W R GRACE & CO
Form 10-K
February 25, 2015
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K
ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2014
or
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number 1-13953
W. R. GRACE & CO.

Delaware	65-0773649
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

7500 Grace Drive, Columbia, Maryland 21044-4098
(Address of principal executive offices) (Zip code)
(410) 531-4000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	New York Stock Exchange, Inc.
Preferred Stock Purchase Rights	

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý No o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes o No ý
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulations S-K is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ý
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.

Large accelerated filer ý	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

The aggregate market value of W. R. Grace & Co. voting and non-voting common equity held by non-affiliates as of June 30, 2014 (the last business day of the registrant's most recently completed second fiscal quarter) based on the closing sale price of $94.53 as reported on the New York Stock Exchange was $7,062,016,032.

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes ý No o

At January 31, 2015, 72,599,833 shares of W. R. Grace & Co. Common Stock, $.01 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on May 7, 2015, are incorporated by reference into Part III.

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Grace®, the Grace® logo and, except as otherwise indicated, the other trademarks, service marks or trade names used in the text of this report are trademarks, service marks or trade names of operating units of W. R. Grace & Co. or its affiliates and/or subsidiaries. RESPONSIBLE CARE® is a trademark, registered in the United States and/or other countries, of the American Chemistry Council. UNIPOL® is a trademark of The Dow Chemical Company or an affiliated company of Dow. W. R. Grace & Co.—Conn. and/or its affiliates are licensed to use the UNIPOL® trademark in the area of polypropylene.

Unless the context otherwise indicates, in this document the terms "Grace," "we," "us," and "our" mean W. R. Grace & Co. and/or its consolidated subsidiaries and affiliates, and "the Company" means "W. R. Grace & Co."

Unless otherwise indicated, the contents of websites mentioned in this report are not incorporated by reference or otherwise made a part of this Report.

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PART I

Item 1. BUSINESS

BUSINESS OVERVIEW

W. R. Grace & Co. is engaged in the production and sale of specialty chemicals and specialty materials on a global basis through three operating segments: Grace Catalysts Technologies, which includes catalysts and related products and technologies used in refining, petrochemical and other chemical manufacturing applications; Grace Materials Technologies, which includes packaging technologies and engineered materials used in consumer, industrial, and pharmaceutical applications; and Grace Construction Products, which includes specialty construction chemicals and specialty building materials used in commercial, infrastructure and residential construction. We entered the specialty chemicals industry in 1954, when we acquired both the Dewey and Almy Chemical Company and the Davison Chemical Company. Grace is the successor to a company that began in 1854 and originally became a public company in 1953.

On February 5, 2015, we announced that the Grace Board of Directors has approved a plan to separate Grace into two independent, publicly traded companies. The two companies, to be named prior to closing, will be "New Grace," consisting of the Catalysts Technologies and Materials Technologies business segments (excluding the packaging products product group), and “New GCP,” consisting of the Construction Products business segment and the packaging products product group. We intend that the separation transaction will be a tax-free spin-off to the Company's stockholders for U.S. federal income tax purposes and we expect the transaction to be completed in approximately 12 months.

In 2001, Grace and 61 of its United States subsidiaries and affiliates filed voluntary petitions for reorganization under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware. On February 3, 2014, the joint plan of reorganization filed by Grace and certain other parties became effective, concluding Grace’s status as a debtor under Chapter 11.

On December 2, 2013, we completed the acquisition of the assets of the polypropylene licensing and catalysts business of The Dow Chemical Company for a cash purchase price of $500 million, subject to customary working capital and post-closing adjustments.

Our principal executive offices are located at 7500 Grace Drive, Columbia, Maryland 21044, telephone (410) 531-4000. As of December 31, 2014, we had approximately 6,500 global employees.

Grace Catalysts Technologies produces and sells catalysts and related products and technologies used in refining, petrochemical and other chemical manufacturing applications, as follows:

- Fluid catalytic cracking catalysts, also called FCC catalysts, that help to "crack" the hydrocarbon chain in distilled crude oil to produce transportation fuels, such as gasoline and diesel fuels, and other petroleum-based products; and FCC additives used to reduce sulfur in gasoline, maximize propylene production from refinery FCC units, and reduce emissions of sulfur oxides, nitrogen oxides and carbon monoxide from refinery FCC units.
- Hydroprocessing catalysts (HPC), most of which are marketed through our Advanced Refining Technologies LLC, or ART, joint venture with Chevron Products Company in which we hold a 50% economic interest, that are used in process reactors to upgrade heavy oils into lighter, more useful products by removing impurities such as nitrogen, sulfur and heavy metals, allowing less expensive feedstocks to be used in the petroleum refining process (ART is not consolidated in our financial statements, so ART's sales are excluded from our sales).
- Polyolefin catalysts and catalyst supports, also called specialty catalysts (SC), for the production of polypropylene and polyethylene thermoplastic resins, which can be customized to enhance the performance of a wide range of industrial and consumer end-use applications including high pressure pipe, geomembranes, food packaging, automotive parts, medical devices, and textiles; chemical catalysts used in a variety of industrial, environmental and consumer applications; and gas-phase polypropylene process technology, which provides our licensees with a reliable capability to manufacture polypropylene products for a broad array of end-use applications.

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Grace Materials Technologies produces and sells specialty materials, coatings and sealants and related products used in coatings, consumer, industrial, pharmaceutical, and packaging applications, as follows:

- Engineered materials, including silica-based and silica-alumina-based materials, used in:
  - Coatings and print media applications, including functional additives that provide matting effects and corrosion protection for industrial and consumer coatings and media and paper products to enhance quality in ink jet coatings.
  - Consumer applications, as a free-flow agent, carrier or processing aid in food and personal care products; as a toothpaste abrasive and thickener; and for the processing and stabilization of edible oils and beverages.
  - Industrial applications, such as tires and rubber, precision investment casting, refractory, insulating glass windows, adsorbents for use in petrochemical and natural gas processes and biofuels, various functions such as reinforcement, high temperature binding and moisture scavenging.
  - Pharmaceutical, life science and related applications including silica-based separation media, excipients and pharmaceutical intermediates; complementary purification products, chromatography consumables, and instruments; and CO_2 absorbents used in anesthesiology and mine safety applications.
- Packaging products, including can and closure sealants used to seal and enhance the shelf life of can and bottle contents; coatings for cans and closures that prevent metal corrosion, protect package contents from the influence of metal and ensure proper adhesion of sealing compounds; and scavenging technologies designed to reduce off-taste and extend the shelf-life of packaged products.

Grace Construction Products produces and sells construction chemicals and building materials, as follows:

- Specialty construction chemicals (SCC) used to improve the performance of portland cement and materials based on portland cement including:
  - Concrete admixtures that are sold to ready-mix, precast, and sprayed concrete producers to improve the rheology, workability, quality, durability and other engineering properties of concrete, reduce production costs and provide differentiated product offerings. Certain of our concrete admixtures include polyolefin fibers which are used to improve the strength of concrete and enables the replacement of steel reinforcement, in certain cases.
  - Cement additives that are sold to manufacturers of portland cement to improve energy efficiency in cement milling operations and to enhance the characteristics of finished cement. Our additives are also used by cement manufacturers to meet national standards for cement quality at lower production cost and with a reduced environmental footprint, including lower CO_2 emissions.
- Specialty building materials (SBM) used in both new construction and renovation/repair projects including:
  - Sheet and liquid membrane systems that protect commercial buildings, residential buildings and infrastructure from above- and below-grade water penetration and above-grade vapor and air penetration and underlayments used to protect sloped roofs from wind and water penetration.

Global Scope

We operate our business on a global scale with approximately 70% of our 2014 sales outside the United States. We conduct business in over 40 countries and in more than 50 currencies. We manage our operating segments on a global basis, to serve global markets. Currency fluctuations affect our reported results of operations, cash flows, and financial position.

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Strategy Overview

Our strategy is to increase enterprise value by profitably growing our specialty chemicals and specialty materials businesses in the global marketplace and achieving high levels of efficiency and cash flow. To meet these objectives, we plan to:

- invest in research and development activities, with the goal of introducing new high-performance, technically differentiated products and services and enhancing manufacturing processes and operations;
- expand sales and manufacturing into emerging regions, including China, India, other economies in Asia, Eastern Europe, the Middle East and Latin America;
- pursue selected acquisitions and alliances that complement our current product offerings or provide opportunities for faster penetration of desirable market or geographic segments; and
- continue our commitment to process and productivity improvements and cost-management, such as rigorous controls on working capital and capital spending, integration of functional support services worldwide, and programs for improving operations and supply chain management.

CHAPTER 11 CASES

On April 2, 2001, Grace, along with 61 of our United States subsidiaries and affiliates, filed voluntary petitions for reorganization under Chapter 11 of the United States Bankruptcy Code (the "Bankruptcy Code") in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Court"). Our non-U.S. subsidiaries and certain of our U.S. subsidiaries were not included in the bankruptcy filing. On February 3, 2014 (the "Effective Date"), the joint plan of reorganization (the "Joint Plan") filed by Grace and certain other parties became effective, concluding Grace’s status as a debtor under Chapter 11.

Under the Joint Plan, two asbestos trusts have been established and funded under Section 524(g) of the Bankruptcy Code. The order of the Bankruptcy Court confirming the Joint Plan contains a channeling injunction which provides that all pending and future asbestos-related personal injury claims and demands are to be channeled for resolution to an asbestos personal injury trust, the PI Trust, and all pending and future asbestos-related property damage claims and demands (PD Claims), including property damage claims related to Grace’s former attic insulation product, ZAI, are to be channeled to an asbestos property damage trust, the PD Trust. The PD Trust has two accounts that may not be commingled, the PD Account, in respect of non-ZAI PD Claims, and the ZAI PD Account, in respect of ZAI PD Claims. The trusts are the sole recourse for holders of asbestos-related claims; the channeling injunctions prohibit claimants from asserting such claims directly against Grace.

