses; (f) amortization of pension and postretirement actuarial losses; (g) net plant incident remediation costs; (h) restructuring, impairment, plant closing and transition costs; and (i) spin-off separation expenses. We believe that net income of Huntsman Corporation or Huntsman International, as appropriate, is the performance measure calculated and presented in accordance with U.S. GAAP that is most directly comparable to adjusted EBITDA.

We believe adjusted EBITDA is useful to investors in assessing the businesses' ongoing financial performance and provides improved comparability between periods through the exclusion of certain items that management believes are not indicative of the businesses' operational profitability and that may obscure underlying business results and trends. However, this measure should not be considered in isolation or viewed as a substitute for net income of Huntsman

Table of Contents

Corporation or Huntsman International, as appropriate, or other measures of performance determined in accordance with U.S. GAAP. Moreover, adjusted EBITDA as used herein is not necessarily comparable to other similarly titled measures of other companies due to potential inconsistencies in the methods of calculation. Our management believes this measure is useful to compare general operating performance from period to period and to make certain related management decisions. Adjusted EBITDA is also used by securities analysts, lenders and others in their evaluation of different companies because it excludes certain items that can vary widely across different industries or among companies within the same industry. For example, interest expense can be highly dependent on a company's capital structure, debt levels and credit ratings. Therefore, the impact of interest expense on earnings can vary significantly among companies. In addition, the tax positions of companies can vary because of their differing abilities to take advantage of tax benefits and because of the tax policies of the various jurisdictions in which they operate. As a result, effective tax rates and tax expense can vary considerably among companies. Finally, companies employ productive assets of different ages and utilize different methods of acquiring and depreciating such assets. This can result in considerable variability in the relative costs of productive assets and the depreciation and amortization expense among companies.

Nevertheless, our management recognizes that there are material limitations associated with the use of adjusted EBITDA in the evaluation of our Company as compared to net income of Huntsman Corporation or Huntsman International, as appropriate, which reflects overall financial performance. For example, we have borrowed money in order to finance our operations and interest expense is a necessary element of our costs and ability to generate revenue. Our management compensates for the limitations of using adjusted EBITDA by using this measure to supplement U.S. GAAP results to provide a more complete understanding of the factors and trends affecting the business rather than U.S. GAAP results alone.

In addition to the limitations noted above, adjusted EBITDA excludes items that may be recurring in nature and should not be disregarded in the evaluation of performance. However, we believe it is useful to exclude such items to provide a supplemental analysis of current results and trends compared to other periods because certain excluded items can vary significantly depending on specific underlying transactions or events, and the variability of such items may not relate specifically to ongoing operating results or trends and certain excluded items, while potentially recurring in future periods, may not be indicative of future results. For example, while EBITDA from discontinued operations is a recurring item, it is not indicative of ongoing operating results and trends or future results.

(2)

Adjusted net income is computed by eliminating the after-tax amounts related to the following from net income attributable to Huntsman Corporation or Huntsman International, as appropriate: (a) business acquisition and integration expenses and purchase accounting adjustments; (b) impact of certain foreign tax credit elections; (c) loss from discontinued operations; (d) (gain) loss on disposition of businesses/assets; (e) loss on early extinguishment of debt; (f) certain legal settlements and related expenses; (g) amortization of pension and postretirement actuarial losses; (h) net plant incident remediation costs; and (i) restructuring, impairment and plant closing and transition costs; (j) spin-off separation expenses. Basic adjusted net income per share excludes dilution and is computed by dividing adjusted net income by the weighted average number of shares outstanding during the period. Adjusted diluted net income per share reflects all potential dilutive common shares outstanding during the period and is computed by dividing adjusted net income by the weighted average number of shares outstanding during the period increased by the number of additional shares that would have been outstanding as dilutive securities. Adjusted net income and adjusted net income per share amounts are presented solely as supplemental information.

Table of Contents

- (3) The income tax impacts, if any, of each adjusting item represent a ratable allocation of the total difference between the unadjusted tax expense and the total adjusted tax expense, computed without consideration of any adjusting items using a with and without approach. We do not adjust for changes in tax valuation allowances because we do not believe it provides more meaningful information than is provided under GAAP.
- (4) Includes costs associated with transition activities relating to the migration of our information system data centers and the transition of our Textile Effects segment's production from Basel, Switzerland to a tolling facility. These transition costs were included in either selling, general and administrative expenses or cost of sales on our consolidated statements of operations.
- (5) Capital expenditures, net of reimbursements, represent cash paid for capital expenditures less payments received as reimbursements from customers and joint venture partners. During 2016, 2015 and 2014, capital expenditures of \$421 million, \$663 million and \$601 million, respectively, were reimbursed in part by \$31 million, \$15 million and \$37 million, respectively.
- (6) Management internally uses a free cash flow measure: (a) to evaluate the Company's liquidity, (b) to evaluate strategic investments, (c) to plan stock buyback and dividend levels, and (d) to evaluate the Company's ability to incur and service debt. Free cash flow is not a defined term under U.S. GAAP, and it should not be inferred that the entire free cash flow amount is available for discretionary expenditures. The Company defines free cash flow as cash flows provided by operating activities and used in investing activities, excluding acquisition and disposition activities. Free cash flow is typically derived directly from the Company's consolidated statement of cash flows; however, it may be adjusted for items that affect comparability between periods.

**Year Ended December 31, 2016 Compared with Year Ended December 31, 2015**

For the year ended December 31, 2016, net income attributable to Huntsman Corporation was \$326 million on revenues of \$9,657 million, compared with net income attributable to Huntsman Corporation of \$93 million on revenues of \$10,299 million for the same period of 2015. For the year ended December 31, 2016, net income attributable to Huntsman International was \$323 million on revenues of \$9,657 million, compared with net income attributable to Huntsman International of \$94 million on revenues of \$10,299 million for the same period of 2015. The increase of \$233 million in net income attributable to Huntsman Corporation and the increase of \$229 million in net income attributable to Huntsman International was the result of the following items:

Revenues for the year ended December 31, 2016 decreased by \$642 million, or 6%, as compared with the 2015 period. The decrease was primarily due to lower average selling prices in all our segments and lower sales volumes in our Performance Products and Advanced Materials segments. See " Segment Analysis" below.

Our gross profit and the gross profit of Huntsman International for the year ended December 31, 2016 decreased by \$170 million each, or 9% each, as compared with the 2015 period. The decrease resulted from lower gross margins in our Polyurethanes, Performance Products and Advanced Materials segments. See " Segment Analysis" below.

Our operating expenses and the operating expenses of Huntsman International for the year ended December 31, 2016 decreased by \$70 million and \$69 million, respectively, or 6% each, as compared with the 2015 period, primarily related to the impact of translating foreign currency amounts to the U.S. dollar and a decrease in selling, general and administrative expenses as a result of cost savings from restructuring programs within our Pigments and Additives segment.

Restructuring, impairment and plant closing costs for the year ended December 31, 2016 decreased to \$81 million from \$302 million in the 2015 period. For more information concerning restructuring activities, see "Note 12. Restructuring, Impairment and Plant Closing Costs" to our consolidated financial statements.

Table of Contents

In connection with the proposed spin-off of our Pigments and Additives business, we recorded spin-off separation expenses of \$18 million during 2016. We expect to record additional spin-off separation expenses of approximately \$56 million in 2017.

Our other operating income, net and other operating income, net of Huntsman International increased by \$139 million and \$140 million, respectively, for the year ended December 31, 2016 as compared with 2015, primarily related to a gain on the sale of our European surfactants business in the fourth quarter of 2016. For more information concerning the sale of our European surfactants business, see "Note 3. Business Combinations and Dispositions Sale of European Surfactants Manufacturing Facilities" to our consolidated financial statements.

Loss on early extinguishment of debt for the year ended December 31, 2016 decreased to \$3 million from \$31 million in the 2015 period. During 2016, we recorded a loss on early extinguishment of debt of \$3 million primarily related to repayment of our term loan B facilities due 2017 and our term loan C facility due 2016 ("Term Loan C") as well as voluntary repayments on our 2015 Extended Term Loan B. During 2015, we recorded a loss on early extinguishment of debt of \$30 million primarily related to the redemption of our 8.625% senior subordinated notes due 2021 ("2021 Senior Subordinated Notes").

Our income tax expense for the year ended December 31, 2016 increased to \$87 million from \$46 million in the 2015 period. The income tax expense of Huntsman International for the year ended December 31, 2016 increased to \$86 million from \$45 million in 2015. Our tax expense is significantly affected by the mix of income and losses in the tax jurisdictions in which we operate, as impacted by the presence of valuation allowances in certain tax jurisdictions. For further information concerning taxes, see "Note 19. Income Taxes" to our consolidated financial statements.

Table of Contents**Segment Analysis****Year Ended December 31, 2016 Compared to Year Ended December 31, 2015**

	Year ended December 31,		Percent Change (Unfavorable) Favorable
	2016	2015	
<b>Revenues</b>			
Polyurethanes	\$ 3,667	\$ 3,811	(4)%
Performance Products	2,126	2,501	(15)%
Advanced Materials	1,020	1,103	(8)%
Textile Effects	751	804	(7)%
Pigments and Additives	2,139	2,160	(1)%
Corporate and eliminations	(46)	(80)	NM
Total	\$ 9,657	\$ 10,299	(6)%

**Huntsman Corporation****Segment adjusted EBITDA(1)**

Polyurethanes	\$ 569	\$ 573	(1)%
Performance Products	316	460	(31)%
Advanced Materials	223	220	1%
Textile Effects	73	63	16%
Pigments and Additives	130	61	113%
Corporate and other	(184)	(156)	(18)%
Total	\$ 1,127	\$ 1,221	(8)%

**Huntsman International****Segment adjusted EBITDA(1)**

Polyurethanes	\$ 569	\$ 573	(1)%
Performance Products	316	460	(31)%
Advanced Materials	223	220	1%
Textile Effects	73	63	16%
Pigments and Additives	130	61	113%
Corporate and other	(180)	(151)	(19)%
Total	\$ 1,131	\$ 1,226	(8)%

NM Not  
meaningful

(1)

For more information, including reconciliation of segment adjusted EBITDA to net income of Huntsman Corporation or Huntsman International, as appropriate, see "Note 26. Operating Segment Information" to our consolidated financial statements.





Table of Contents

## Year ended December 31, 2016 vs. 2015

	Average Selling Price(1)			
	Local Currency	Foreign Currency Translation Impact	Mix & Other	Sales Volumes(2)
<b>Period-Over-Period (Decrease) Increase</b>				
Polyurethanes	(9)%	(1)%	(5)%	11%
Performance Products	(8)%	(1)%	(4)%	(2)%
Advanced Materials	(2)%	(2)%	3%	(7)%
Textile Effects	(6)%	(3)%	(1)%	3%
Pigments and Additives	(4)%	(1)%		4%
Total Company	(7)%	(1)%	(3)%	5%

## Fourth Quarter 2016 vs. Third Quarter 2016

	Average Selling Price(1)			
	Local Currency	Foreign Currency Translation Impact	Mix & Other	Sales Volumes(2)
<b>Period-Over-Period Increase (Decrease)</b>				
Polyurethanes	7%	(1)%	(1)%	3%
Performance Products			1%	
Advanced Materials	1%	(1)%	(1)%	1%
Textile Effects	1%	(1)%	(1)%	1%
Pigments and Additives	3%	(1)%	(2)%	(8)%
Total Company	3%	(1)%		(1)%

(1) Excludes revenues from tolling arrangements, byproducts and raw materials.

(2) Excludes sales volumes of byproducts and raw materials.

***Polyurethanes***

The decrease in revenues in our Polyurethanes segment for 2016 compared to 2015 was primarily due to lower average selling prices, partially offset by higher sales volumes. MDI average selling prices decreased in response to lower raw material costs. MTBE average selling prices decreased primarily as a result of lower pricing for high octane gasoline. MDI sales volumes increased due to higher demand in the Americas and European regions. PO/MTBE sales volumes increased primarily due to the impact of the prior year planned maintenance outage. The decrease in segment adjusted EBITDA was primarily due to lower MTBE margins, partially offset by higher MDI margins and sales volumes and the prior year planned PO/MTBE maintenance outage of approximately \$90 million.