Under the Joint Plan, Grace is obligated to make future payments to the PD Trust in respect of PD Claims and ZAI PD Claims. The amounts that Grace is obligated to pay to the PD Trust in respect of non-ZAI PD Claims are not fixed. Grace is obligated to make payments to the PD Trust every six months in the amount of any non-ZAI PD Claims allowed by the Bankruptcy Court during the preceding six months plus interest (if applicable) and the amount of PD Trust expenses. Grace has accrued for those unresolved non-ZAI PD Claims that it believes are probable and estimable. Grace has not accrued for other unresolved or unasserted non-ZAI PD Claims as it does not believe that payment on any such claims is probable.

The amounts that Grace is obligated to pay to the PD Trust in respect of ZAI PD Claims include a fixed amount and a capped contingent amount. Grace is obligated to make a fixed payment of $30 million to the ZAI PD Account on the third anniversary of the Effective Date, i.e., February 3, 2017. Grace is also obligated to make up to 10 contingent payments of $8 million per year to the ZAI PD Account during the 20-year period beginning on the fifth anniversary of the Effective Date, with each such payment due only if the assets of the ZAI PD Account fall below $10 million during the preceding year. Grace has recorded a liability for the fixed deferred payment but has not recorded a liability for the contingent payments as it does not currently believe these payments are probable. These obligations to the PD Trust are secured by Grace's obligation to issue 77,372,257 shares of Company common stock to the PD Trust in the event of default.

In September 2014, Grace paid the PI Trust $632 million in settlement of Grace's deferred payment obligation. In February 2015, Grace purchased from the PI Trust the warrant to purchase 10 million shares of

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Company common stock issued to the PI Trust on the Effective Date for $490 million. Grace has no further financial obligations to the PI Trust.

See disclosure in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 2 (Chapter 11 and Joint Plan of Reorganization) to the Consolidated Financial Statements for a detailed description of the Chapter 11 cases and the Joint Plan.

PRODUCTS AND MARKETS

Specialty Chemicals and Materials Industry Overview

Specialty chemicals and specialty materials are high value-added products used as catalysts, intermediates, components, protectants or additives in a wide variety of products and applications. They are generally produced in relatively small volumes (compared with commodity chemicals) and must satisfy well-defined performance requirements and specifications. Specialty chemicals and specialty materials are often critical components of end products, catalysts for the production of end products and components used in end products. Consequently, they are tailored to meet customer needs, which generally results in a close relationship between the producer and the customer.

We focus our business on the following, which we believe are important competitive factors in the specialty chemicals and specialty materials industry:

- value-added products, technologies and services, sold at competitive prices;
- customer service, including rapid response to changing customer needs;
- technological leadership (resulting from investment in research and development and technical customer service); and
- reliability of product and supply.

We believe that our focus on these competitive factors enables us to deliver increased value to customers and competitive operating margins notwithstanding the increased customer service and research and development costs that this focus entails.

Grace Catalysts Technologies Operating Segment

Catalysts Technologies principally applies alumina, zeolite and inorganic support technologies in the design and manufacture of products to create significant value for our diverse customer base. Our customers include major oil refiners and plastics and chemicals manufacturers. We believe that our technological expertise provides a competitive advantage, allowing us to quickly design products that help our customers create value in their markets.

The following table sets forth Catalysts Technologies sales of similar products as a percentage of Grace total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Grace Revenue		Sales	% of Grace Revenue		Sales	% of Grace Revenue	
Refining Catalysts	$845.5	26.0	%	$832.4	27.2	%	$986.8	31.3	%
Polyolefin and Chemical Catalysts	401.3	12.4	%	291.6	9.5	%	281.3	8.9	%
Total Catalysts Technologies Revenue	$1,246.8	38.4	%	$1,124.0	36.7	%	$1,268.1	40.2	%

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The following table sets forth Catalysts Technologies sales by region as a percentage of Catalysts Technologies total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Catalysts Technologies Revenue		Sales	% of Catalysts Technologies Revenue		Sales	% of Catalysts Technologies Revenue	
North America	$431.7	34.6	%	$359.8	32.0	%	$382.1	30.1	%
Europe Middle East Africa	452.8	36.3	%	459.2	40.9	%	543.5	42.8	%
Asia Pacific	260.0	20.9	%	223.0	19.8	%	256.9	20.3	%
Latin America	102.3	8.2	%	82.0	7.3	%	85.6	6.8	%
Total Catalysts Technologies Revenue	$1,246.8	100.0	%	$1,124.0	100.0	%	$1,268.1	100.0	%

Grace Catalysts Technologies—Refining Catalysts

FCC Catalysts

We are a global leader in developing and manufacturing fluid catalytic cracking, or FCC, catalysts and additives that enable petroleum refiners to increase profits by improving product yields, value and quality. Our FCC products also enable refiners to reduce emissions from their FCC units and reduce sulfur content in the transportation fuels they produce. Oil refining is a highly specialized discipline and FCC catalysts must be tailored to meet local variations in crude oil feedstocks and a refinery's product mix. We work regularly with our customers to identify the most appropriate catalyst and additive formulations for their changing needs.

Since our customers are refiners, our business is highly dependent on the economics of the petroleum refining industry. In particular, demand for our FCC products is affected by refinery throughput, the type and quality of refinery feedstocks and the demand for transportation fuels and other refinery products, such as propylene.

Refinery throughput, or the extent to which refiners utilize the available capacity of their FCC units, is generally determined by demand for transportation fuels and petrochemical products and the availability of crude oil supply. In recent years, global economic growth, especially in emerging regions, has increased the global demand for transportation fuels and petrochemical products. Retail gasoline and diesel fuel prices and the level of economic activity has also directly influenced transportation fuel demand as have government policies that encourage the use of non-petroleum-based fuels, discourage the use of petroleum-based fuels and encourage greater vehicular fuel economy. In general, as a refinery utilizes more of its FCC capacity, it needs a greater amount of FCC catalyst.

Refinery crude oil feedstocks vary in quality from light and sweet to heavy and sour. Light and sweet feedstocks are typically more expensive than heavy and sour feedstocks and yield a greater proportion of high-value petroleum products. They also yield a lower proportion of residual oil, or "resid," which is generally the lowest value feedstock contained in crude oil. Although heavy and sour feedstocks with high resid content are typically less expensive than higher quality feedstocks, the processing of high-resid feedstocks is more difficult because these feedstocks have more impurities and higher boiling points. Our customers generally determine the feedstocks to be used in their refineries based on relative pricing and availability of various quality feedstocks. Refinery configuration and complexity also plays a role in feedstock selection; more complex refineries tend to process a higher proportion of heavy and sour feedstocks. In general, as a refinery uses more heavy and sour feedstocks, it uses a greater amount of FCC catalyst. In addition, refiners use special high value-added formulations of FCC catalysts for efficient refining of heavy and sour feedstocks. We have designed our MIDAS® catalyst, IMPACT® catalyst, NEKTOR™ catalyst, and GENESIS® catalyst product portfolios to enable our customers to increase the efficiency and yield of high-resid feedstock refining.

Heavy and sour crude oil has a relatively high level of metals, nitrogen and sulfur contamination. In recent years, many countries and regions, including the U.S., European Union, Japan, Russia, India and China have imposed or increased the regulatory limitations on the sulfur content of gasoline and diesel fuel. We have developed a portfolio of products designed to assist refiners in meeting their gasoline sulfur-reduction targets, including our D-PRISM® and GSR® additives and our SURCA® catalyst family.

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Within certain limits, refiners have the ability to adjust their relative output of transportation fuels versus petrochemicals. Global economic growth, especially in emerging regions, has increased the demand for plastics. As a result, some of our refinery customers have sought increased profits from petrochemicals by increasing the yield of propylene from their FCC units. Our ZSM-5-based technology, including our OLEFINSMAX® and OLEFINSULTRA® additive products, is designed to maximize the propylene output of FCC units.

Many U.S. petroleum refiners have entered into consent decrees with the U.S. Environmental Protection Agency (EPA) under which the refiners have agreed to reduce emissions of nitrogen oxides and sulfur oxides. The European Union has also imposed requirements on refineries with respect to nitrogen oxides and sulfur oxides emissions. FCC units are generally the largest emitters of these pollutants in a refinery. Our additives are designed to assist refineries in meeting their obligations to reduce these pollutants. Our Super DESOX® additive reduces sulfur oxides emissions from commercial FCC units. Our DENOX® additives are designed to achieve reductions in nitrogen oxides emissions comparable to those obtained from capital intensive alternatives available to a refinery, while our non-platinum-based combustion promoters XNOX® and CP®P enable refiners to control carbon monoxide emissions without increasing nitrogen oxides.

In response to volatility in the price of rare earths that are used in the manufacture of FCC catalysts, we have developed our REPLACER® product line of low- and no-rare earth FCC catalysts to mitigate the effects of changing rare earth prices without sacrificing performance.

Competition in FCC catalysts and additives is based on technology, product performance, customer service and price. Our principal global FCC catalyst competitors are Albemarle Corp., BASF, and SINOPEC. Our principal global competitors in FCC additives are BASF and Johnson Matthey. We also have multiple regional competitors for FCC catalysts and additives.

Hydroprocessing Catalysts

We market hydroprocessing catalysts primarily through ART, our joint venture with Chevron. We established ART to combine our technology with that of Chevron and to develop, market and sell hydroprocessing catalysts to customers in the petroleum refining industry worldwide.

As discussed above, our business is dependent on the economics of the petroleum industry. We are a leading supplier of hydroprocessing catalysts designed for processing high resid content feedstocks. We offer products for fixed-bed resid hydrotreating, on-stream catalyst replacement and ebullating-bed resid hydrocracking processes.

We also offer a full line of catalysts, customized for individual refiners, used in distillate hydrotreating to produce ultra-low sulfur content gasoline and diesel fuel, including our SMART CATALYST SYSTEM® and APART® catalyst systems. As discussed above, regulatory limitations on the sulfur content of gasoline and diesel fuel are becoming more common. These products are designed to help refiners to reduce the sulfur content of their products.

We have rights to sell hydrocracking and lubes hydroprocessing catalysts to licensees of Chevron Lummus Global and other petroleum refiners for unit refills. These rights allow us to streamline hydroprocessing catalyst supply and improve technical service for refining customers by establishing ART as their single point of contact for all their hydroprocessing catalyst needs.

Competition in the hydroprocessing catalyst industry is based on technology, product performance, customer service and price. Criterion, Albemarle, Haldor Topsoe, UOP and Axens are our leading global competitors in hydroprocessing catalysts. We also have multiple regional competitors.

Grace Catalysts Technologies—Polyolefin Catalysts, Catalyst Supports and Polypropylene Process Technology

We are a leading provider of catalyst systems and catalyst supports to the polyolefins industry for a variety of polyethylene and polypropylene process technologies. These types of catalysts are used for the manufacture of polyethylene and polypropylene thermoplastic resins used in products such as plastic film, high-performance plastic pipe, automobile parts, household appliances and household containers. We use a combination of proprietary catalyst and support technology and technology licensed from third parties to provide unique catalyst-based solutions to our customers and to provide a broad technology portfolio for enhancing collaboration opportunities with technology leaders.

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Our MAGNAPORE® polymerization catalyst is used to produce high performance polyethylene in the slurry loop process for pipe and film applications. Our POLYTRAK® polymerization catalyst is designed to achieve improved polypropylene performance, particularly for impact resistant applications such as automobile bumpers and household appliances.
Our standard and customized DAVICAT® catalysts offer a wide range of chemical and physical properties based on our material science technology for supported catalysts, polystyrene, herbicide, neutraceuticals and on-purpose olefins. Our RANEY® nickel, cobalt and copper hydrogenation and dehydrogenation catalysts are used for the synthesis of organic compounds for the fibers, polyurethanes, engineered plastics, pharmaceuticals, sweeteners and petroleum industries.
Our non-phthalate CONSISTA® and traditional SHAC® catalysts along with CONSISTA® and ADT donors have been designed for the UNIPOL® gas-phase polypropylene process technology but are also adaptable to a variety of other polypropylene gas-phase and slurry-phase polymerization processes.
The polyolefin catalyst and supports industry is technology-intensive and suppliers must provide products formulated to meet customer specifications. There are many manufacturers of polyolefin catalysts and supports including Univation, LyondellBasell, BASF, Albemarle and PQ, and most sell their products worldwide.
We are also a leading licensor of gas-phase polypropylene process technology to polypropylene manufacturers. Our aforementioned UNIPOL® polypropylene technology is designed to have fewer moving parts and require less equipment than other competing technologies in order to reduce operating costs. This technology provides our licensees with a reliable capability to manufacture products for a broad array of end-use applications. The polypropylene process licensing industry is technology-intensive and licensors must adapt the technology and the related licenses to meet individual customer needs. The major competing polypropylene process licensors are LyondellBasell, Novolen and INEOS Technologies.
Grace Catalysts Technologies—Manufacturing, Marketing and Raw Materials
Our Catalysts Technologies products are manufactured by a network of globally coordinated plants. Our integrated planning organization is responsible for the effective utilization of our manufacturing capabilities.
We use a global organization of technical professionals with extensive experience in refining processes, catalyst development, and catalyst applications to market our refining catalysts and additives. These professionals work to tailor our technology to the needs of each specific customer. We generally negotiate prices for our refining catalysts because our formulations are specific to the needs of each customer and each customer receives individual attention and technical service. We sell a significant portion of our hydroprocessing catalysts through multiple-year supply agreements with our geographically diverse customer base.
We use a global direct sales force for our polyolefin catalysts, supports and technologies and chemical catalysts that seeks to maintain close working relationships with our customers. These relationships enable us to cooperate with major polymer and chemical producers to develop catalyst technologies that complement their process or application developments. We have geographically distributed our sales and technical service professionals to make them responsive to the needs of our geographically diverse customers. We typically operate under long-term contracts with our customers.
Seasonality does not have a significant overall effect on our Catalysts Technologies operating segment. However, sales of FCC catalysts tend to be lower in the first calendar quarter prior to the shift in production by refineries from home heating oil for the winter season to gasoline production for the summer season. FCC catalysts and ebullating-bed hydroprocessing catalysts are consumed at a relatively steady rate and are replaced regularly. Fixed-bed hydroprocessing catalysts are consumed over a period of years and are replaced in bulk in an irregular pattern. Since our customers periodically shut down their refining processes to replace fixed-bed hydroprocessing catalysts in bulk, our hydroprocessing catalyst sales to any customer can vary substantially over the course of a year and between years based on that customer's catalyst replacement schedule.
The principal raw materials for Catalysts Technologies products include molybdenum, rare earths, tungsten, alumina, caustic soda, sodium silicate, sodium aluminate, aluminum sulfate, nickel, aluminum chlorohydrate, and aluminum. Multiple suppliers are generally available for each of these materials; however, some of our raw materials may be provided by single sources of supply. We seek to mitigate the risk of using single source suppliers by identifying and

qualifying alternative suppliers or, for unique materials, by using alternative

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formulations from other suppliers or by passing price increases on to customers. In some instances, we produce our own raw materials and intermediates.

Prices for many of our raw materials, including metals, have been volatile in recent years. In response to increases in raw material costs, we generally take actions to mitigate the effect of higher costs including increasing prices, developing alternative formulations for our products, increasing productivity, and hedging purchases of certain raw materials. In particular, in late 2010, we implemented rare earth surcharges on certain FCC catalysts that subsequently were removed in mid-2013 when the prices of these materials returned to stable levels. Rare earth surcharges increased sales by approximately $15 million and $110 million in 2013 and 2012.

As in many chemical businesses, we consume significant quantities of natural gas in the production of Catalysts Technologies products. World events and other economic factors have caused volatility in the price of natural gas. Increases or decreases in the cost of natural gas and raw materials can have a significant impact on our operating margins. We have implemented a risk management program under which we hedge natural gas in a way that provides protection against price volatility. See also disclosure in this Report in Item 7A (Quantitative and Qualitative Disclosures about Market Risk).

Grace Materials Technologies Operating Segment

Materials Technologies principally applies specialty silica, zeolite and resin technologies in the design and manufacture of products to create significant value for our diverse customer base. Our customers include coatings manufacturers, consumer product manufacturers, plastics manufacturers, producers of rigid food and beverage packaging, and pharmaceutical companies. We believe that our technological expertise and broad technology platform provide a competitive advantage, allowing us to quickly design products that help our customers create value in their markets.

The following table sets forth Materials Technologies sales of similar products as a percentage of Grace total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Grace Revenue		Sales	% of Grace Revenue		Sales	% of Grace Revenue	
Engineered Materials	$515.8	15.9	%	$494.4	16.2	%	$478.3	15.1	%
Packaging Products	374.8	11.6	%	384.1	12.5	%	384.3	12.2	%
Total Materials Technologies Revenue	$890.6	27.5	%	$878.5	28.7	%	$862.6	27.3	%

The following table sets forth Materials Technologies sales by region as a percentage of Materials Technologies total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Materials Technologies Revenue		Sales	% of Materials Technologies Revenue		Sales	% of Materials Technologies Revenue	
North America	$187.5	21.1	%	$176.7	20.1	%	$174.0	20.2	%
Europe Middle East Africa	373.5	41.9	%	367.8	41.9	%	362.4	41.9	%
Asia Pacific	198.7	22.3	%	197.4	22.5	%	185.9	21.6	%
Latin America	130.9	14.7	%	136.6	15.5	%	140.3	16.3	%
Total Materials Technologies Revenue	$890.6	100.0	%	$878.5	100.0	%	$862.6	100.0	%

Grace Materials Technologies—Engineered Materials

We provide enabling technologies that are silica- and silica-alumina-based functional additives and process aids, such as silica gel, colloidal silica, zeolitic adsorbents, precipitated silica and silica-aluminas, for a wide variety of applications. Our product portfolio includes:

Application	Use	Key Brands
Coatings and Print Media	Matting agents, anticorrosion pigments, TiO_2 extenders and moisture scavengers for paints and lacquers	SYLOID®, SHIELDEX®, SYLOSIV®, SYLOWHITE™
	Additives and formulations for matte, semi-glossy and glossy ink receptive coatings on high performance ink jet papers, photo paper, and commercial wide-format print media	SYLOJET®, DURAFILL®, LUDOX®
	Paper retention aids, functional fillers, paper frictionizers	DURAFILL®, LUDOX®
Consumer	Toothpaste abrasives and thickening agents, free-flow agents, anticaking agents, tabletting aids, cosmetic additives and flavor carriers	SYLOID® FP, SYLODENT®, SYLOID®, SYLOBLANC®, SYLOSIV®
	Edible oil refining agents, beer stabilizers and clarification aids for beer, juices and other beverages	DARACLAR®, TRISYL®
Industrial	Reinforcing agents for rubber and tires	PERKASIL®
	Inorganic binders and surface smoothening aids for precision investment casting and refractory applications	LUDOX®
	Adsorbents for dual pane windows and industrial applications, desiccant granules, beads, powders and bags and polyurethane moisture scavengers	PHONOSORB®, SYLOBEAD®, SYLOSIV®, CRYOSIV®, SAFETYSORB®
	Chemical metal polishing aids and formulations for chemical mechanical planarization/electronics applications	LUDOX®, POLIEDGE®
	Polymer additives for producers and processors of plastic products that prevent layers of polymer film from sticking together, improve dispersal of pigments and ease removal from molds	SYLOBLOC®
	Process adsorbents used in petrochemical and natural gas processes for such applications as ethylene-cracked-gas-drying, natural gas drying and sulfur removal	SYLOBEAD®
Discovery Sciences	Pharmaceutical excipients and intermediates	SYLOID® FP
	Fine chemical intermediates	SYNTHETECH®™
	Preparative scale purification products including media, column hardware, and equipment	DAVISIL®, VYDAC®, MODCOL®, SPRING®, MULTIPACKER®
	Flash chromatography systems and consumables	REVELERIS®, REVEALX™, GRACERESOLV™
	Analytical scale high performance liquid chromatography (HPLC) columns and detectors	VISIONHT®, VYDAC®, ALLTECH®, ALLTIMA®
	CO_2 absorbents for anesthesiology and re-breathing applications	SODASORB®