***Performance Products***

The decrease in revenues in our Performance Products segment for 2016 compared to 2015 was primarily due to lower average selling prices and lower sales volumes. Average selling prices decreased primarily in response to lower raw material costs and competitive market conditions. Sales volumes decreased primarily due to competitive market conditions, softer demand in China and oilfield applications as well as the impact of weather related and other production outages. The decrease in segment adjusted EBITDA was primarily due to lower sales volumes, lower margins in our amines, maleic anhydride and upstream intermediates businesses as well as the impact of weather related and other production outages estimated at approximately \$15 million.

Table of Contents

***Advanced Materials***

The decrease in revenues in our Advanced Materials segment for 2016 compared to 2015 was due to lower sales volumes and lower average selling prices. Sales volumes decreased primarily in the Americas region, due to competitive pressure and soft demand. Average selling prices decreased in our Asia Pacific and European regions primarily due to price concessions in our electrical, electronic and wind markets and the foreign currency exchange impact of a stronger U.S. dollar against major international currencies. The increase in segment adjusted EBITDA was primarily due to lower fixed costs, partially offset by lower margins as savings from lower raw material costs were offset by lower sales volumes and lower selling prices.

***Textile Effects***

The decrease in revenues in our Textile Effects segment for 2016 compared to 2015 was due to lower average selling prices, partially offset by higher sales volumes. Average selling prices decreased primarily due to lower raw material costs and the foreign currency exchange impact of a stronger U.S. dollar against major international currencies. Sales volumes increased in key target countries, mainly in South Asia. The increase in segment adjusted EBITDA was primarily due to higher margins from lower raw material costs and lower selling, general and administrative costs.

***Pigments and Additives***

The decrease in revenues in our Pigments and Additives segment for 2016 compared to 2015 was due to lower average selling prices, partially offset by higher sales volumes. Average selling prices decreased primarily as a result of competitive pressure and the foreign currency exchange impact of a stronger U.S. dollar primarily against the euro. Sales volumes increased primarily due to increased end use demand for our titanium dioxide, functional additives and timber treatment products. The increase in segment adjusted EBITDA was primarily due to higher margins resulting from restructuring savings.

***Corporate and other***

Corporate and other includes unallocated corporate overhead, unallocated foreign exchange gains and losses, LIFO inventory valuation reserve adjustments, loss on early extinguishment of debt, unallocated restructuring, impairment and plant closing costs, nonoperating income and expense, benzene sales and gains and losses on the disposition of corporate assets. For 2016, adjusted EBITDA from Corporate and other for Huntsman Corporation decreased by \$28 million to a loss of \$184 million from a loss of \$156 million for the same period in 2015. For 2016, adjusted EBITDA from Corporate and other for Huntsman International decreased by \$29 million to a loss of \$180 million from a loss of \$151 million for the same period in 2015. The decrease in adjusted EBITDA from Corporate and other resulted primarily from an increase in LIFO inventory valuation expense, partially offset by an increase in gain from benzene sales.

**Year Ended December 31, 2015 Compared with Year Ended December 31, 2014**

For the year ended December 31, 2015, net income attributable to Huntsman Corporation was \$93 million on revenues of \$10,299 million, compared with net income attributable to Huntsman Corporation of \$323 million on revenues of \$11,578 million for 2014. For the year ended December 31, 2015, net income attributable to Huntsman International was \$94 million on revenues of \$10,299 million, compared with net income attributable to Huntsman International of \$335 million on revenues of \$11,578 million for 2014. The decrease of \$230 million in net income attributable to

Table of Contents

Huntsman Corporation and the decrease of \$241 million in net income attributable to Huntsman International was the result of the following items:

Revenues for the year ended December 31, 2015 decreased by \$1,279 million, or 11%, as compared with 2014. The decrease was due principally to lower sales volumes and lower average selling prices in all our segments. See " Segment Analysis" below.

Our gross profit and the gross profit of Huntsman International for the year ended December 31, 2015 decreased by \$71 million and \$75 million, respectively, or 4% each, as compared with 2014. The impact on gross profit resulted from lower gross margins in all of our segments, except for our Advanced Materials segment. See " Segment Analysis" below.

Our operating expenses and the operating expenses of Huntsman International increased by \$10 million each or 1% each, for the year ended December 31, 2015 as compared with 2014, primarily related to the consolidated expenses of the acquired Rockwood businesses, offset in part by the foreign currency exchange impacts of the strengthening U.S. dollar against other major international currencies.

Restructuring, impairment and plant closing costs for the year ended December 31, 2015 increased to \$302 million from \$158 million in 2014. For more information concerning restructuring activities, see "Note 12. Restructuring, Impairment and Plant Closing Costs" to our consolidated financial statements.

Loss on early extinguishment of debt for the year ended December 31, 2015 increased to \$31 million from \$28 million in 2014. During 2015, we recorded a loss on early extinguishment of debt of \$30 million related to the redemption of our 2021 Senior Subordinated Notes. For more information, see "Note 15. Debt Direct and Subsidiary Debt Redemption of Notes and Loss on Early Extinguishment of Debt" to our consolidated financial statements.

Our income tax expense for the year ended December 31, 2015 decreased to \$46 million from \$51 million in 2014. The income tax expense of Huntsman International for the year ended December 31, 2015 increased to \$45 million from \$43 million in 2014. The change in income tax expense is impacted by the benefit in 2015 of generating \$14 million of excess U.S. foreign tax credits and in 2014 of utilizing U.S. foreign tax credits which had been subject to a valuation allowance. Excluding the impact of the U.S. foreign tax credits, our income tax expense and the income tax expense of Huntsman International decreased by \$97 million and \$101 million, respectively, as compared with 2014, primarily due to lower pre-tax income and tax impacts of tax only foreign currency exchange losses. Our tax expense is significantly affected by the mix of income and losses in the tax jurisdictions in which we operate, as impacted by the presence of valuation allowances in certain tax jurisdictions. For further information concerning taxes, see "Note 19. Income Taxes" to our consolidated financial statements.

Table of Contents**Segment Analysis****Year Ended December 31, 2015 Compared to Year Ended December 31, 2014**

	Year ended December 31,		Percent Change (Unfavorable) Favorable
	2015	2014	
<b>Revenues</b>			
Polyurethanes	\$ 3,811	\$ 5,032	(24)%
Performance Products	2,501	3,072	(19)%
Advanced Materials	1,103	1,248	(12)%
Textile Effects	804	896	(10)%
Pigments and Additives	2,160	1,549	39%
Corporate and eliminations	(80)	(219)	NM
Total	\$ 10,299	\$ 11,578	(11)%

**Huntsman Corporation****Segment adjusted EBITDA(1)**

Polyurethanes	\$ 573	\$ 722	(21)%
Performance Products	460	473	(3)%
Advanced Materials	220	199	11%
Textile Effects	63	58	9%
Pigments and Additives	61	76	(20)%
Corporate and other	(156)	(188)	17%
Total	\$ 1,221	\$ 1,340	(9)%

**Huntsman International****Segment adjusted EBITDA(1)**

Polyurethanes	\$ 573	\$ 722	(21)%
Performance Products	460	473	(3)%
Advanced Materials	220	199	11%
Textile Effects	63	58	9%
Pigments and Additives	61	76	(20)%
Corporate and other	(151)	(182)	17%
Total	\$ 1,226	\$ 1,346	(9)%

---

NM Not  
meaningful

(1) For more information, including reconciliation of segment adjusted EBITDA to net income of Huntsman Corporation or Huntsman International, as appropriate, see "Note 26. Operating Segment Information" to our consolidated financial statements.



## Table of Contents

Year ended December 31, 2015 vs. 2014				
Period-Over-Period Increase (Decrease)	Average Selling Price(1)		Mix & Other(2)	Sales Volumes(3)
	Local Currency	Foreign Currency Translation Impact		
Polyurethanes	(12)%	(5)%	3%	(10)%
Performance Products	(7)%	(5)%	(3)%	(4)%
Advanced Materials	2%	(8)%	(1)%	(5)%
Textile Effects	1%	(6)%	2%	(7)%
Pigments and Additives	(10)%	(8)%	62%	(5)%
Total Company	(8)%	(6)%	10%	(7)%

(1) Excludes revenues from tolling arrangements, byproducts and raw materials.

(2) Includes the impact from the Rockwood Acquisition.

(3) Excludes sales volumes of byproducts and raw materials.

### Polyurethanes

The decrease in revenues in our Polyurethanes segment for 2015 compared to 2014 was primarily due to a planned maintenance outage at our PO/MTBE facility in Port Neches, Texas that commenced in the first quarter of 2015 and extended into the second quarter of 2015, lower MDI average selling prices and the foreign currency exchange impact of a stronger U.S. dollar against other key currencies. PO/MTBE sales volumes decreased due to the planned maintenance outage at our PO/MTBE facility in Port Neches, Texas. MDI sales volumes decreased slightly due to the market slowdown in China and lower sales into commercial construction in the U.S. PO/MTBE average selling prices decreased following lower pricing for high octane gasoline. MDI average selling prices decreased in response to lower raw material costs and the foreign currency exchange impact of a stronger U.S. dollar against major European currencies. The decrease in segment adjusted EBITDA was due to lower PO/MTBE earnings and the foreign currency exchange impact of a stronger U.S. dollar against the euro. We estimate the reduction to segment adjusted EBITDA resulting from the planned PO/MTBE maintenance outage was approximately \$90 million for 2015.

### Performance Products

The decrease in revenues in our Performance Products segment for 2015 compared to 2014 was primarily due to lower average selling prices and lower sales volumes. Average selling prices decreased across all product lines primarily in response to lower raw material costs and the foreign currency exchange impact of a stronger U.S. dollar against major European currencies. Sales volumes decreased across most product lines, including the effect of the sale of our European commodity surfactants business in the second quarter of 2014 partially offset by higher toll volumes in our upstream intermediates business. The decrease in segment adjusted EBITDA was primarily due to lower margins on produced ethylene, partially offset by higher amines margins.

### Advanced Materials

The decrease in revenues in our Advanced Materials segment for 2015 compared to 2014 was due to lower sales volumes and lower average selling prices. Sales volumes decreased globally primarily in our coatings and construction and transportation and industrial markets due to the de-selection of certain business and competitive pressure, partially offset by strong volume growth in our do-it-yourself and wind markets in the Asia Pacific region. Average selling prices increased, in most markets, on a local currency basis in the Americas and Asia Pacific regions due to certain price increase initiatives

Table of Contents

and our focus on higher value markets; overall this was more than offset by the foreign currency exchange impact of a stronger U.S. dollar against major international currencies. The increase in segment adjusted EBITDA was primarily due to higher margins, resulting from lower raw material costs, and our focus on higher value business as well as lower fixed costs.

*Textile Effects*

The decrease in revenues in our Textile Effects segment for 2015 compared to 2014 was due to lower average selling prices and lower sales volumes. Average selling prices decreased in response to lower raw material costs and the foreign currency exchange impact of a stronger U.S. dollar against major international currencies. Sales volumes decreased primarily due to the de-selection of certain less profitable business and challenging market conditions. The increase in segment adjusted EBITDA was primarily due to lower fixed costs, partially offset by lower margins.

*Pigments and Additives*

The increase in revenues in our Pigments and Additives segment for 2015 compared to 2014 was primarily due to the impact of the Rockwood Acquisition. Other than the impact of the Rockwood Acquisition, average selling prices decreased primarily as a result of high titanium dioxide industry inventory levels and the foreign currency exchange impact of a stronger U.S. dollar against major European currencies. Sales volumes decreased primarily as a result of lower end-use demand and the impact of a nitrogen tank explosion owned and operated by a third party at our Uerdingen, Germany facility, which disrupted our manufacturing during the third quarter of 2015. The decrease in segment adjusted EBITDA was primarily due to lower contribution margin for titanium dioxide and the negative impact from the manufacturing disruption at our Uerdingen, Germany facility.