Our silica-based engineered materials are integrated into our customers' manufacturing processes and, when combined with our technical support, increase the efficiency and performance of their products. By working closely with our customers, we help them to respond quickly to the changing needs of brand owners and consumers. We focus on high-growth segments and seek to develop and introduce new products that add additional value to the current and future needs of our customers. For example, our customers have incorporated our products into higher resolution print media, less abrasive high cleaning toothpastes and technologies that are friendly to the environment such as water-based and VOC-compliant coatings, green tires with lower roll resistance and non-toxic anticorrosion protection. Our Discovery Sciences products are used in a wide range of applications, including drug discovery and purification for the healthcare, pharmaceutical and biotechnology industries, environmental analysis, forensics, petrochemical analysis and the manufacture of food, cosmetics, vitamins and biofuels. We also market chromatography consumables and analytical and preparative columns packed with our specialty media. We can modify the base silica and surface chemistry for analytical, preparative and process-scale customers in order to enhance our product performance for their unique applications.

Our silica-based engineered materials sales are global. There are many manufacturers of engineered materials that market their products on a global basis including Evonik, PQ/INEOS, and UOP. Competition is generally based on product performance, technical service and reliability, price, and additional value-added features to address the needs of our customers, end-users and brand owners. Our Discovery Sciences products compete on the basis of distinct technology, product quality, and customer support. Competition for these products is highly fragmented with a large number of companies that sell their products on a global and regional

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basis, although a number of companies, such as Waters Corporation, Agilent Technologies and Thermo-Fisher, have a substantial global position and a relatively large installed customer base.

Grace Materials Technologies—Packaging Products

We are a global leader in can and closure sealants that, along with our specialized can and closure coatings, we supply to the packaging industry. Our product portfolio includes:

Products	Key Brands
Can sealants for rigid containers that ensure a hermetic seal between the lid and the body of beverage, food, aerosol and other cans	DAREX®
Sealants for metal and plastic bottle closures that are used on pry-off and twist-off metal crowns, as well as roll-on pilfer-proof and plastic closures to seal and enhance the shelf life of food and beverages in glass and plastic bottles and jars	DAREX®, DARAFORM®, DARASEAL®, DARABLEND®, SINCERA®, CELOX®
Coatings for metal packaging that are used in the manufacture of cans and closures to protect the metal against corrosion, protect the contents against the influences of metal, ensure proper adhesion of sealing compounds to metal surfaces, and provide base coats for inks and for decorative purposes	DAREX®, APPERTA®, SISTIAGA®

Our packaging products are designed to address major industry trends such as lighter weight packaging, lower energy consumption, personal convenience, and highly individualized packaging. Our growth is driven by innovation of higher performing products, continuous development of new applications, increasing demand for sustainability and rising disposable income in emerging regions. We seek to capitalize upon our technical customer service, global infrastructure and expertise in global regulatory compliance (including food law compliance) to enhance our growth, especially in emerging regions. We also seek to develop and introduce new products that add additional value to the current and future needs of our customers, such as our introduction of products with oxygen scavenging functionality.

Our packaging products sales are global. There are many manufacturers of packaging products that market their products on a global basis including Altana, Akzo Nobel, PPG and Valspar. Competition is generally based on product performance, technical service and reliability, price and additional value-added features to address the needs of our customers, end-users and brand owners.

We expect the packaging products product group to become part of "New GCP" upon completion of the separation of "New GCP" from Grace.

Grace Materials Technologies—Manufacturing, Marketing and Raw Materials

Our Materials Technologies products are manufactured by a network of globally integrated plants that are positioned to service our customers regionally. Our packaging products are manufactured in both large facilities to permit economies of scale and a network of smaller operations that enable customization to local market conditions. Our integrated planning organization is responsible for the effective utilization of our manufacturing capabilities.

We use country-based direct sales forces that are dedicated to each product line and backed by application-specific technical customer service teams to market our Materials Technologies products. Our sales force seeks to develop long-term relationships with our customers and focuses on consultative sales, technical support and key account growth programs. To ensure full geographic coverage, our direct sales organization is further supplemented by a network of distributors and agents.

Seasonality does not have a significant overall effect on our Materials Technologies operating segment; however, our packaging products and some of our construction-related products such as insulated glass desiccants are affected by seasonal and weather-related factors including the consumption of beverages, the size and quality of food crops and the level of construction activity. These impacts are mitigated by the global scope of our business.

The principal raw materials for Materials Technologies products include resins, sodium silicate, solvents, latexes (including certain food-grade raw materials), polyolefin, and rubber. Multiple suppliers are generally available for each of these materials; however, some of our raw materials may be provided by single sources of supply. We seek to mitigate the risk of using single source suppliers by identifying and qualifying alternative

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suppliers or, for unique materials, by using alternative formulations from other suppliers or by passing price increases on to customers. In some instances, we produce our own raw materials and intermediates.

Prices for many of our raw materials, including specialty and commodity materials such as latex, rubbers, pigments, resins and solvents, have been volatile in recent years. In response to increases in raw material costs, we generally take actions to mitigate the effect of higher costs including increasing prices, developing alternative formulations for our products, increasing productivity, and hedging purchases of certain raw materials.

As in many chemical businesses, we consume significant quantities of natural gas in the production of Materials Technologies products. World events and other economic factors have caused volatility in the price of natural gas. Increases or decreases in the cost of natural gas and raw materials can have a significant impact on our operating margins. We have implemented a risk management program under which we hedge natural gas in a way that provides protection against price volatility. See also disclosure in this Report in Item 7A (Quantitative and Qualitative Disclosures about Market Risk).

Since we manufacture a substantial portion of our packaging products in emerging regions using raw materials from suppliers in the U.S., Europe and other advanced economies, changes in the values of the currencies of these emerging regions versus the U.S. dollar and the euro may adversely affect our raw material costs.

Grace Construction Products Operating Segment

Construction Products produces and sells specialty construction chemicals and specialty building materials. We are a supplier to the construction industry and the most important uses of our products involve large commercial, infrastructure, and multi-family residential projects. We also supply roofing underlayments for single-family residential construction, repair and restoration.

The following table sets forth Construction Products sales of similar products as a percentage of Grace total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Grace Revenue		Sales	% of Grace Revenue		Sales	% of Grace Revenue	
Specialty Construction Chemicals	$688.7	21.2	%	$650.4	21.3	%	$642.6	20.4	%
Specialty Building Materials	416.9	12.9	%	407.8	13.3	%	382.2	12.1	%
Total Construction Products Revenue	$1,105.6	34.1	%	$1,058.2	34.6	%	$1,024.8	32.5	%

The following table sets forth Construction Products sales by region as a percentage of Construction Products total revenue.

	2014			2013			2012		
(In millions)	Sales	% of Construction Products Revenue		Sales	% of Construction Products Revenue		Sales	% of Construction Products Revenue	
North America	$436.0	39.4	%	$423.2	39.9	%	$411.5	40.2	%
Europe Middle East Africa	270.7	24.5	%	260.9	24.7	%	269.7	26.3	%
Asia Pacific	257.5	23.3	%	233.7	22.1	%	217.5	21.2	%
Latin America	141.4	12.8	%	140.4	13.3	%	126.1	12.3	%
Total Construction Products Revenue	$1,105.6	100.0	%	$1,058.2	100.0	%	$1,024.8	100.0	%

Grace Construction Products—Specialty Construction Chemicals

We supply concrete admixtures and fibers to concrete producers that are used to improve the rheology, workability, quality, durability and other engineering properties of concrete, mortar, masonry and other cementitious construction materials. We also supply cement additives to cement manufactures that are used to

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improve energy efficiency in cement processing, enhance the characteristics of finished cement and improve ease of use.

Portland cement serves as the binder for the great majority of the concrete produced globally. National standards usually dictate the compressive strength and other properties that must be met by cement. Our additives are used to reduce the energy required to mill cement to the desired fineness and to improve the handling characteristics of the powdered material. Our additives are also used to adjust the performance of portland cement, permitting our customers to optimize production economics by using a broader selection of raw materials and allowing alternative processing conditions. Increasingly, cement manufacturers seek to reduce the environmental impact of their manufacturing processes. By providing greater flexibility in raw materials, our additives enable our customers to achieve environmental improvements such as a reduction in carbon dioxide emissions.

Our concrete admixtures allow concrete producers to optimize the use of a limited selection of locally-sourced raw materials (cement and aggregates). Our products are based on a set of core technologies that are formulated regionally into products tailored to specific local materials and end-use requirements. For example, our MIRA® admixture allows concrete to be produced with a lower amount of water, which improves the compressive strength and the long-term durability of the concrete. Our ADVA® admixture is used to make flowable "self compacting concrete" which is popular in precast concrete manufacturing where the rapid filling of large molds is a major driver of economics. Our ECLIPSE® admixture is used to minimize the formation of shrinkage cracks in critical applications, such as bridge decks. Our STRUX® polymeric fibers are used to replace steel reinforcement near the surface of concrete that will be exposed to corrosive de-icing salts. These products allow our customers to differentiate their concrete products for a wide variety of applications.