*Corporate and other*

Corporate and other includes unallocated corporate overhead, unallocated foreign exchange gains and losses, LIFO inventory valuation reserve adjustments, nonoperating income and expense, benzene sales and gains and losses on the disposition of corporate assets. For 2015, adjusted EBITDA from Corporate and other for Huntsman Corporation increased by \$32 million to a loss of \$156 million from a loss of \$188 million for 2014. For 2015, adjusted EBITDA from Corporate and other for Huntsman International increased by \$31 million to a loss of \$151 million from a loss of \$182 million for 2014. The increase in adjusted EBITDA from Corporate and other resulted primarily from an increase in LIFO inventory valuation income and a decrease in unallocated corporate overhead, partially offset by an increase in loss from benzene sales.

**LIQUIDITY AND CAPITAL RESOURCES**

The following is a discussion of our liquidity and capital resources and generally does not include separate information with respect to Huntsman International in accordance with General Instruction I of Form 10-K.

**Cash Flows for Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015**

Net cash provided by operating activities for 2016 and 2015 was \$1,088 million and \$575 million, respectively. The increase in net cash provided by operating activities during 2016 compared with 2015 was primarily attributable to increased operating income as described in "Results of Operations" above as well as a \$473 million favorable variance in operating assets and liabilities for 2016 as compared with 2015.

Table of Contents

Net cash used in investing activities for 2016 and 2015 was \$202 million and \$600 million, respectively. During 2016 and 2015, we paid \$421 million and \$663 million, respectively, for capital expenditures. During 2016 and 2015, we made investments in LPC of \$29 million and \$42 million, respectively, and in our BASF Huntsman Shanghai Isocyanate Investment B.V. joint venture of nil and \$12 million, respectively, and received dividends from LPC of \$33 million and \$48 million, respectively. During 2016 and 2015, we paid nil and \$14 million, respectively, for the acquisition of businesses and received proceeds from a purchase price adjustment of nil and \$18 million, respectively, related to the Rockwood Acquisition. During 2016 and 2015, we received proceeds from the sale of businesses and assets of \$208 million and \$1 million, respectively, including proceeds of \$199 million from the sale of our European surfactants business during 2016. During 2015, we received \$66 million from the termination of cross-currency interest rate contracts.

Net cash used in financing activities for 2016 and 2015 was \$723 million and \$562 million, respectively. The increase in net cash used in financing activities was primarily due to an increase in repayments of long-term debt, partially offset by an increase in proceeds from the issuance of long-term debt during the 2016 period as compared to the 2015 period. On April 1, 2016, we entered into our 2016 term loan B facility due 2023 ("2016 Term Loan B") in an aggregate principal amount of \$550 million. Additionally, on April 1, 2016, we used the net proceeds of the 2016 Term Loan B to repay in full our extended term loan B due 2017, extended term loan B series 2 due 2017 and our Term Loan C. On both July 22, 2016 and September 30, 2016, we prepaid \$100 million of our 2015 Extended Term Loan B. On December 30, 2016, we made an early repayment of \$260 million on our 2015 Extended Term Loan B using proceeds from the sale of our European surfactants business and existing cash. On March 31, 2015, we issued €300 million (approximately \$326 million) aggregate principal amount of our 4.25% senior notes due April 1, 2025 ("2025 Senior Notes"). On April 17, 2015, we used the net proceeds of this offering to redeem \$289 million (\$294 million carrying value) of our 2021 Senior Subordinated Notes and redeemed the remaining \$195 million (\$198 million carrying value) of our 2021 Senior Subordinated Notes during the third quarter of 2015. During 2015, we repurchased \$100 million of our common stock.

Free cash flow for 2016 and 2015 were cash proceeds of \$686 million and use of cash of \$30 million, respectively. The improvement in free cash flow was attributable to the changes in cash flows from operating and investing activities, excluding merger and acquisition activities.

**Cash Flows for Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014**

Net cash provided by operating activities for 2015 and 2014 was \$575 million and \$760 million, respectively. The decrease in net cash provided by operating activities during 2015 compared with 2014 was primarily attributable to lower net income as described in "Results of Operations" above and a \$24 million unfavorable variance in operating assets and liabilities for 2015 as compared with 2014.

Net cash used in investing activities for 2015 and 2014 was \$600 million and \$1,606 million, respectively. During 2015 and 2014, we paid \$663 million and \$601 million, respectively, for capital expenditures. During 2014, we paid \$1.04 billion for the Rockwood Acquisition, and during 2015 and 2014, we received proceeds from a purchase price adjustment of \$18 million and nil, respectively, related to the Rockwood Acquisition. For further information, see "Note 3. Business Combinations and Dispositions" to our consolidated financial statements. During 2015 and 2014, we made investments in LPC of \$42 million and \$37 million, respectively, in Nanjing Jinling Huntsman New Materials Co., Ltd. of nil and \$62 million, respectively, and in our BASF Huntsman Shanghai Isocyanate Investment B.V. joint venture of \$12 million and \$9 million, respectively, and we received dividends from LPC of \$48 million each. During 2015 and 2014, we received \$1 million and \$15 million, respectively, from the sale of businesses and assets. During 2015 and 2014, we received \$66 million and nil, respectively, from the termination of cross-currency interest rate contracts.



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Net cash (used in) provided by financing activities for 2015 and 2014 was \$(562) million and \$1,197 million, respectively. The decrease in net cash provided by financing activities was primarily due to higher net borrowings during 2014, primarily used to fund the Rockwood Acquisition and an increase in repayments of long-term debt in 2015. On March 31, 2015, we issued €300 million (approximately \$326 million) aggregate principal amount of our 2025 Senior Notes. On April 17, 2015, we used the net proceeds of this offering to redeem \$289 million (\$294 million carrying value) of our 2021 Senior Subordinated Notes. In the third quarter of 2015, we redeemed the remaining \$195 million (\$198 million carrying value) of our 2021 Senior Subordinated Notes. During 2015, we repurchased \$100 million of our common stock.

Free cash flow for 2015 and 2014 were a use of cash of \$30 million and cash proceeds of \$99 million, respectively. The decrease in free cash flow was attributable to the changes in cash flows from operating and investing activities, excluding merger and acquisition activities.

### **Changes in Financial Condition**

The following information summarizes our working capital (dollars in millions):

	December 31, 2016	December 31, 2015	Increase (Decrease)	Percent Change
Cash and cash equivalents	\$ 414	\$ 257	\$ 157	61%
Restricted cash	11	12	(1)	(8)%
Accounts and notes receivable, net	1,435	1,449	(14)	(1)%
Inventories	1,344	1,692	(348)	(21)%
Prepaid expenses	60	112	(52)	(46)%
Other current assets	291	312	(21)	(7)%
<b>Total current assets</b>	<b>3,555</b>	<b>3,834</b>	<b>(279)</b>	<b>(7)%</b>
Accounts payable	1,102	1,061	41	4%
Accrued liabilities	616	686	(70)	(10)%
Current portion of debt	60	170	(110)	(65)%
<b>Total current liabilities</b>	<b>1,778</b>	<b>1,917</b>	<b>(139)</b>	<b>(7)%</b>
<b>Working capital</b>	<b>\$ 1,777</b>	<b>\$ 1,917</b>	<b>\$ (140)</b>	<b>(7)%</b>

Our working capital decreased by \$140 million as a result of the net impact of the following significant changes:

The increase in cash and cash equivalents of \$157 million resulted from the matters identified on our consolidated statements of cash flows.

Inventories decreased by \$348 million primarily due to lower inventory volumes and lower inventory costs.

Prepaid expenses decreased by \$52 million mainly due to the distribution of employee termination and other restructuring costs that were prefunded during the fourth quarter of 2015.

Accrued liabilities decreased by \$70 million primarily due to the distribution of prefunded restructuring costs.

Current portion of debt decreased by \$110 million primarily due to the repayment of \$50 million our Term Loan C during the second quarter of that was recorded as current debt as of December 31, 2015. On April 1, 2016, this debt was refinanced with the 2016 Term Loan B due 2023. In addition, the company has repaid \$47 million under its HPS working capital facility in 2016 that was classified as current as of December 31, 2015.



Table of Contents

**Direct and Subsidiary Debt**

See "Note 15. Debt Direct and Subsidiary Debt" to our consolidated financial statements.

**Debt Issuance Costs**

See "Note 15. Debt Debt Issuance Costs" to our consolidated financial statements.

**Senior Credit Facilities**

See "Note 15. Debt Senior Credit Facilities" to our consolidated financial statements.

**Amendment to Credit Agreement**

See "Note 15. Debt Amendment to Credit Agreement" to our consolidated financial statements.

**A/R Programs**

See "Note 15. Debt A/R Programs" to our consolidated financial statements.

**Notes**

See "Note 15. Debt Notes" to our consolidated financial statements.

**Redemption of Notes and Loss on Early Extinguishment of Debt**

See "Note 15. Debt Redemption of Notes and Loss on Early Extinguishment of Debt" to our consolidated financial statements.

**Variable Interest Entity Debt**

See "Note 15. Debt Variable Interest Entity Debt" to our consolidated financial statements.

**Note Payable from Huntsman International to Huntsman Corporation**

See "Note 15. Debt Note Payable from Huntsman International to Huntsman Corporation" to our consolidated financial statements.

**Compliance with Covenants**

See "Note 15. Debt Compliance with Covenants" to our consolidated financial statements.

**Maturities**

See "Note 15. Debt Maturities" to our consolidated financial statements.

**Short-Term and Long-Term Liquidity**

We depend upon our cash, senior credit facilities ("Senior Credit Facilities"), U.S. accounts receivable securitization program ("U.S. A/R Program"), European accounts receivable securitization program ("EU A/R Program" and collectively with the U.S. A/R Program, "A/R Programs") and other debt instruments to provide liquidity for our operations and working capital needs. As of December 31, 2016, we had \$1,208 million of combined cash and unused borrowing capacity, consisting of \$425 million in cash and restricted cash, \$628 million in availability under our revolving facility ("Revolving Facility"), and \$155 million in availability under our A/R Programs. Our liquidity can be

Table of Contents

significantly impacted by various factors. The following matters had, or are expected to have, a significant impact on our liquidity:

Cash from our accounts receivable and inventory, net of accounts payable, increased by approximately \$304 million for 2016, as reflected in our consolidated statements of cash flows. We expect volatility in our working capital components to continue.

During 2017, we expect to spend approximately \$400 million on capital expenditures. Our future expenditures include certain EHS maintenance and upgrades, and periodic maintenance and repairs applicable to major units of manufacturing facilities. We expect to fund this spending with cash provided by operations.

During 2016, we made contributions to our pension and postretirement benefit plans of \$74 million. During 2017, we expect to contribute an additional amount of approximately \$116 million to these plans.

We are involved in a number of cost reduction programs for which we have established restructuring accruals. As of December 31, 2016, we had \$89 million of accrued restructuring costs from continuing operations, of which \$43 million is classified as current. For further discussion of these plans and the costs involved, see "Note 12. Restructuring, Impairment and Plant Closing costs" to our consolidated financial statements.

Further, we expect to incur additional restructuring charges for recently identified plans for business improvements in our Pigments and Additives segment expected to be completed by the end of 2018. We expect these additional business improvements to provide additional contributions to adjusted EBITDA beginning in 2017.

The payment of dividends is a business decision made by our Board of Directors from time to time based on our earnings, financial position and prospects, and such other considerations as our Board of Directors considers relevant. Historically, our Board of Directors has declared quarterly cash dividends of \$0.125 per share of common stock. While management currently expects that the Company will continue to pay the quarterly cash dividend, its dividend practice may change at any time.

In connection with the sale of our European surfactants business, we recognized a pre-tax gain in the fourth quarter of 2016 of \$98 million which was reflected in other operating income, net on the accompanying consolidated statements of operations. For more information, see "Note 3. Business Combination and Dispositions Sale of European Surfactants Manufacturing Facilities" to our consolidated financial statements.

On December 30, 2016, we made an early repayment of \$260 million on our 2015 Extended Term Loan B using proceeds from the sale of the European surfactants business and existing cash. See "Note 15. Debt Direct and Subsidiary Debt Amendment to the Credit Agreement."