Our products include:

Products	Uses	Customers	Key Brands
Concrete admixtures	Concrete admixtures and polymeric fibers used to reduce the production and in-place costs of concrete, increase the performance of concrete and improve the life cycle cost of structures	Ready-mix and precast concrete producers, engineers and specifiers	ADVA®, STRUX®, MIRA®, POLARSET®, ECLIPSE®
Additives for cement processing	Cement additives added to the milling stage of the cement manufacturing process to improve plant energy efficiency, enhance the performance of the finished cement and help our customers meet environmental regulations and reduce their CO_2 footprints	Cement manufacturers	CBA®, SYNCHRO®, HEA2®, TDA®
Admixtures for masonry concrete	Products for masonry concrete used by block and paver producers for process efficiency and to improve the appearance, durability and water resistance of finished concrete masonry units	Masonry block manufacturers	DRY-BLOCK®, OPTEC®, QUANTEC®
Process control solutions for ready-mix concrete	Services to provide concrete producers quality control and operational efficiencies using sensors and other technologies	Ready-mix concrete manufacturers	VERIFI®

Our specialty construction chemicals product sales are global. We compete globally with several large international construction materials suppliers, and regionally and locally with numerous smaller competitors. Competition for our products is based on product performance, technical support and service, brand name recognition in the construction industry and price. Our major global competitors are BASF and Sika.

Grace Construction Products—Specialty Building Materials

We supply building materials used in both new construction and renovation/repair projects. Our products protect buildings and infrastructure from water, vapor, air and fire. They also reduce energy usage and improve long-term durability. Our products include waterproofing membranes and roofing underlayments for commercial and residential buildings, chemical grouts for use in waterproofing and soil stabilization applications, air and vapor barriers, cementitious grouts, passive fire protection, and products used to create decorative/architectural concrete.

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Our products include:

Products	Uses	Customers	Key Brands
Structural waterproofing, vapor and air barrier systems	Structural waterproofing and air barrier systems to prevent water, vapor and/or air infiltration in commercial structures, including self-adhered sheet and liquid membranes, joint sealing materials, drainage composites and waterstops.	Architects and structural engineers; specialty waterproofing and general contractors; specialty waterproofing distributors	BITUTHENE®, PROCOR®, PREPRUFE®, ADPRUFE™, HYDRODUCT®, PERM-A-BARRIER®, ADCOR®ES, SILCOR®
Residential building materials	Specialty roofing membranes and flexible flashings for windows, doors, decks and detail areas, including fully adhered roofing underlayments, synthetic underlayments and self-adhered flashing.	Roofing contractors, home builders and remodelers; specialty roofing distributors, lumberyards and home centers; homeowners; architects and specifiers	ICE & WATER SHIELD®, TRI-FLEX®, VYCOR®
Chemical grouts	Products for repair and remediation in waterproofing applications and soil stabilization	Contractors; specialty distributors; municipalities; and other owners of large infrastructure facilities	DE NEEF™ HYDRO ACTIVE® Cut, DE NEEF™ AC-400, DE NEEF™ SWELLSEAL® WA, DE NEEF™ MC-500™
Fire protection	Fire protection products spray-applied to the structural steel frame, encasing and insulating the steel and protecting the building in the event of fire.	Local contractors and specialty subcontractors and applicators; building materials distributors; industrial manufacturers; architects and structural engineers	MONOKOTE®
Specialty grouts and mortars	Cementitious grouts and mortars used for under filling and gap filling	Specialty contractors engaged in the repair of concrete, installation of new precast concrete elements and infrastructure repair	BETEC®
Products for architectural concrete	Products for architectural concrete include surface retarders, coatings, pigments and release agents used by concrete producers and contractors to enhance the surface appearance and aesthetics of concrete	Precast concrete producers and architects	PIERI®

Our specialty building materials product sales are global. Our customers include global architectural and contracting firms as well as local specifiers, engineers and contractors. We compete globally with several large international construction materials suppliers, and regionally and locally with numerous smaller competitors. Competition for our products is based on product performance, technical support and service, brand name recognition in the construction industry and price. Our major global competitor is Sika.

Grace Construction Products—Manufacturing, Marketing and Raw Materials

In view of our diversity of customers and customer requirements, and because specialty construction chemicals and specialty building materials require intensive sales and customer service efforts, we maintain specialized direct sales and technical teams to support sales in over 100 countries. Our specialized teams sell products under global contracts, under U.S. or regional contracts, and on a job-by-job basis. They have developed deep segment knowledge that is important to our customers. These teams work with architects and engineers to have our products specified for construction projects in their local areas and internationally. We also use distributors in both U.S. and non-U.S. markets.

Our research and development and marketing organizations utilize a growth and innovation process to develop and continually improve our products to meet the changing needs of our customers. In addition to new product introductions, we have grown in emerging regions where increasing construction activity, improvement in

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building codes, and sophistication of construction practices have increased demand for our products. We work with code-writing bodies in emerging regions to create standards that increase the sophistication and quality of construction. We have expanded our commercial and manufacturing capabilities in emerging regions to serve this demand.

We manufacture our products in our own plants or we have third parties toll manufacture to our specifications. The low capital needed for our plants and third-party manufacturers gives us flexibility in the manner in which we service our customers and the range of technologies we can employ. Several of the plants ship internationally to leverage capacity, but most are intended to serve local markets.

The key raw materials we use in our products are obtained from a variety of suppliers, including basic chemical and petrochemical producers. Many of our raw materials are organic chemicals derived from olefins. We also make significant purchases of inorganic materials such as gypsum, as well as specialty materials including specialty films, papers and fibers. In most instances, our raw materials are sourced locally to the manufacturing facility and are available from multiple sources. Global supply and demand factors, changes in currency exchange rates, and petroleum prices can significantly impact the price and availability of our key raw materials.

Since we manufacture a portion of our construction products in emerging regions using raw materials from suppliers in the U.S., Europe and other advanced economies, changes in the values of the currencies of these emerging regions versus the U.S. dollar and the euro may adversely affect our raw material costs.

The construction business is cyclical, in response to economic conditions, as well as seasonal, driven by weather conditions. Demand for our products is primarily driven by global non-residential construction activity and U.S. residential construction activity. We seek to increase profitability and minimize the impact of cyclical downturns in regional economies by introducing technically advanced high-performance products and expanding geographically.

We expect Grace Construction Products to become part of "New GCP" upon completion of the separation of "New GCP" from Grace.

FINANCIAL INFORMATION ABOUT INDUSTRY SEGMENTS AND GEOGRAPHIC AREAS

Disclosure of financial information about industry segments and geographic areas for 2014, 2013 and 2012 is provided in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 18 (Operating Segment Information) to the Consolidated Financial Statements, which disclosure is incorporated herein by reference. Disclosure of risks attendant to our foreign operations is provided in this Report in Item 1A (Risk Factors).

BACKLOG OF ORDERS

While at any given time there may be some backlog of orders, this backlog is not material in respect to our total annual sales, nor are the changes, from time to time, significant.

INTELLECTUAL PROPERTY; RESEARCH ACTIVITIES

Competition in the specialty chemicals and specialty materials industry is often based on technological superiority and innovation. Our ability to maintain our margins and effectively compete with other suppliers depends on our ability to introduce new products based on innovative technology, as well as our ability to obtain patent or other intellectual property protection. Our research and development programs emphasize development of new products and processes, improvement of existing products and processes and application of existing products and processes to new industries and uses. We conduct research in all regions, with North America and Europe accounting for the most activity.

We routinely file and obtain patents in a number of countries around the world that are significant to our businesses in order to protect our investments in innovation, research, and product development. Numerous patents and patent applications protect our products, formulations, manufacturing processes, equipment, and improvements. We also benefit from the use of trade secret information, including know-how and other proprietary information relating to many of our products and processing technologies. There can be no assurance, however, that our patents, patent applications and precautions to protect trade secrets and know-how will provide sufficient protection for our intellectual property. In addition, other companies may independently develop technology that could replicate, and thus diminish the advantage provided by, our trade secrets. Other companies may also

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develop alternative technology or design-arounds that could circumvent our patents or may acquire patent rights applicable to our business which might interpose some limitation on expansion of the business in the future.
Research and development expenses were approximately $80 million in 2014 and $65 million in 2013 and 2012. These amounts include depreciation and amortization expenses related to research and development and expenses incurred in funding external research projects. The amount of research and development expenses relating to government- and customer-sponsored projects (rather than projects that we sponsor) was not material during these periods. Grace also conducts research and development activities with our ART joint venture, which are not included in the amounts above.

ENVIRONMENT, HEALTH AND SAFETY MATTERS

We are subject, along with other manufacturers of specialty chemicals, to stringent regulations under numerous U.S. federal, state and local and foreign environment, health and safety laws and regulations relating to the generation, storage, handling, discharge, disposition and stewardship of hazardous wastes and other materials. Environmental laws require that certain responsible parties, as defined in the relevant statute, fund remediation actions regardless of legality of original disposal or ownership of a disposal site. We are involved in remediation actions to address hazardous wastes or other materials as required by U.S. federal, state and local and foreign laws.
We have expended substantial funds to comply with environmental laws and regulations and expect to continue to do so in the future. The following table sets forth our expenditures in the past three years, and our estimated expenditures in 2015 and 2016, for (i) the operation and maintenance of manufacturing facilities and the disposal of wastes; (ii) capital expenditures for environmental control facilities; and (iii) site remediation:

Year (In millions)	Operation of Facilities and Waste Disposal	Capital Expenditures	Site Remediation	
2012	$61	$9	$13	
2013	59	17	14	
2014	59	25	12	
2015	61	17	21	*
2016	62	11	23	*

* Amounts are based on site remediation matters for which sufficient information is available to estimate remediation costs. We do not have sufficient information to estimate all of Grace's possible future remediation costs. As we receive new information, our estimate of remediation costs may change materially.