On both July 22, 2016 and September 30, 2016, Huntsman International prepaid \$100 million of the 2015 Extended Term Loan B. In connection with the \$200 million prepayments on our term loan, we recognized a loss on early extinguishment of debt of \$1 million in the third quarter of 2016. See "Note 15. Debt Direct and Subsidiary Debt Senior Credit Facilities" to our consolidated financial statements.

In connection with the proposed spin-off of our Pigments and Additives business into a separate, publicly traded company, Venator, we anticipate that Venator will enter into new financing arrangements in anticipation of the spin-off. After Venator has entered into its new financing arrangements but immediately prior to separation, it will make a cash distribution to Huntsman International and, at separation, Venator will assume various Huntsman International

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

indebtedness. We anticipate that Venator will fund such cash distribution and will repay such assumed indebtedness with the proceeds of its new financing arrangement.

During 2017, we expect to spend approximately \$100 million of non-recurring costs related to the proposed spin-off of our Pigments and Additives business, including costs for capital expenditures and financing. For more information see "Note 4. Separation of Pigments and Additives Business" to our consolidated financial statements.

On November 18, 2016, we entered into a new \$350 million term loan B facility due 2021 ("2021 Term Loan B") and a new \$1,375 million term loan B facility due 2023 ("2023 Term Loan B"). Proceeds from the new term loans were used to repay in full our 2014 term loan B facility due 2021 ("2014 Term Loan B") and our 2016 Term Loan B. As a result of this refinancing, we extended \$829 million of term loan maturities from 2021 to 2023 and did not increase our overall indebtedness.

On January 30, 2017, our titanium dioxide manufacturing facility in Pori, Finland experienced fire damage and is currently not operational. We do not currently have an estimated time frame for how long the facility will be off line, but we are committed to repairing the facility as quickly as possible. The Pori facility has a nameplate capacity of 130,000 metric tons, which represents approximately 15% of our total titanium dioxide capacity and approximately 10% of total European titanium dioxide demand. The site is insured for property damage as well as business interruption losses. According to our insurance policies, the respective retention levels (deductibles) for physical damage and business interruption are \$15 million and 60 days, respectively. On February 9, 2017, we received a €50 million (approximately \$52 million) payment from our insurer as an initial partial progress payment towards the overall pending claim.

During 2017 we expect to receive a cash benefit of approximately \$90 million related to overpayments of prior year tax payments. We expect to receive this refund in the first half of 2017.

As of December 31, 2016, we had \$60 million classified as current portion of debt, scheduled Senior Credit Facilities amortization payments totaling \$18 million, debt at our variable interest entities of \$14 million, and certain other short-term facilities and scheduled amortization payments totaling \$28 million. Although we cannot provide assurances, we intend to renew, repay or extend the majority of these short-term facilities in the next twelve months.

As of December 31, 2016, we had approximately \$383 million of cash and cash equivalents, including restricted cash, held by our foreign subsidiaries, including our variable interest entities. Additionally, we have material intercompany debt obligations owed to us by our non-U.S. subsidiaries. We intend to use cash held in our foreign subsidiaries to fund our local operations. Nevertheless, we could repatriate cash as dividends or as repayments of intercompany debt. If foreign cash were repatriated as dividends, the dividends could be subject to U.S. federal and state income taxes without any offsetting foreign tax credit relief. At present, we estimate that we will generate sufficient cash in our U.S. operations, together with the payments of intercompany debt if necessary, to meet our cash needs in the U.S and we do not expect to repatriate cash to the U.S. as dividends. Cash held by certain foreign subsidiaries, including our variable interest entities, may also be subject to changing monetary policies of governments, legal restrictions, including those arising from the interests of our partners, which could limit the amounts available for repatriation.

### **CAPITAL RESOURCES**

We are now commissioning a new production facility in Augusta, Georgia for the synthesis of iron oxide pigments, which we purchased from Rockwood. During commissioning, the facility has

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

experienced delays producing products at the expected specifications and quantities, causing us to question the capabilities of the Augusta technology. Based on the facility's performance during the commissioning process, we have concluded that production capacity at our Augusta facility will be substantially lower than originally anticipated. On February 6, 2017, we filed a lawsuit against Rockwood, Albemarle Corporation (as Rockwood's successor) and certain former Rockwood executives to recover damage for fraud and breach of contract involving the Augusta technology.

### **Contractual Obligations and Commercial Commitments**

Our obligations under long-term debt (including the current portion), lease agreements and other contractual commitments as of December 31, 2016 are summarized below (dollars in millions):

	2017	2018 - 2019	2020 - 2021	After 2021	Total
Long-term debt, including current portion	\$ 60	\$ 611	\$ 1,538	\$ 1,986	\$ 4,195
Interest(1)	191	358	276	122	947
Operating leases(2)	82	138	113	177	510
Purchase commitments(3)	1,636	1,579	338	1,063	4,616
Total(4)(5)	\$ 1,969	\$ 2,686	\$ 2,265	\$ 3,348	\$ 10,268

- 
- (1) Interest calculated using interest rates as of December 31, 2016 and contractual maturity dates assuming no refinancing or extension of debt instruments.
- (2) Future minimum lease payments have not been reduced by minimum sublease rentals of \$2 million due in the future under noncancelable subleases.
- (3) We have various purchase commitments extending through 2029 for materials, supplies and services entered into in the ordinary course of business. Included in the purchase commitments table above are contracts which require minimum volume purchases that extend beyond one year or are renewable annually and have been renewed for 2017. Certain contracts allow for changes in minimum required purchase volumes in the event of a temporary or permanent shutdown of a facility. To the extent the contract requires a minimum notice period, such notice period has been included in the above table. The contractual purchase price for substantially all of these contracts is variable based upon market prices, subject to annual negotiations. We have estimated our contractual obligations by using the terms of our current pricing for each contract. We also have a limited number of contracts which require a minimum payment even if no volume is purchased. We believe that all of our purchase obligations will be utilized in our normal operations. For the years ended December 31, 2016, 2015 and 2014, we made minimum payments of \$2 million, nil and nil, respectively, under such take or pay contracts without taking the product.
- (4) Totals do not include commitments pertaining to our pension and other postretirement obligations. Our estimated future contributions to our pension and postretirement plans are as follows (dollars in millions):

	2017	2018 - 2019	2020 - 2021	5-Year Average Annual
Pension plans	\$ 108	\$ 222	\$ 231	\$ 107
Other postretirement obligations	8	16	16	8

- (5) The above table does not reflect expected tax payments and unrecognized tax benefits due to the inability to make reasonably reliable estimates of the timing and amount of payments. For additional discussion on unrecognized tax benefits, see "Note 19. Income Taxes" to our consolidated financial statements.

**Off-Balance Sheet Arrangements**

No off-balance sheet arrangements exist at this time.

Table of Contents

**RESTRUCTURING, IMPAIRMENT AND PLANT CLOSING COSTS**

Since the Rockwood Acquisition, our Pigments and Additives segment has been involved in a cost reduction program expected to reduce costs by approximately \$140 million and improve its global competitiveness. In addition, we have announced a capacity reduction at our titanium dioxide manufacturing facility in Calais, France expected to generate approximately \$35 million of annual savings. The cost savings from this cost reduction program were achieved during the first half of 2016. Further, we expect to incur additional restructuring charges for recently identified plans for business improvements in our Pigments and Additives segment expected to be completed by the end of 2018. We expect these additional business improvements to provide additional contributions to adjusted EBITDA beginning in 2017.

For further discussion of these and other restructuring plans and the costs involved, see "Note 12. Restructuring, Impairment and Plant Closing Costs" to our consolidated financial statements.

**LEGAL PROCEEDINGS**

For a discussion of legal proceedings, see "Note 20. Commitments and Contingencies Legal Matters" to our consolidated financial statements.

**ENVIRONMENTAL, HEALTH AND SAFETY MATTERS**

As noted above in "Part I. Item 1. Business Environmental, Health and Safety Matters" and "Part I. Item 1A. Risk Factors," we are subject to extensive environmental regulations, which may impose significant additional costs on our operations in the future. While we do not expect any of these enactments or proposals to have a material adverse effect on us in the near term, we cannot predict the longer-term effect of any of these regulations or proposals on our future financial condition. For a discussion of environmental, health and safety matters, see "Note 21. Environmental, Health and Safety Matters" to our consolidated financial statements.

**RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS**

For a discussion of recently issued accounting pronouncements, see "Note 2. Summary of Significant Accounting Policies Recently Issued Accounting Pronouncements" to our consolidated financial statements.

**CRITICAL ACCOUNTING POLICIES**

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make judgments, estimates and assumptions that affect the reported amounts in our consolidated financial statements. Our significant accounting policies are summarized in "Note 2. Summary of Significant Accounting Policies" to our consolidated financial statements. Summarized below are our critical accounting policies:

**Employee Benefit Programs**

We sponsor several contributory and non-contributory defined benefit plans, covering employees primarily in the U.S., the U.K., The Netherlands, Belgium and Switzerland, but also covering employees in a number of other countries. We fund the material plans through trust arrangements (or local equivalents) where the assets are held separately from us. We also sponsor unfunded postretirement plans which provide medical and, in some cases, life insurance benefits covering certain employees in the U.S., Canada and South Africa. Amounts recorded in our consolidated financial statements are recorded based upon actuarial valuations performed by various independent actuaries. Inherent in these valuations are numerous assumptions regarding expected long-term rates of return on



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

plan assets, discount rates, compensation increases, mortality rates and health care cost trends. These assumptions are described in "Note 18. Employee Benefit Plans" to our consolidated financial statements.

Management, with the advice of actuaries, uses judgment to make assumptions on which our employee pension and postretirement benefit plan obligations and expenses are based. The effect of a 1% change in three key assumptions is summarized as follows (dollars in millions):

Assumptions	Statement of Operations(1)	Balance Sheet Impact(2)
Discount rate		
1% increase	\$ (37)	\$ (588)
1% decrease	48	662
Expected long-term rates of return on plan assets		
1% increase	(37)	
1% decrease	37	
Rate of compensation increase		
1% increase	11	83
1% decrease	(11)	(72)

(1) Estimated increase (decrease) on 2016 net periodic benefit cost

(2) Estimated increase (decrease) on December 31, 2016 pension and postretirement liabilities and accumulated other comprehensive loss

### **Goodwill**

We test our goodwill for impairment at least annually (at the beginning of the third quarter) and when events and circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Goodwill has been assigned to reporting units for purposes of impairment testing. Approximately 69% of our goodwill balance relates to our Advanced Materials reporting unit. The remaining goodwill relates to three other reporting units.

Fair value is estimated using the market approach, as well as the income approach based on discounted cash flow projections. The estimated fair values of our reporting units are dependent on several significant assumptions including, among others, market information, operating results, earnings projections and anticipated future cash flows.

We tested goodwill for impairment at the beginning of the third quarter of 2016 as part of the annual impairment testing procedures and determined that no goodwill impairment existed. Our most recent fair value determination resulted in an amount that exceeded the carrying amounts of all reporting units by a significant margin.

### **Income Taxes**

We use the asset and liability method of accounting for income taxes. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial and tax reporting purposes. We evaluate deferred tax assets to determine whether it is more likely than not that they will be realized. Valuation allowances are reviewed on a tax jurisdiction basis to analyze whether there is sufficient positive or negative evidence to support a change in judgment about the realizability of the related deferred tax assets for each jurisdiction. These conclusions require significant judgment. In evaluating the objective evidence that historical results provide, we consider the cyclical nature of businesses and cumulative income or losses during the applicable period. Cumulative losses incurred over the period limits our ability to consider other subjective

Table of Contents

evidence such as our projections for the future. Changes in expected future income in applicable jurisdictions could affect the realization of deferred tax assets in those jurisdictions. As of December 31, 2016, we had total valuation allowances of \$757 million. See "Note 19. Income Taxes" to our consolidated financial statements for more information regarding our valuation allowances.

For non-U.S. entities that were not treated as branches for U.S. tax purposes, we do not provide for income taxes on the undistributed earnings of these subsidiaries that are reinvested and, in the opinion of management, will continue to be reinvested indefinitely. We have material intercompany debt obligations owed by our non-U.S. subsidiaries to the U.S. We do not intend to repatriate earnings to the U.S. via dividend based on estimates of future domestic cash generation, combined with the ability to return cash to the U.S. through payments of intercompany debt owed by our non-U.S. subsidiaries to the U.S. To the extent that cash is required in the U.S., rather than repatriate earnings to the U.S. via dividend we will utilize our intercompany debt. If any earnings were repatriated via dividend, we may need to accrue and pay taxes on the distributions. As discussed in "Note 19. Income Taxes" to our consolidated financial statements, we made a distribution of a portion of our earnings in 2015 when the amount of foreign tax credits associated with the distribution was greater than the amount of tax otherwise due. The undistributed earnings of foreign subsidiaries with positive earnings that are deemed to be permanently invested were approximately \$390 million at December 31, 2016. It is not practicable to determine the unrecognized deferred tax liability on those earnings because of the significant assumptions necessary to compute the tax.

Accounting for uncertainty in income taxes prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The application of income tax law is inherently complex. We are required to determine if an income tax position meets the criteria of more-likely-than-not to be realized based on the merits of the position under tax law, in order to recognize an income tax benefit. This requires us to make significant judgments regarding the merits of income tax positions and the application of income tax law. Additionally, if a tax position meets the recognition criteria of more-likely-than-not we are required to make judgments and apply assumptions in order to measure the amount of the tax benefits to recognize. These judgments are based on the probability of the amount of tax benefits that would be realized if the tax position was challenged by the taxing authorities. Interpretations and guidance surrounding income tax laws and regulations change over time. As a consequence, changes in assumptions and judgments can materially affect amounts recognized in our consolidated financial statements.

**Long-Lived Assets**

The useful lives of our property, plant and equipment are estimated based upon our historical experience, engineering estimates and industry information and are reviewed when economic events indicate that we may not be able to recover the carrying value of the assets. The estimated lives of our property range from 3 to 50 years and depreciation is recorded on the straight-line method. Inherent in our estimates of useful lives is the assumption that periodic maintenance and an appropriate level of annual capital expenditures will be performed. Without on-going capital improvements and maintenance, the productivity and cost efficiency declines and the useful lives of our assets would be shorter.

Management uses judgment to estimate the useful lives of our long-lived assets. At December 31, 2016, if the estimated useful lives of our property, plant and equipment had either been one year greater or one year less than their recorded lives, then depreciation expense for 2016 would have been approximately \$35 million less or \$41 million greater, respectively.

We are required to evaluate the carrying value of our long-lived tangible and intangible assets whenever events indicate that such carrying value may not be recoverable in the future or when

Table of Contents

management's plans change regarding those assets, such as idling or closing a plant. We evaluate impairment by comparing undiscounted cash flows of the related asset groups that are largely independent of the cash flows of other asset groups to their carrying values. Key assumptions in determining the future cash flows include the useful life, technology, competitive pressures, raw material pricing and regulations. In connection with our asset evaluation policy, we reviewed all of our long-lived assets for indicators that the carrying value may not be recoverable. During 2016, we recorded an impairment charge of \$1 million related to the impairment of our Pigments and Additives South African asset group. See "Note 12. Restructuring, Impairment and Plant Closing Costs" to our consolidated financial statements.

**Restructuring and Plant Closing Costs**

We have recorded restructuring charges in recent periods in connection with closing certain plant locations, workforce reductions and other cost savings programs in each of our business segments. These charges are recorded when management has committed to a plan and incurred a liability related to the plan. Estimates for plant closing costs include the write-off of the carrying value of the plant, any necessary environmental and/or regulatory costs, contract termination and demolition costs. Estimates for workforce reductions and other costs savings are recorded based upon estimates of the number of positions to be terminated, termination benefits to be provided and other information, as necessary. Management evaluates the estimates on a quarterly basis and will adjust the reserve when information indicates that the estimate is above or below the currently recorded estimate. For further discussion of our restructuring activities, see "Note 12. Restructuring, Impairment and Plant Closing Costs" to our consolidated financial statements.

**Contingent Loss Accruals**

Environmental remediation costs for our facilities are accrued when it is probable that a liability has been incurred and the amount can be reasonably estimated. Estimates of environmental reserves require evaluating government regulation, available technology, site-specific information and remediation alternatives. We accrue an amount equal to our best estimate of the costs to remediate based upon the available information. The extent of environmental impacts may not be fully known and the processes and costs of remediation may change as new information is obtained or technology for remediation is improved. Our process for estimating the expected cost for remediation considers the information available, technology that can be utilized and estimates of the extent of environmental damage. Adjustments to our estimates are made periodically based upon additional information received as remediation progresses. For further information, see "Note 21. Environmental, Health and Safety Matters" to our consolidated financial statements.

We are subject to legal proceedings and claims arising out of our business operations. We routinely assess the likelihood of any adverse outcomes to these matters, as well as ranges of probable losses. A determination of the amount of the reserves required, if any, for these contingencies is made after analysis of each known claim. We have an active risk management program consisting of numerous insurance policies secured from many carriers. These policies often provide coverage that is intended to minimize the financial impact, if any, of the legal proceedings. The required reserves may change in the future due to new developments in each matter. For further information, see "Note 20. Commitments and Contingencies Legal Matters" to our consolidated financial statements.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are exposed to market risks, such as changes in interest rates, foreign exchange rates and commodity prices. From time to time, we enter into transactions, including transactions involving derivative instruments, to manage certain of these exposures. We also hedge our net investment in

Table of Contents

certain European operations. Changes in the fair value of the hedge in the net investment of certain European operations are recorded in accumulated other comprehensive loss.

**INTEREST RATE RISKS**

Through our borrowing activities, we are exposed to interest rate risk. Such risk arises due to the structure of our debt portfolio, including the mix of fixed and floating interest rates. Actions taken to reduce interest rate risk include managing the mix and rate characteristics of various interest bearing liabilities, as well as entering into interest rate derivative instruments.

From time to time, we may purchase interest rate swaps and/or other derivative instruments to reduce the impact of changes in interest rates on our floating-rate long-term debt. Under interest rate swaps, we agree with other parties to exchange, at specified intervals, the difference between fixed-rate and floating-rate interest amounts calculated by reference to an agreed notional principal amount.

Huntsman International has entered into several interest rate contracts to hedge the variability caused by monthly changes in cash flow due to associated changes in LIBOR under our Senior Credit Facilities. As of December 31, 2016 and December 31, 2015, we had \$100 million notional value of interest rate hedges with a fixed rate of 2.5%. These swaps are designated as cash flow hedges and the effective portion of the changes in the fair value of the swaps are recorded in other comprehensive loss. The fair value of these hedges on December 31, 2016 and December 31, 2015 was \$1 million and \$2 million, respectively, and was recorded as other current liabilities on our consolidated balance sheets. These hedges will expire in April 2017. For the years ended December 31, 2016 and 2015, the changes in accumulated other comprehensive loss associated with these cash flow hedging activities were gains of approximately \$2 million and \$1 million, respectively.

Beginning in 2009, AAC entered into a 12-year floating to fixed interest rate contract providing for a receipt of LIBOR interest payments for a fixed payment of 5.02%. In connection with the consolidation of AAC as of July 1, 2010, the interest rate contract is now included in our consolidated results. See "Note 8. Variable Interest Entities" to our consolidated financial statements. The notional amount of the swap as of December 31, 2016 was \$18 million, and the interest rate contract is not designated as a cash flow hedge. As of December 31, 2016 and 2015, the fair value of the swap was \$1 million and \$2 million, respectively, and was recorded as other noncurrent liabilities on our consolidated balance sheets. For 2016 and 2015, we recorded a reduction of interest expense of \$1 million each due to changes in fair value of the swap.

During 2017, accumulated other comprehensive loss of nil is expected to be reclassified to earnings. The actual amount that will be reclassified to earnings over the next twelve months may vary from this amount due to changing market conditions. We would be exposed to credit losses in the event of nonperformance by a counterparty to our derivative financial instruments. We anticipate, however, that the counterparties will be able to fully satisfy their obligations under the contracts. Market risk arises from changes in interest rates.

**FOREIGN EXCHANGE RATE RISK**

Our cash flows and earnings are subject to fluctuations due to exchange rate variation. Our revenues and expenses are denominated in various currencies. We enter into foreign currency derivative instruments to minimize the short-term impact of movements in foreign currency rates. Where practicable, we generally net multicurrency cash balances among our subsidiaries to help reduce exposure to foreign currency exchange rates. Certain other exposures may be managed from time to time through financial market transactions, principally through the purchase of spot or forward foreign exchange contracts (generally with maturities of three months or less). We do not hedge our currency exposures in a manner that would eliminate the effect of changes in exchange rates on our cash flows and earnings. As of both December 31, 2016 and 2015, we had approximately \$176 million notional

Table of Contents

amount (in U.S. dollar equivalents) outstanding in foreign currency contracts with a term of approximately one month.

In November 2014, we entered into two five year cross-currency interest rate contracts and one eight year cross-currency interest rate contract to swap an aggregate notional \$200 million for an aggregate notional €161 million. The swap is designated as a hedge of net investment for financial reporting purposes. Under the cross-currency interest rate contract, we will receive fixed U.S. dollar payments of \$5 million semiannually on May 15 and November 15 (equivalent to an annual rate of 5.125%) and make interest payments of approximately €3 million (equivalent to an annual rate of approximately 3.6%). As of December 31, 2016, the fair value of this swap was \$29 million and was recorded in noncurrent assets.

In March 2010, we entered into three five year cross-currency interest rate contracts to swap an aggregate notional \$350 million for an aggregate notional €255 million. This swap was designated as a hedge of net investment for financial reporting purposes. During the three months ended March 31, 2015, we terminated these cross-currency interest rate contracts and received \$66 million in payments from the counterparties.

A portion of our debt is denominated in euros. We also finance certain of our non-U.S. subsidiaries with intercompany loans that are, in many cases, denominated in currencies other than the entities' functional currency. We manage the net foreign currency exposure created by this debt through various means, including cross-currency swaps, the designation of certain intercompany loans as permanent loans because they are not expected to be repaid in the foreseeable future and the designation of certain debt and swaps as net investment hedges.

Foreign currency transaction gains and losses on intercompany loans that are not designated as permanent loans are recorded in earnings. Foreign currency transaction gains and losses on intercompany loans that are designated as permanent loans are recorded in other comprehensive (loss) income. From time to time, we review such designation of intercompany loans.

We review our non-U.S. dollar denominated debt and derivative instruments to determine the appropriate amounts designated as hedges. As of December 31, 2016, we have designated approximately €651 million (approximately \$677 million) of euro-denominated debt and cross-currency interest rate contracts as a hedge of our net investment. For the years ended December 31, 2016, 2015 and 2014, the amount of gain recognized on the hedge of our net investment was \$27 million, \$68 million and \$97 million, respectively, and was recorded in other comprehensive (loss) income.

## **COMMODITY PRICES RISK**

Inherent in our business is exposure to price changes for several commodities. However, our exposure to changing commodity prices is somewhat limited since the majority of our raw materials are acquired at posted or market related prices, and sales prices for many of our finished products are at market related prices which are largely set on a monthly or quarterly basis in line with industry practice. Consequently, we do not generally hedge our commodity exposures. For further information, see "Note 16. Derivative Instruments and Hedging Activities Commodity Prices Risk" to our consolidated financial statements.

## **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

Our consolidated financial statements required by this item are included on the pages immediately following the Index to Consolidated Financial Statements appearing on page F-1.

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

There have been no changes in our independent accountants, Deloitte & Touche LLP, or disagreements with them on matters of accounting or financial disclosure.

Table of Contents

**ITEM 9A. CONTROLS AND PROCEDURES**

**EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES**

Our management, with the participation of our chief executive officer and chief financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2016. Based on this evaluation, our chief executive officer and chief financial officer have concluded that, as of December 31, 2016, our disclosure controls and procedures were effective, in that they ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (2) accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

**CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING**

No changes to our internal control over financial reporting occurred during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act).

**MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control framework and processes for our Company and Huntsman International are designed to provide reasonable assurance to management, Huntsman International's Board of Managers and our Board of Directors regarding the reliability of financial reporting and the preparation of our consolidated financial statements in accordance with accounting principles generally accepted in the United States of America.

Our internal control over financial reporting for our Company and Huntsman International includes those policies and procedures that:

pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our Company and Huntsman International;

provide reasonable assurance that transactions are recorded properly to allow for the preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of our Company and Huntsman International are being made only in accordance with authorizations of management and Directors of our Company and Huntsman International;

provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our consolidated financial statements; and

provide reasonable assurance as to the detection of fraud.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changing conditions, effectiveness of internal control over financial reporting may vary over time.

Our management assessed the effectiveness of our internal control over financial reporting for our Company and Huntsman International and concluded that, as of December 31, 2016, such internal control is effective. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework (2013)* ("COSO").

Our independent registered public accountants, Deloitte & Touche LLP, with direct access to our Board of Directors through our Audit Committee, have audited our consolidated financial statements prepared by our Company and Huntsman International and have issued attestation reports on internal control over financial reporting for our Company and Huntsman International.



Table of Contents

**MANAGEMENT'S PROCESS TO ASSESS THE EFFECTIVENESS OF  
INTERNAL CONTROL OVER FINANCIAL REPORTING**

To comply with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, we completed a comprehensive compliance process to evaluate our internal control over financial reporting for our Company and Huntsman International. We involved employees at all levels of our Company during 2016 in training, performing and evaluating our internal controls.

Our management's conclusion on the effectiveness of internal control over financial reporting is based on a comprehensive evaluation and analysis of the five elements of COSO. Our management considered information from multiple sources as the basis its conclusion including self-assessments of the control activities within each work process, assessments of division-level and entity-level controls and internal control attestations from key external service providers, as well as from key management. In addition, our internal control processes contain self-monitoring mechanisms, and proactive steps are taken to correct deficiencies as they are identified. We also maintain an internal auditing program that independently assesses the effectiveness of internal control over financial reporting within each of the five COSO elements.

/s/ PETER R. HUNTSMAN

/s/ SEAN DOUGLAS

---

Peter R. Huntsman

---

Sean Douglas

*President and Chief Executive Officer*

*Executive Vice President and Chief Financial Officer*

February 15, 2017



Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of  
Huntsman Corporation and subsidiaries

We have audited the internal control over financial reporting of Huntsman Corporation and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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 included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedules as of and for the year ended December 31, 2016 of the Company and our report dated February 15, 2017 expressed an unqualified opinion on those financial statements and financial statement schedules.

/s/ DELOITTE & TOUCHE LLP  
Houston, Texas  
February 15, 2017

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Managers and Members of  
Huntsman International LLC and subsidiaries

We have audited the internal control over financial reporting of Huntsman International LLC and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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 included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2016 of the Company and our report dated February 15, 2017 expressed an unqualified opinion on those financial statements and financial statement schedule.

/s/ DELOITTE & TOUCHE LLP  
Houston, Texas  
February 15, 2017

Table of Contents

**ITEM 9B. OTHER INFORMATION**

None.

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information relating to our Directors (including identification of our Audit Committee's financial expert(s)) and executive officers will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference. See also the information regarding executive officers of the registrant set forth in Part I under the caption "Executive Officers of the Registrant" in reliance on General Instruction G to Form 10-K.

**Code of Ethics**

Our Company has adopted a code of ethics, as defined by Item 406(b) of Regulation S-K under the Exchange Act, that applies to our principal executive officer, principal financial officer and principal accounting officer or controller. A copy of the code of ethics is posted on our website, at [www.huntsman.com](http://www.huntsman.com). We intend to disclose any amendments to, or waivers from, our code of ethics on our website.

**ITEM 11. EXECUTIVE COMPENSATION**

Information relating to executive compensation and our equity compensation plans will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

Information with respect to beneficial ownership of our common stock by each Director and all Directors and officers of our Company as a group will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference.

Information relating to any person who beneficially owns in excess of 5 percent of the total outstanding shares of our common stock will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference.

Information with respect to compensation plans under which equity securities are authorized for issuance will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Information with respect to certain relationships and related transactions will be disclosed in the definitive Proxy Statement for our Annual Meeting of Stockholders and is incorporated herein by reference.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information with respect to principal accountant fees and services, and the disclosure of the Audit Committee's pre-approval policies and procedures are contained in the definitive Proxy Statement for our Annual Meeting of Stockholders and are incorporated herein by reference.

Table of Contents

**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a)

Documents filed with this report.

1.

Consolidated Financial Statements:

See Index to Consolidated Financial Statements on page F-1

2.

Financial Statement Schedules:

Other than as stated on the Index to Consolidated Financial Statements on page F-1 with respect to Schedule I and Schedule II, financial statement schedules are omitted because they are not required or are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

3.

Exhibits:

The exhibits to this report are listed on the Exhibit Index below.

(b)

Description of exhibits.

**EXHIBIT INDEX**

<b>Number</b>	<b>Description</b>
3.1	Amended and Restated Certificate of Incorporation of Huntsman Corporation (incorporated by reference to Exhibit 3.1 to our current report on Form 8-K filed on May 12, 2014)
3.2	Fifth Amended and Restated Bylaws of Huntsman Corporation dated as of December 21, 2016 (incorporated by reference to Exhibit 3.1 to our current report on Form 8-K filed on December 23, 2016)
4.1	Registration Rights Agreement dated as of February 10, 2005, by and among Huntsman Corporation and the stockholders signatory thereto (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on February 16, 2005 (File No. 001-32427))
4.2	Form of stock certificate of Huntsman Corporation (incorporated by reference to Exhibit 4.68 to amendment No. 3 to our registration statement on Form S-1 filed on February 8, 2005)
4.3	Form of Restricted Stock Unit Agreement for Outside Directors, effective for grants prior to February 6, 2008 (incorporated by reference to Exhibit 4.8 of our registration statement on Form S-8 filed on February 10, 2006)
4.4	Form of Restricted Stock Unit Agreement for Outside Directors, effective for grants from February 6, 2008 to September 21, 2010 (incorporated by reference to Exhibit 4.32 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)
4.5	Indenture, dated as of November 19, 2012, by and among Huntsman International LLC, the guarantors named therein and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed November 19, 2012)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
4.6	Form of 4.875% Senior Note due 2020 (included as Exhibit A to Exhibit 4.5) (incorporated by reference to Exhibit 4.2 to our current report on Form 8-K filed November 19, 2012)
4.7	Form of Notation of Guarantee (included as Exhibit D to Exhibit 4.5) (incorporated by reference to Exhibit 4.3 to our current report on Form 8-K filed November 19, 2012)
4.8	Indenture, dated as of December 23, 2013, by and among Huntsman International LLC, the guarantors named therein, Citibank, N.A., London Branch, as paying agent, registrar and transfer agent, and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed December 23, 2013)
4.9	Form of 5 <sup>1</sup> / <sub>8</sub> % Senior Note (included as Exhibit A to Exhibit 4.8) (incorporated by reference to Exhibit 4.2 to our current report on Form 8-K filed December 23, 2013)
4.10	Form of Notation of Guarantee (included as Exhibit D to Exhibit 4.8) (incorporated by reference to Exhibit 4.3 to our current report on Form 8-K filed December 23, 2013)
4.11	Indenture, dated as of November 13, 2014, by and among Huntsman International LLC, the guarantors named therein, and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on November 17, 2014)
4.12	Form of 5 <sup>1</sup> / <sub>8</sub> % Senior Note (included as Exhibit A to Exhibit 4.11) (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on November 17, 2014)
4.13	Form of Notation of Guarantee (included as Exhibit D to Exhibit 4.11) (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on November 17, 2014)
4.14	Indenture, dated as of March 31, 2015, by and among Huntsman International LLC, the guarantors named therein, Citibank, N.A., London Branch, as paying agent, transfer agent, registrar and authenticating agent, and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed on April 2, 2015)
4.15	Form of 4.25% Senior Notes due 2025 (included as Exhibit A to Exhibit 4.14) (incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed on April 2, 2015)
4.16	Form of Notation of Guarantee (included as Exhibit D to Exhibit 4.14) (incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed on April 2, 2015)
10.1	Employment Agreement with Anthony Hankins (incorporated by reference to Exhibit 10.27 to amendment No. 2 to our registration statement on Form S-1 filed on January 28, 2005)
10.2	Huntsman Corporation Stock Incentive Plan (incorporated by reference to Exhibit 10.19 to amendment No. 4 to our registration statement on Form S-1 filed on February 8, 2005)
10.3	Form of Nonqualified Stock Option Agreement, effective for grants prior to February 21, 2011 (incorporated by reference to Exhibit 10.20 to amendment No. 4 to our registration statement on Form S-1 filed on February 8, 2005)
10.4	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.25 to amendment No. 4 to our registration statement on Form S-1 filed on February 8, 2005)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.5	Credit Agreement dated August 16, 2005 among Huntsman International LLC, Deutsche Bank AG New York Branch as Administrative Agent and the other financial institutions named therein (incorporated by reference to Exhibit 10.1 to Huntsman International LLC's current report on Form 8-K filed August 22, 2005 (File No. 333-85141))
10.6	Consent and First Amendment to Credit Agreement dated December 12, 2005 among Huntsman International LLC, Deutsche Bank AG New York Branch as Administrative Agent and the other financial institutions named therein (incorporated by reference to Exhibit 10.1 to Huntsman International LLC's current report on Form 8-K filed December 27, 2005 (File No. 333-85141))
10.7	Amended and Restated Huntsman Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed December 30, 2005 (File No. 001-32427))
10.8	Huntsman Supplemental Executive MPP Plan (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed December 30, 2005 (File No. 001-32427))
10.9	Amended and Restated Huntsman Supplemental Savings Plan (incorporated by reference to Exhibit 10.3 to our current report on Form 8-K filed December 30, 2005 (File No. 001-32427))
10.10	Huntsman Outside Directors Elective Deferral Plan (incorporated by reference to Exhibit 10.4 to our current report on Form 8-K filed December 30, 2005 (File No. 001-32427))
10.11	Consent and Second Amendment to Credit Agreement and Amendment to Security Documents, dated June 30, 2006, by and among Huntsman International LLC, as Borrower, Deutsche Bank AG New York Branch, as Administrative Agent and Collateral Agent, and the other financial institutions party thereto (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on July 7, 2006 (File No. 001-32427))
10.12	Third Amendment to Credit Agreement dated April 19, 2007 by and among Huntsman International LLC, as Borrower, Deutsche Bank AG New York Branch, as Administrative Agent and Collateral Agent, and the other financial institutions party thereto (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on April 24, 2007 (File No. 001-32427))
10.13	First Amendment to Huntsman Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.32 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)
10.14	First Amendment to Huntsman Supplemental Executive MPP Plan (incorporated by reference to Exhibit 10.33 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)
10.15	First Amendment to Huntsman Supplemental Savings Plan (incorporated by reference to Exhibit 10.34 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)
10.16	Second Amendment to Huntsman Supplemental Savings Plan (incorporated by reference to Exhibit 10.35 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.17	First Amendment to Huntsman Outside Directors Elective Deferral Plan (incorporated by reference to Exhibit 10.36 to our annual report on Form 10-K filed on February 22, 2008) (File No. 001-32427)
10.18	Fourth Amendment to Credit Agreement, dated as of June 22, 2009, by and among Huntsman International LLC and Credit Suisse Securities (USA) LLC and Deutsche Bank Securities Inc. (incorporated by reference to Exhibit 10.3 to our current report on Form 8-K filed on June 23, 2009) (File No. 001-32427)
10.19	U.S. Receivables Loan Agreement dated as of October 16, 2009 among Huntsman Receivables Finance II LLC, Huntsman (Europe) BVBA, the several entities party thereto as lenders, the several financial institutions party thereto as funding agents, the several commercial paper conduits party thereto as conduit lenders, the several financial institutions party thereto as committed lenders, Wachovia Bank National Association, as administrative agent, and Wachovia Bank National Association, as collateral Agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on October 22, 2009) (File No. 001-32427)
10.20	U.S. Contribution Agreement dated as of October 16, 2009 between Huntsman International LLC and Huntsman Receivables Finance II LLC (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed on October 22, 2009) (File No. 001-32427)
10.21	European Receivables Loan Agreement dated as of October 16, 2009 between Huntsman Receivables Finance LLC, Huntsman (Europe) BVBA, the several entities party thereto as lenders, the several financial institutions party thereto as funding agents, Barclays Bank Plc, as administrative agent, and Barclays Bank Plc, as collateral agent (incorporated by reference to Exhibit 10.3 to our current report on Form 8-K filed on October 22, 2009) (File No. 001-32427)
10.22	European Contribution Agreement dated as of October 16, 2009 between Huntsman International LLC and Huntsman Receivables Finance LLC (incorporated by reference to Exhibit 10.4 to our current report on Form 8-K filed on October 22, 2009) (File No. 001-32427)
10.23	Fifth Amendment to Credit Agreement, dated as of March 9, 2010, by and among Huntsman International LLC, JPMorgan Chase Bank, N.A. and the other financial institutions party thereto (incorporated by reference to Exhibit 10.1 to our current report on Form 10-Q filed on May 7, 2010)
10.24	Certain exhibits and schedules to Exhibit A to the Fifth Amendment to Credit Agreement, dated as of March 9, 2010, which was previously filed as Exhibit 10.1 to our quarterly report on Form 10-Q filed May 7, 2010 (incorporated by reference to Exhibit 10.2 to our current report on Form 10-Q filed on November 4, 2010) (File No. 001-32427)
10.25	Second Amendment to Huntsman Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.38 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)
10.26	Third Amendment to Huntsman Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.39 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.27	Form of Restricted Stock Agreement effective for grants from February 2, 2011 to May 5, 2016 (incorporated by reference to Exhibit 10.40 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)
10.28	Form of Phantom Share Agreement effective for grants from February 2, 2011 to May 5, 2016 (incorporated by reference to Exhibit 10.41 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)
10.29	Form of Nonqualified Stock Option Agreement effective for grants from February 2, 2011 to May 5, 2016 (incorporated by reference to Exhibit 10.42 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)
10.30	Form of Restricted Stock Unit Agreement for Outside Directors effective for grants from February 2, 2011 to May 5, 2016 (incorporated by reference to Exhibit 10.43 to our annual report on Form 10-K filed on February 17, 2011) (File No. 001-32427)
10.31	Sixth Amendment, dated as of March 7, 2011, to the Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on March 9, 2011) (File No. 001-32427)
10.32	Master Amendment No. 2 to the U.S. Receivables Loan Agreement, U.S. Servicing Agreement and Transaction Documents dated as of April 18, 2011 (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on April 20, 2011) (File No. 001-32427)
10.33	Master Amendment No. 2 to the European Receivables Loan Agreement, European Servicing Agreement and Transaction Documents dated as of April 15, 2011 (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed on April 20, 2011) (File No. 001-32427)
10.34	Second Amendment to Huntsman Outside Directors Elective Deferral Plan (incorporated by reference to Exhibit 10.5 to our current report on Form 10-Q filed on May 5, 2011) (File No. 001-32427)
10.35	Third Amendment to Huntsman Outside Directors Elective Deferral Plan (incorporated by reference to Exhibit 10.6 to our current report on Form 10-Q filed on May 5, 2011) (File No. 001-32427)
10.36	Huntsman Corporation Stock Incentive Plan (amended and restated) (incorporated by reference to Exhibit 4.1 to our registration statement on Form S-8 filed on May 10, 2011) (File No. 001-32427)
10.37	Seventh Amendment, dated as of March 6, 2012, to Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on March 6, 2012)
10.38	Severance Agreement dated January 1, 2013 between Huntsman Corporation and Jon M. Huntsman (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on January 4, 2013)
10.39	Severance Agreement dated January 1, 2013 between Huntsman Corporation and Peter R. Huntsman (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed on January 4, 2013)



## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.40	First Amendment to the Huntsman Corporation Stock Incentive Plan (as amended and restated) (incorporated by reference to Exhibit 10.56 to our annual report on Form 10-K filed on February 12, 2013)
10.41	Eighth Amendment, dated as of March 11, 2013, to Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on March 12, 2013)
10.42	Master Amendment No. 3 to the U.S. Receivables Loan Agreement, U.S. Servicing Agreement and Transaction Documents dated as of April 29, 2013 (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on May 2, 2013)
10.43	Master Amendment No. 3 to the European Receivables Loan Agreement dated as of April 29, 2013 (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed on May 2, 2013)
10.44	Form of Notice of Award of Common Stock effective for grants from June 10, 2013 to May 5, 2016 (incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the quarter ended June 30, 2013)
10.45	Ninth Amendment, dated as of August 22, 2013, to Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on August 26, 2013)
10.46	Stock Purchase Agreement dated as of September 17, 2013 by and between Rockwood Specialties Group, Inc. and Huntsman International LLC (incorporated by reference to Exhibit 2.1 to our current report on Form 8-K filed on September 20, 2013) as amended by Amendment to Stock Purchase Agreement dated as of March 20, 2014 (incorporated by reference to Exhibit 2.1 to our quarterly report on Form 10-Q filed on April 29, 2014) as amended by Amendment No. 2 to Stock Purchase Agreement dated as of July 24, 2014 (incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q filed on July 30, 2014) as amended by Amendment No. 3 to Stock Purchase Agreement dated as of September 30, 2014 (incorporated by reference to Exhibit 2.2 to our quarterly report on Form 10-Q filed on October 27, 2014)
10.47	Tenth Amendment to Credit Agreement, Second Amendment to Collateral Security Agreement, Second Amendment to Pledge Agreement and Second Amendment to Subsidiary Guaranty, dated as of October 15, 2013, among Huntsman International LLC, the subsidiary guarantors party thereto, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on October 18, 2013)
10.48	Huntsman Executive Severance Plan (as amended and restated) (incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the quarter ended September 30, 2013)
10.49	Huntsman Corporation Stock Incentive Plan (amended and restated) (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on May 12, 2014)
10.50	Eleventh Amendment, dated as of August 12, 2014, to Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on August 15, 2014)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.51	Twelfth Amendment, dated as of August 13, 2014, to Credit Agreement, dated as of August 16, 2005, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on August 15, 2014)
10.52	Thirteenth Amendment to Credit Agreement, dated as of October 1, 2014, among Huntsman International LLC, the subsidiary guarantors party thereto, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on October 7, 2014)
10.53	Registration Rights Agreement, dated as of November 13, 2014, by and among Huntsman International LLC, the guarantors named therein and J.P. Morgan Securities LLC, as representative of the several purchasers (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on November 17, 2014)
10.54	Form of Performance Share Unit Award Agreement effective for grants from February 4, 2015 to May 5, 2016 (incorporated by reference to Exhibit 10.65 to our annual report on Form 10-K filed on February 18, 2015)
10.55	Amendment to the Huntsman Corporation Stock Incentive Plan Nonqualified Stock Option Agreement effective for grants through May 5, 2016 (incorporated by reference to Exhibit 10.66 to our annual report on Form 10-K filed on February 18, 2015)
10.56	Registration Rights Agreement, dated as of March 31, 2015, by and among Huntsman International LLC, the guarantors named therein and the several initial purchasers (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on April 2, 2015)
10.57	Master Amendment No. 4 to the European Receivables Loan Agreement, the Servicing Agreement, the Liquidation Servicer Agreement and the Transaction Documents, dated as of March 5, 2015 (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on March 9, 2015)
10.58	Master Amendment No. 4 to the U.S. Receivables Loan Agreement, U.S. Servicing Agreement and Transaction Documents and Waiver, dated as of March 30, 2015 (incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed on April 2, 2015)
10.59	Fourteenth Amendment to Credit Agreement, dated as of August 10, 2015, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on August 10, 2015)
10.60	Fifteenth Amendment to Credit Agreement, dated as of April 1, 2016, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on April 6, 2016)
10.61	Huntsman Corporation 2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on May 11, 2016)
10.62	Form of Nonqualified Stock Option Agreement effective for grants from May 5, 2016 to January 31, 2017 (incorporated by reference to Exhibit 99.1 to our registration statement on Form S-8 filed on May 31, 2016)

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Number	Description
10.63	Form of Restricted Stock Agreement effective for grants from May 5, 2016 to January 31, 2017 (incorporated by reference to Exhibit 99.2 to our registration statement on Form S-8 filed on May 31, 2016)
10.64	Form of Phantom Share Agreement effective for grants from May 5, 2016 to January 31, 2017 (incorporated by reference to Exhibit 99.3 to our registration statement on Form S-8 filed on May 31, 2016)
10.65	Sixteenth Amendment to Credit Agreement, dated as of November 15, 2016, among Huntsman International LLC, the lenders from time to time party thereto, and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed on November 16, 2016)
10.66*	Form of Phantom Share Agreement
10.67*	Form of Performance Share Unit Award Agreement
10.68*	Form of Nonqualified Stock Option Agreement
10.69*	Form of Restricted Stock Agreement
10.70*	Form of Stock Unit Agreement for Outside Directors
10.71*	Form of Notice of Award of Common Stock
21.1*	Subsidiaries of Huntsman Corporation
23.1*	Consent of Independent Registered Public Accounting Firm
31.1*	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.LAB*	XBRL Taxonomy Extension Label Linkbase
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Linkbase

\*

Filed herewith.

Table of Contents

**SIGNATURES**

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

Dated: February 15, 2017

HUNTSMAN CORPORATION  
HUNTSMAN INTERNATIONAL LLC

By: /s/ SEAN DOUGLAS

Sean Douglas

*Executive Vice President and Chief Financial Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Huntsman Corporation in the capacities indicated on the 15<sup>th</sup> day of February 2017.

/s/ JON M. HUNTSMAN

/s/ PETER R. HUNTSMAN

Jon M. Huntsman

*Executive Chairman of the Board and Director*

Peter R. Huntsman

*President, Chief Executive Officer and Director (Principal Executive Officer)*

/s/ SEAN DOUGLAS

/s/ RANDY W. WRIGHT

Sean Douglas

*Executive Vice President and Chief Financial Officer (Principal Financial Officer)*

Randy W. Wright

*Vice President and Controller (Authorized Signatory and Principal Accounting Officer)*

/s/ NOLAN D. ARCHIBALD

/s/ WAYNE A. REAUD

Nolan D. Archibald

*Chairman of the Nominating and Corporate Governance Committee and Director*

Wayne A. Reaud

*Chairman of the Litigation Committee and Director*

/s/ ALVIN V. SHOEMAKER

/s/ M. ANTHONY BURNS

Alvin V. Shoemaker

*Chairman of the Compensation Committee and Director*

M. Anthony Burns

*Chairman of the Audit Committee and Director*

/s/ MARY C. BECKERLE

/s/ SIR ROBERT MARGETTS

Mary C. Beckerle

*Director*

Sir Robert Margetts

*Director*

## Edgar Filing: Huntsman CORP - Form 10-K

### Table of Contents

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of Huntsman International in the capacities indicated on the 15<sup>th</sup> day of February 2017.