Additional information about our environmental remediation activities is provided in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 11 (Commitments and Contingent Liabilities) to the Consolidated Financial Statements.
We continuously seek to improve our environment, health and safety performance. To the extent applicable, we extend the basic elements of the American Chemistry Council's RESPONSIBLE CARE® program to all our locations worldwide, embracing specific performance objectives in the key areas of management systems, product stewardship, employee health and safety, community awareness and emergency response, distribution, process safety and pollution prevention. We have implemented key elements of the RESPONSIBLE CARE® Security Code for our operations and systems. We have completed a review of our existing security (including cyber-security) vulnerability and have taken actions to enhance our security systems and protect our assets. We have undertaken certain activities to comply with the Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards, including identifying facilities subject to the standards, conducting security vulnerability assessments and developing site security plans, as necessary.

EMPLOYEE RELATIONS

As of December 31, 2014, we employed approximately 6,500 persons, of whom approximately 2,700 were employed in the United States. Of our total employees, approximately 4,700 were salaried and 1,800 were hourly.

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Approximately 750 of our manufacturing employees in the United States are represented for collective bargaining purposes by nine different local collective bargaining groups. We have operated without a labor work stoppage for more than 10 years.

We have works councils representing the majority of our European sites serving approximately 1,600 employees.

AVAILABILITY OF REPORTS AND OTHER DOCUMENTS

We maintain an Internet website at www.grace.com. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available, free of charge, on our website as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission, or SEC. These reports may be accessed through our website's investor information page.

In addition, the charters for the Audit, Compensation, Nominating and Governance, and Corporate Responsibility Committees of our Board of Directors, our corporate governance guidelines and code of ethics are available, free of charge, on our website at www.grace.com/en-us/corporate-leadership/pages/governance.aspx. Printed copies of the charters, governance guidelines and code of ethics may be obtained free of charge by contacting Grace Shareholder Services at 410-531-4167.

The information on our website is not, and shall not be deemed to be, a part of this report or incorporated into any other filings we make with the SEC.

Our Chief Executive Officer and Chief Financial Officer have submitted certifications to the SEC pursuant to the Sarbanes Oxley Act of 2002 as exhibits to this Report.

EXECUTIVE OFFICERS

See "Executive Officers of the Registrant" following Part I, Item 4 of this Report for information about our Executive Officers.

Item 1A. RISK FACTORS

This Report, including the Financial Supplement, contains, and our other public communications may contain, forward-looking statements; that is, information related to future, not past, events. Such statements generally include the words "believes," "plans," "intends," "targets," "will," "expects," "suggests," "anticipates," "outlook," "continues" or similar expressions. Forward-looking statements include, without limitation, all statements regarding: expected financial positions; results of operations; cash flows; financing plans; business strategy; budgets; capital and other expenditures; competitive positions; growth opportunities for existing products; benefits from new technology and cost reduction initiatives; plans and objectives; and markets for securities. For these statements, we claim the protection of the safe harbor for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Exchange Act. Like other businesses, we are subject to risks and uncertainties that could cause our actual results to differ materially from our projections or that could cause other forward-looking statements to prove incorrect. Factors that could cause actual events to materially differ from those contained in the forward-looking statements include those factors set forth below and elsewhere in this Annual Report on Form 10-K. Our reported results should not be considered as an indication of our future performance. Readers are cautioned not to place undue reliance on our projections and forward-looking statements, which speak only as of the date thereof. We undertake no obligation to publicly release any revisions to the projections and forward-looking statements contained in this document, or to update them to reflect events or circumstances occurring after the date of this document. In addition to general economic, business and market conditions, we are subject to other risks and uncertainties, including, without limitation, the following:

The global scope of our operations subjects us to the risks of doing business in foreign countries, which could adversely affect our business, financial condition and results of operations.

We operate our business on a global scale with approximately 70% of our 2014 sales outside the United States. We conduct business in over 40 countries and in more than 50 currencies. We currently have many production facilities, research and development facilities and administrative and sales offices located outside

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North America, including facilities and offices located in Europe, the Middle East, Africa, Asia and Latin America. We expect non-U.S. sales to continue to represent a substantial majority of our revenue. Accordingly, our business is subject to risks related to the differing legal, political, social and regulatory requirements and economic conditions of many jurisdictions. Risks inherent in non-U.S. operations include the following:

- commercial agreements may be more difficult to enforce and receivables more difficult to collect;
- intellectual property rights may be more difficult to enforce;
- increased shipping costs, disruptions in shipping or reduced availability of freight transportation;
- we may have difficulty transferring our profits or capital from foreign operations to other countries where such funds could be more profitably deployed;
- we may experience unexpected adverse changes in export duties, quotas and tariffs and difficulties in obtaining export licenses;
- some foreign countries have adopted, and others may impose, additional withholding taxes or adopt other restrictions on foreign trade or investment, including currency exchange and capital controls;
- foreign governments may nationalize private enterprises;
- our business and profitability in a particular country could be affected by political or economic repercussions on a domestic, country specific or global level from terrorist activities and the response to such activities;
- we may be affected by unexpected adverse changes in foreign laws or regulatory requirements; and
- unanticipated events, such as geopolitical changes, could adversely affect our foreign operations.

Our success as a global business will depend, in part, upon our ability to succeed in differing legal, regulatory, economic, social and political conditions by developing, implementing and maintaining policies and strategies that are effective in each location where we do business.

We are exposed to currency exchange rate changes that impact our profitability.

We are exposed to currency exchange rate risk through our U.S. and non-U.S. operations. Changes in currency exchange rates may materially affect our operating results. For example, changes in currency exchange rates may affect the relative prices at which we and our competitors sell products in the same region and the cost of materials used in our operations. A substantial portion of our net sales and assets are denominated in currencies other than the U.S. dollar. When the U.S. dollar strengthens against other currencies, at a constant level of business, our reported sales, earnings, assets and liabilities are reduced because the non-U.S. currencies translate into fewer U.S. dollars. In addition, since we manufacture a substantial portion of our construction products and packaging products in emerging regions using raw materials from suppliers in the U.S., Europe and other advanced economies, changes in the values of the currencies of these emerging regions versus the U.S. dollar and the euro may adversely affect our raw material costs.

We incur a currency transaction risk whenever one of our operating subsidiaries enters into either a purchase or a sales transaction using a currency different from the operating subsidiary's functional currency. Given the volatility of exchange rates, we may not be able to manage our currency transaction risks effectively, or volatility in currency exchange rates may expose our financial condition or results of operations to a significant additional risk.

Prices for certain raw materials are volatile and can have a significant effect on our manufacturing and supply chain strategies as we seek to maximize our profitability. If we are unable to successfully adjust our strategies in response to volatile raw materials and energy prices, such volatility could have a negative effect on our earnings in future periods

We use petroleum-based materials, metals, natural gas and other materials in the manufacture of our products. Prices for these materials are volatile and can have a significant effect on our pricing, sales, manufacturing and supply chain strategies as we seek to maximize our profitability. Our ability to successfully adjust strategies in response to volatile raw material and energy prices is a significant factor in maintaining or improving our profitability. If we are unable to successfully adjust our strategies in response to volatile prices, such volatility could have a negative effect on our sales and earnings in future periods.

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A substantial portion of our raw materials are commodities whose prices fluctuate as market supply and demand fundamentals change.

We attempt to manage exposure to price volatility of major commodities through:

- long-term supply contracts;
- contracts with customers that permit adjustments for changes in prices of commodity-based materials and energy;
- forward buying programs that layer in our expected requirements systematically over time; and
- limited use of financial instruments.

Although we regularly assess our exposure to raw material price volatility, we cannot always predict the prospects of volatility and we cannot always cover the risk in a cost effective manner.

We have a policy of maintaining, when available, multiple sources of supply for raw materials. However, certain of our raw materials may be provided by single sources of supply. We may not be able to obtain sufficient raw materials due to unforeseen developments that would cause an interruption in supply. Even if we have multiple sources of supply for raw materials, these sources may not make up for the loss of a major supplier.

Our planned separation of Grace into two independent, publicly traded companies may not be completed or, if it is completed, it may not qualify as a tax-free spin-off for U.S. federal income tax purposes.

We recently announced our intention to separate Grace into two independent, publicly-traded companies. The two companies, to be named prior to closing, are expected to be "New Grace," consisting of the Catalysts Technologies and Materials Technologies business segments (excluding the packaging products product group), and “New GCP,” consisting of the Construction Products business segment and the packaging products product group. The transactions are subject to multiple conditions that may not be met or, if met, may not be met on our currently anticipated timetable, and which could therefore delay or ultimately prevent completion of the transaction. If the transaction is delayed or not completed, we may incur significant costs. Whether or not we complete the transaction, our announcement of the planned separation and steps we may take toward its completion could negatively impact our ability to establish and maintain significant business relationships, including with customers and suppliers, and our ability to retain key personnel during the period leading up to and following the separation transaction. In addition, although we intend that the separation transaction be tax-free to the Company's stockholders for U.S. federal income tax purposes, we can have no assurance that the transaction will qualify for tax-free treatment. If the transaction is ultimately determined to be taxable, Grace stockholders and "New Grace" could incur significant income tax liabilities.

The length and depth of product and industry business cycles in our segments may result in periods of reduced sales, earnings and cash flows, and portions of our business are subject to seasonality and weather-related effects.