/s/ JON M. HUNTSMAN

/s/ PETER R. HUNTSMAN

---

Jon M. Huntsman  
*Chairman of the Board of Managers and Manager*

---

Peter R. Huntsman  
*President, Chief Executive Officer and Manager (Principal Executive Officer)*

/s/ SEAN DOUGLAS

/s/ RANDY W. WRIGHT

---

Sean Douglas  
*Executive Vice President, Chief Financial Officer and Manager (Principal Financial Officer)*

---

Randy W. Wright  
*Vice President and Controller (Authorized Signatory and Principal Accounting Officer)*

/s/ DAVID M. STRYKER

---

David M. Stryker  
*Executive Vice President, General Counsel Chief Compliance Officer and Secretary and Manager*

103

---

Table of Contents

**HUNTSMAN CORPORATION AND SUBSIDIARIES  
HUNTSMAN INTERNATIONAL LLC AND SUBSIDIARIES  
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

	<b>Page</b>
<b>Huntsman Corporation and Subsidiaries:</b>	
<b>Consolidated Financial Statements</b>	
<u>Report of Independent Registered Public Accounting Firm</u>	<u>F-2</u>
<u>Consolidated Balance Sheets as of December 31, 2016 and 2015</u>	<u>F-3</u>
<u>Consolidated Statements of Operations for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-4</u>
<u>Consolidated Statements of Comprehensive Loss for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-6</u>
<u>Consolidated Statements of Equity for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-7</u>
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-8</u>
<b>Huntsman International LLC and Subsidiaries:</b>	
<b>Consolidated Financial Statements</b>	
<u>Report of Independent Registered Public Accounting Firm</u>	<u>F-10</u>
<u>Consolidated Balance Sheets as of December 31, 2016 and 2015</u>	<u>F-11</u>
<u>Consolidated Statements of Operations for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-12</u>
<u>Consolidated Statements of Comprehensive Loss for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-13</u>
<u>Consolidated Statements of Equity for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-14</u>
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2016, 2015 and 2014</u>	<u>F-15</u>
<b>Huntsman Corporation and Subsidiaries and Huntsman International LLC and Subsidiaries:</b>	
<b>Notes to Consolidated Financial Statements</b>	<u>F-17</u>
<b>Schedules to Consolidated Financial Statements</b>	
<u>Schedule to Consolidated Financial Statements, Schedule I Condensed Financial Information of Registrant (Huntsman Corporation only)</u>	<u>F-110</u>
<u>Schedule to Consolidated Financial Statements, Schedule II Valuation and Qualifying Accounts (Huntsman Corporation and Subsidiaries and Huntsman International LLC and Subsidiaries)</u>	<u>F-115</u>

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of  
Huntsman Corporation and subsidiaries

We have audited the accompanying consolidated balance sheets of Huntsman Corporation and subsidiaries (the "Company") as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, equity, and cash flows for each of the three years in the period ended December 31, 2016. Our audits also included the financial statement schedules listed in the Index on page F-1. These financial statements and financial statement schedules are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedules based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Huntsman Corporation and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedules, when considered in relation to the basic consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 15, 2017 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP  
Houston, Texas  
February 15, 2017

Table of Contents**HUNTSMAN CORPORATION AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS****(In Millions, Except Share and Per Share Amounts)**

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents(a)	\$ 414	\$ 257
Restricted cash(a)	11	12
Accounts and notes receivable (net of allowance for doubtful accounts of \$27 and \$26, respectively), (\$437 and \$438 pledged as collateral, respectively)(a)	1,402	1,420
Accounts receivable from affiliates	33	29
Inventories(a)	1,344	1,692
Prepaid expenses	60	112
Other current assets(a)	291	312
<b>Total current assets</b>	<b>3,555</b>	<b>3,834</b>
Property, plant and equipment, net(a)	4,212	4,446
Investment in unconsolidated affiliates	332	347
Intangible assets, net(a)	66	86
Goodwill	121	116
Deferred income taxes	396	418
Other noncurrent assets(a)	507	573
<b>Total assets</b>	<b>\$ 9,189</b>	<b>\$ 9,820</b>
<b>LIABILITIES AND EQUITY</b>		
<b>Current liabilities:</b>		
Accounts payable(a)	\$ 1,071	\$ 1,034
Accounts payable to affiliates	31	27
Accrued liabilities(a)	616	686
Current portion of debt(a)	60	170
<b>Total current liabilities</b>	<b>1,778</b>	<b>1,917</b>
Long-term debt(a)	4,135	4,625
Notes payable to affiliates	1	1
Deferred income taxes	427	422
Other noncurrent liabilities(a)	1,381	1,226
<b>Total liabilities</b>	<b>7,722</b>	<b>8,191</b>
<b>Commitments and contingencies (Notes 20 and 21)</b>		
<b>Equity</b>		
<b>Huntsman Corporation stockholders' equity:</b>		
Common stock \$0.01 par value, 1,200,000,000 shares authorized, 250,802,175 and 249,483,541 issued and 236,370,347 and 237,080,026 outstanding in 2016 and 2015, respectively	3	3
Additional paid-in capital	3,447	3,407
Treasury stock, 12,607,223 and 11,162,454 shares in 2016 and 2015, respectively	(150)	(135)
Unearned stock-based compensation	(17)	(17)
Accumulated deficit	(325)	(528)
Accumulated other comprehensive loss	(1,671)	(1,288)
<b>Total Huntsman Corporation stockholders' equity</b>	<b>1,287</b>	<b>1,442</b>
Noncontrolling interests in subsidiaries	180	187
<b>Total equity</b>	<b>1,467</b>	<b>1,629</b>



## Edgar Filing: Huntsman CORP - Form 10-K

<b>Total liabilities and equity</b>	\$	9,189	\$	9,820
-------------------------------------	----	-------	----	-------

---

(a)

At December 31, 2016 and December 31, 2015, respectively, \$25 and \$34 of cash and cash equivalents, \$10 and \$12 of restricted cash, \$27 and \$26 of accounts and notes receivable (net), \$46 and \$54 of inventories, \$5 each of other current assets, \$284 and \$307 of property, plant and equipment (net), \$31 and \$36 of intangible assets (net), \$37 and \$38 of other noncurrent assets, \$90 and \$82 of accounts payable, \$34 and \$27 of accrued liabilities, \$14 and \$15 of current portion of debt, \$114 and \$137 of long-term debt, and \$76 and \$54 of other noncurrent liabilities from consolidated variable interest entities are included in the respective Balance Sheet captions above. See "Note 8. Variable Interest Entities."

See accompanying notes to consolidated financial statements.

F-3

---

Table of Contents**HUNTSMAN CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS**

(In Millions, Except Per Share Amounts)

	Year ended December 31,		
	2016	2015	2014
<b>Revenues:</b>			
Trade sales, services and fees, net	\$ 9,526	\$ 10,168	\$ 11,317
Related party sales	131	131	261
<b>Total revenues</b>	9,657	10,299	11,578
<b>Cost of goods sold</b>	7,979	8,451	9,659
<b>Gross profit</b>	1,678	1,848	1,919
<b>Operating expenses:</b>			
Selling, general and administrative	920	982	974
Research and development	152	160	158
Restructuring, impairment and plant closing costs	81	302	158
Spin-off separation expenses	18		
Other operating income, net	(140)	(1)	(4)
<b>Total expenses</b>	1,031	1,443	1,286
<b>Operating income</b>	647	405	633
Interest expense	(202)	(205)	(205)
Equity in income of investment in unconsolidated affiliates	5	6	6
Loss on early extinguishment of debt	(3)	(31)	(28)
Other income (loss), net	1	1	(2)
<b>Income from continuing operations before income taxes</b>	448	176	404
Income tax expense	(87)	(46)	(51)
<b>Income from continuing operations</b>	361	130	353
Loss from discontinued operations	(4)	(4)	(8)
<b>Net income</b>	357	126	345
Net income attributable to noncontrolling interests	(31)	(33)	(22)
<b>Net income attributable to Huntsman Corporation</b>	\$ 326	\$ 93	\$ 323

(continued)

Table of Contents**HUNTSMAN CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS (Continued)****(In Millions, Except Per Share Amounts)**

	Year ended December 31,		
	2016	2015	2014
<b>Basic income (loss) per share:</b>			
Income from continuing operations attributable to Huntsman Corporation common stockholders	\$ 1.40	\$ 0.40	\$ 1.36
Loss from discontinued operations attributable to Huntsman Corporation common stockholders, net of tax	(0.02)	(0.02)	(0.03)
Net income attributable to Huntsman Corporation common stockholders	\$ 1.38	\$ 0.38	\$ 1.33
Weighted average shares	236.3	242.8	242.1
<b>Diluted income (loss) per share:</b>			
Income from continuing operations attributable to Huntsman Corporation common stockholders	\$ 1.38	\$ 0.40	\$ 1.34
Loss from discontinued operations attributable to Huntsman Corporation common stockholders, net of tax	(0.02)	(0.02)	(0.03)
Net income attributable to Huntsman Corporation common stockholders	\$ 1.36	\$ 0.38	\$ 1.31
Weighted average shares	239.6	245.4	246.0
<b>Amounts attributable to Huntsman Corporation common stockholders:</b>			
Income from continuing operations	\$ 330	\$ 97	\$ 331
Loss from discontinued operations, net of tax	(4)	(4)	(8)
Net income	\$ 326	\$ 93	\$ 323
Dividends per share	\$ 0.50	\$ 0.50	\$ 0.50

See accompanying notes to consolidated financial statements.

Table of Contents

**HUNTSMAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS**  
(In Millions)

	Year ended December 31,		
	2016	2015	2014
<b>Net income</b>	\$ 357	\$ 126	\$ 345
<b>Other comprehensive loss, net of tax:</b>			
Foreign currency translations adjustments	(171)	(313)	(221)
Pension and other postretirement benefits adjustments	(219)	66	(271)
Other, net	(1)	7	1
<b>Other comprehensive loss, net of tax</b>	(391)	(240)	(491)
<b>Comprehensive loss</b>	(34)	(114)	(146)
Comprehensive income attributable to noncontrolling interests	(23)	(28)	(7)
<b>Comprehensive loss attributable to Huntsman Corporation</b>	\$ (57)	\$ (142)	\$ (153)

See accompanying notes to consolidated financial statements.

Table of Contents

**HUNTSMAN CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF EQUITY**  
(In Millions, Except Share Amounts)

**Huntsman Corporation Stockholders' Equity**

	Shares			Additional			Unearned		Accumulated	Accumulated	Noncontrolling	Total
	Common	Common	paid-in	Treasury	stock-based	Unearned	stock-based	Unearned	other	comprehensive	interests	equity
	stock	stock	capital	stock	compensation	deficit	deficit	loss	loss	in		
Beginning balance, January 1, 2014	240,401,442	2	3,305	(50)	(13)	(687)		(577)		149		2,129
Net income						323				22		345
Other comprehensive loss								(476)		(15)		(491)
Issuance of nonvested stock awards			15		(15)							
Vesting of stock awards	1,018,050		7									7
Recognition of stock-based compensation			10		14							24
Repurchase and cancellation of stock awards	(302,200)					(7)						(7)
Stock options exercised	2,299,687	1	47									48
Dividends paid to noncontrolling interests										(4)		(4)
Excess tax benefit related to stock-based compensation			1									1
Accrued and unpaid dividends						(1)						(1)
Cash received for a noncontrolling interest of a subsidiary										5		5
Acquisition of a business										16		16
Dividends declared on common stock						(121)						(121)
Balance, December 31, 2014	243,416,979	3	3,385	(50)	(14)	(493)		(1,053)		173		1,951
Net income						93				33		126
Other comprehensive loss								(235)		(5)		(240)
Issuance of nonvested stock awards			19		(19)							
Vesting of stock awards	1,037,743		7									7
Recognition of stock-based compensation			10		16							26
Repurchase and cancellation of stock awards	(304,340)					(7)						(7)
Stock options exercised	48,572		1									1
Dividends paid to noncontrolling interests										(14)		(14)
Excess tax benefit related to stock-based compensation			1									1
Cash paid for noncontrolling interest			(1)									(1)
Treasury stock repurchased	(7,118,928)		(15)	(85)								(100)
Dividends declared on common stock						(121)						(121)
Balance, December 31, 2015	237,080,026	3	3,407	(135)	(17)	(528)		(1,288)		187		1,629
Net income						326				31		357
Other comprehensive income								(383)		(8)		(391)
Issuance of nonvested stock awards			16		(16)							
Vesting of stock awards	914,081		2									2
Recognition of stock-based compensation			9		16							25
Repurchase and cancellation of stock awards	(256,468)					(3)						(3)
Stock options exercised	77,477		1									1
Dividends paid to noncontrolling interests										(30)		(30)
			(3)									(3)

## Edgar Filing: Huntsman CORP - Form 10-K

Excess tax benefit related to stock-based compensation																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--