Our operating segments are sensitive to the cyclical nature of the industries they serve. Our construction business is cyclical in response to economic conditions and construction demand and is also seasonal and dependent on favorable weather conditions, with a decrease in construction activity during the winter months. Sales of our FCC catalysts tend to be lower in the first calendar quarter prior to the shift in production by refineries from home heating oil for the winter season to gasoline production for the summer season. Our packaging products are affected by seasonal and weather-related factors including the consumption of beverages and the size and quality of food crops.

If we are not able to continue our technological innovation and successful introduction of new products, our customers may turn to other suppliers to meet their requirements.

The specialty chemicals industry and the end-use markets into which we sell our products experience ongoing technological change and product improvements. A key element of our business strategy is to invest in research and development activities with the goal of introducing new high-performance, technically differentiated products. We may not be successful in developing new technology and products that successfully compete with products introduced by our competitors, and our customers may not accept, or may have lower demand for, our new products. If we fail to keep pace with evolving technological innovations or fail to improve our products in response to our customers’ needs, then our business, financial condition and results of operations could be adversely affected as a result of reduced sales of our products.

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We spend large amounts of money for environmental compliance in connection with our current and former operations.

As a manufacturer of specialty chemicals and specialty materials, we are subject to stringent regulations under numerous U.S. federal, state, local and foreign environmental, health and safety laws and regulations relating to the generation, storage, handling, discharge, disposition and stewardship of hazardous wastes and other materials. We have expended substantial funds to comply with such laws and regulations and have established a policy to minimize our emissions to the environment. Nevertheless, legislative, regulatory and economic uncertainties (including existing and potential laws and regulations pertaining to climate change) make it difficult for us to project future spending for these purposes and if there is an acceleration in new regulatory requirements, we may be required to expend substantial additional funds to remain in compliance.

We are subject to environmental clean-up costs, fines, penalties and damage claims that have been and continue to be costly.

We are subject to lawsuits and regulatory actions, in connection with current and former operations (including divested businesses), for breaches of environmental laws that seek clean-up or other remedies. We are also subject to lawsuits and investigations by public and private parties under various environmental laws in connection with our current and former operations in various states, including with respect to off-site disposal at facilities where we have been identified as a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, commonly referred to as CERCLA. We are also subject to similar risks outside of the U.S.

We operated a vermiculite mine in Libby, Montana, until 1990. Some of the vermiculite ore that was mined at the Libby mine contained naturally occurring asbestos. We are cooperating with EPA to investigate the Libby vermiculite mine and the surrounding area and determine a final remedy. During 2010, EPA began reinvestigating up to 105 facilities where vermiculite concentrate from the Libby mine may have been used, stored or processed. We are cooperating with EPA on this reinvestigation including remediation at several facilities. It is probable that EPA will request additional remediation at other facilities. We do not have sufficient information to identify other sites that might require additional remediation or to estimate the costs. We will evaluate our estimated remediation liability for other sites as we receive additional information from EPA.

We have established accounting accruals for all environmental matters for which a loss is considered to be probable and sufficient information is available to reasonably estimate the loss. We do not have sufficient information to accrue for all of our environmental risks. These accruals do not include the cost to remediate the Libby vermiculite mine or costs related to any additional EPA claims, whether resulting from EPA's reinvestigation of vermiculite facilities or otherwise, which may be material but are not currently estimable. Due to these vermiculite-related matters, it is probable that our ultimate liability for environmental matters will exceed our current estimates by material amounts.

We require liquidity to service our debt and to fund operations, capital expenditures, research and development efforts, acquisitions and other corporate expenses.

Our ability to fund operations, capital expenditures, research and development efforts, acquisitions and other corporate expenses, including repayment of our debt, depends on our ability to generate cash through future operating performance, which is subject to economic, financial, competitive, legislative, regulatory and other factors. Many of these factors are beyond our control. We cannot be certain that our businesses will generate sufficient cash or that future borrowings will be available to us in amounts sufficient to fund all of our requirements. If we are unable to generate sufficient cash to fund all of our requirements, we may need to pursue one or more alternatives, such as to:

- reduce or delay planned capital expenditures, research and development spending or acquisitions;
- obtain additional financing or restructure or refinance all or a portion of our debt on or before maturity;
- sell assets or businesses; and
- sell additional equity.

Any reduction or delay in planned capital expenditures, research and development spending or acquisitions or sale of assets or businesses may materially and adversely affect our future revenue prospects. In addition, we cannot be certain that we will be able to raise additional equity capital, restructure or refinance any of our debt or obtain additional financing on commercially reasonable terms or at all.

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Our indebtedness may materially affect our business, including our ability to fulfill our obligations, react to changes in our business and incur additional debt to fund future needs.

We have a substantial amount of debt. As of December 31, 2014, we had $1,031.5 million of unsecured indebtedness outstanding and $984.3 million of secured indebtedness outstanding. Our indebtedness may have material effects on our business, including to:

- require us to dedicate a substantial portion of our cash flow to debt payments, thereby reducing funds available for working capital, capital expenditures, acquisitions, research and development, distributions to stockholders and other purposes;
- restrict us from making strategic acquisitions or taking advantage of favorable business opportunities;
- limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate;
- increase our vulnerability to adverse economic, credit and industry conditions, including recessions;
- make it more difficult for us to satisfy our debt service and other obligations;
- place us at a competitive disadvantage compared to our competitors that have relatively less debt; and
- limit our ability to borrow additional funds, or to dispose of assets to raise funds, if needed, for working capital, capital expenditures, acquisitions, research and development and other purposes.

If we incur additional debt, the risks related to our indebtedness may intensify.

Restrictions imposed by agreements governing our indebtedness may limit our ability to operate our business, finance our future operations or capital needs, or engage in other business activities. If we fail to comply with certain restrictions under these agreements, our debt could be accelerated and we may not have sufficient cash to pay our accelerated debt.

The agreements governing our indebtedness contain various covenants that limit, among other things, our ability, and the ability of certain of our subsidiaries, to:

- incur certain liens;
- enter into sale and leaseback transactions; and
- consolidate, merge or sell all or substantially all of our assets or the assets of our guarantors.

As a result of these covenants, we will be limited in the manner in which we can conduct our business, and may be unable to engage in favorable business activities or finance future operations or capital needs. Accordingly, these restrictions may limit our flexibility to operate our business. A failure to comply with the restrictions contained in these agreements, including maintaining the financial ratios required by our credit facilities, could lead to an event of default which could result in an acceleration of the indebtedness. We cannot assure you that our future operating results will be sufficient to enable us to comply with the covenants contained in the agreements governing our indebtedness or to remedy any such default. In addition, in the event of an acceleration, we may not have or be able to obtain sufficient funds to make any accelerated payments.

Our indebtedness exposes us to interest expense increases if interest rates increase.

As of December 31, 2014, $972.6 million, or approximately 48%, of our borrowings were at variable interest rates and expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness would increase even though the amount borrowed would remain the same, and our net income would decrease. An increase of 100 basis points in the interest rates payable on our variable rate indebtedness would increase our annual estimated debt-service requirements by $9.7 million, assuming our consolidated variable interest rate indebtedness outstanding as of December 31, 2014, remains the same.

We have unfunded and underfunded pension plan liabilities. We will require future operating cash flow to fund these liabilities. We have no assurance that we will generate sufficient cash to satisfy these obligations.

We maintain U.S. and non-U.S. defined benefit pension plans covering current and former employees who meet or met age and service requirements. Our net pension liability and cost is materially affected by the discount rate used to measure pension obligations, the longevity and actuarial profile of our workforce, the level of plan assets available to fund those obligations and the actual and expected long-term rate of return on plan assets. Significant changes in investment performance or a change in the portfolio mix of invested assets can result in

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corresponding increases and decreases in the valuation of plan assets or in a change in the expected rate of return on plan assets. Assets available to fund the pension benefit obligation of the U.S. advance-funded pension plans at December 31, 2014, were approximately $1,263 million, or approximately $67 million less than the measured pension benefit obligation on a U.S. GAAP basis. In addition, any changes in the discount rate could result in a significant increase or decrease in the valuation of pension obligations, affecting the reported funded status of our pension plans as well as the net periodic pension cost in the following years. Similarly, changes in the expected return on plan assets can result in significant changes in the net periodic pension cost in the following years.

Our obligation to make payments to the PD Trust in respect of asbestos PD Claims (other than ZAI PD Claims) is not capped and we may be obligated to make additional payments.

Under the Joint Plan, an asbestos property damage trust has been established and funded under Section 524(g) of the Bankruptcy Code. The order of the Bankruptcy Court confirming the Joint Plan contains a channeling injunction which provides that all pending and future asbestos-related property damage claims and demands, PD Claims, can only be brought against the PD Trust. The PD Trust contains two accounts. One of these accounts, the PD Account, is funded solely in respect of PD Claims other than those PD Claims related to our former ZAI attic insulation product. Unresolved and future non-ZAI PD Claims are to be litigated pursuant to procedures to be approved by the Bankruptcy Court and, to the extent such PD claims are determined to be allowed claims, are to be paid in cash by the PD Trust. We are obligated to make a payment to the PD Trust every six months in the amount of any non-ZAI PD Claims allowed during the preceding six months plus interest (if any) and, except for the first six months, the amount of PD Trust expenses for the preceding six months (the "PD Obligation"). The aggregate amount we are required to pay under the PD Obligation is not capped so we may have to make additional payments to the PD Account in respect of the PD Obligation. We are also obligated to make a payment of $30 million to the PD Trust on February 3, 2017, and up to 10 contingent deferred payments to the PD Trust of $8 million during the 20-year period beginning February 3, 2019, in respect of ZAI PD Claims in the event the ZAI PD Account's assets fall below $10 million in the preceding year. We have accrued liabilities for probable PD Claims but have not accrued any liability for the contingent ZAI PD payments as we do not believe they are probable.

Our ability to use tax deductions to reduce future tax payments may be limited if there is a change in ownership of Grace or if Grace does not generate sufficient U.S. taxable income.

Our ability to use future tax deductions, including net operating losses, is dependent on our ability to generate sufficient future taxable income in the U.S. In addition, our ability to use future tax deductions may be limited by Section 382 of the Internal Revenue Code resulting from future changes in the ownership of outstanding Company common stock. Our Certificate of Incorporation provides that under certain circumstances, our Board of Directors would have the authority to impose restrictions on the transfer of Company common stock with respect to certain 5% shareholders in order to preserve these future tax deductions.

We intend to pursue acquisitions, joint ventures and other transactions that complement or expand our businesses. We may not be able to complete proposed transactions and even if completed, the transactions may involve a number of risks that may materially and adversely affect our business, financial condition and results of operations.

We have recently completed a number of acquisitions that we believe will contribute to our future success. We intend to continue to pursue opportunities to buy other businesses or technologies that could complement, enhance or expand our current businesses or product lines or that might otherwise offer us growth opportunities. We may have difficulty identifying appropriate opportunities or, if we do identify opportunities, we may not be successful in completing transactions for a number of reasons. Any transactions that we are able to identify and complete may involve a number of risks, including:

- the diversion of management's attention from our existing businesses to integrate the operations and personnel of the acquired or combined business or joint venture;
- possible adverse effects on our operating results during the integration process;
- failure of the acquired business to achieve expected operational objectives; and
- our possible inability to achieve the intended objectives of the transaction.

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In addition, we may not be able to successfully or profitably integrate, operate, maintain and manage our newly acquired operations or their employees. We may not be able to maintain uniform standards, controls, procedures and policies, which may lead to operational inefficiencies.

We work with dangerous materials that can injure our employees, damage our facilities and disrupt our operations.

Some of our operations involve the handling of hazardous materials that may pose the risk of fire, explosion, or the release of hazardous substances. Such events could result from terrorist attacks, natural disasters, or operational failures, and might cause injury or loss of life to our employees and others, environmental contamination, and property damage. These events might cause a temporary shutdown of an affected plant, or portion thereof, and we could be subject to penalties or claims as a result. A disruption of our operations caused by these or other events could have a material adverse effect on our results of operations.

Some of our employees are unionized, represented by works councils or employed subject to local laws that are less favorable to employers than the laws in the United States.

As of December 31, 2014, we had approximately 6,500 global employees. Approximately 750 of our approximately 2,700 U.S. employees are unionized. In addition, a large number of our employees are employed in countries in which employment laws provide greater bargaining or other rights to employees than the laws in the United States. Such employment rights require us to work collaboratively with the legal representatives of the employees to effect any changes to labor arrangements. For example, most of our employees in Europe are represented by works councils that have co-determination rights on any changes in conditions of employment, including salaries and benefits and staff changes, and may impede efforts to restructure our workforce. A strike, work stoppage or slowdown by our employees or significant dispute with our employees, whether or not related to these negotiations, could result in a significant disruption of our operations or higher ongoing labor costs.

We may be subject to claims of infringement of the intellectual property rights of others, which could hurt our business.

From time to time, we face infringement claims from our competitors or others alleging that our processes or products infringe on their proprietary technologies. Any claims that our products or processes infringe the intellectual property rights of others, regardless of the merit or resolution of the claims, could cause us to incur significant costs in responding to, defending and resolving the claims, and may divert the efforts and attention of our management and technical personnel from our business. If we are found to be infringing on the proprietary technology of others, we may be liable for damages, and we may be required to change our processes, redesign our products, pay others to use the technology or stop using the technology or producing the infringing product. Even if we ultimately prevail, the existence of the lawsuit could prompt our customers to switch to products that are not the subject of infringement suits.

We are subject to business continuity risks associated with centralization of certain administrative functions.

We have centralized certain administrative functions, primarily in North America, Europe and Asia, to improve efficiency and reduce costs. To the extent that these central locations are disrupted or disabled, key business processes, such as invoicing, payments and general management operations, could be interrupted.

A failure of our information technology infrastructure could adversely impact our business and operations.

We rely upon the capacity, reliability and security of our information technology (IT) infrastructure and our ability to expand and continually update this infrastructure in response to the changing needs of our business. If we experience a problem with the functioning of an important IT system or a security breach of our IT systems, the resulting disruptions could have an adverse effect on our business.

We and certain of our third-party vendors receive and store personal information in connection with our human resources operations and other aspects of our business. Despite our implementation of security measures, our IT systems are vulnerable to damages from computer viruses, natural disasters, unauthorized access, cyber attack and other similar disruptions. Any system failure, accident or security breach could result in disruptions to our operations. A material network breach in the security of our IT systems could include the theft of our intellectual property, trade secrets or customer information. To the extent that any disruptions or security breach results in a loss or damage to our data, or an inappropriate disclosure of confidential or customer information, it could cause significant damage to our reputation, affect our relationships with our customers, lead to claims against Grace and ultimately harm our business. In addition, we may be required to incur significant costs to protect against damage caused by these disruptions or security breaches in the future.

We do not pay cash dividends on our common stock.

We have not paid a cash dividend on our common stock since 1997. Our Board of Directors has made no determination as to whether or when we will begin paying cash dividends. Until we begin paying dividends on our common stock, investors will have to rely on stock appreciation for a return on their investment.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We operate manufacturing plants and other facilities (including offices, warehouses, labs and other service facilities) throughout the world. Some of these plants and facilities are shared by our operating segments. We consider our major operating properties to be in good operating condition and suitable for their current use. We believe that, after taking planned expansion into account, the productive capacity of our plants and other facilities is generally adequate for current operations. The table below summarizes our primary facilities by operating segment and region:

	Number of Facilities*				
	North America	Europe Middle East Africa	Asia Pacific	Latin America	Total
Catalysts Technologies	9	3	1	—	13
Materials Technologies	7	10	9	4	30
Construction Products	17	12	23	11	63

* Shared facilities are counted in all applicable operating segments. The total number of facilities included in the above table, without regard to sharing amongst operating segments, is 92.

Our largest Catalysts Technologies facilities are located in Baltimore, Maryland; Lake Charles, Louisiana; and Worms, Germany.

Our largest Materials Technologies facilities are located in Baltimore, Maryland, and Worms, Germany.

Our largest Construction Products facilities are located in Cambridge, Massachusetts, and Mount Pleasant, Tennessee. Because this operating segment's products generally have short shelf lives and must be delivered to numerous job sites, Construction Products requires a greater number of facilities to service our customers than Catalysts Technologies and Materials Technologies. Also, these facilities are generally smaller and less capital intensive than our Catalysts Technologies and Materials Technologies facilities. For information on our net properties and equipment by region and country, see disclosure set forth in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 18 (Operating Segment Information) to our Consolidated Financial Statements, which disclosure is incorporated herein by reference.

Our corporate headquarters is in Columbia, Maryland, and we also lease and operate a shared services facility in Manila, Philippines.

We own all of our major manufacturing plants. As for the remainder of our facilities, we either own, lease or hold them under a land lease arrangement. In North America, we primarily own our facilities; in Europe, Middle East and Africa, we have a relatively even distribution between owned and leased facilities; and in Asia Pacific and Latin America, we lease the majority of our facilities.

In connection with our credit agreement, we have executed security agreements with respect to certain of our larger United States facilities in the following locations: Chicago, Illinois; Lake Charles, Louisiana; Baltimore and Columbia, Maryland; Albany, Oregon; and Mount Pleasant, Tennessee. For a description of our credit

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agreement see Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 6 (Debt) to the Consolidated Financial Statements.

Item 3. LEGAL PROCEEDINGS

CHAPTER 11 PROCEEDINGS

Disclosure provided in this Report in Item 1 (Business) under the caption "Chapter 11 Cases" and in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 1 (Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies under the caption "Chapter 11 Proceedings") and Note 2 (Chapter 11 and Joint Plan of Reorganization) to the Consolidated Financial Statements is incorporated herein by reference.

ASBESTOS LITIGATION

Disclosure provided in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 2 (Chapter 11 and Joint Plan of Reorganization) to the Consolidated Financial Statements is incorporated herein by reference.

ENVIRONMENTAL INVESTIGATIONS AND CLAIMS

Disclosure provided in this Report in Item 1 (Business) under the caption "Environment, Health and Safety Matters" and Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 11 (Commitments and Contingent Liabilities under the caption "Environmental Remediation") to the Consolidated Financial Statements is incorporated herein by reference.

TAX CLAIMS

Disclosure provided in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 8 (Income Taxes) to the Consolidated Financial Statements is incorporated herein by reference.

OTHER CLAIMS RECEIVED PRIOR TO THE CHAPTER 11 CLAIMS BAR DATE

Disclosure provided in this Report in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 2 (Chapter 11 and Joint Plan of Reorganization) to the Consolidated Financial Statements is incorporated herein by reference.

Item 4. MINE SAFETY DISCLOSURES

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95 to this Report.

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EXECUTIVE OFFICERS OF THE REGISTRANT

Pursuant to General Instruction G(3) of Form 10-K, the following list of executive officers of Grace as of February 15, 2015, is included as an unnumbered Item in Part I of this report in lieu of being included in the Grace Proxy Statement relating to the Annual Meeting of Stockholders to be held on May 7, 2015. Our executive officers are elected annually.

Name and Age	Office	First Elected
Alfred E. Festa (55)	Chairman of the Board and Chief Executive Officer	01/01/08 06/01/05
Hudson La Force III (50)	Senior Vice President and Chief Financial Officer	04/01/08
Gregory E. Poling (59)	President and Chief Operating Officer	11/03/11
Elizabeth C. Brown (51)	Vice President and Chief Human Resources Officer	01/21/15
Keith N. Cole (56)	Vice President, Government Relations and Environment, Health and Safety	02/10/14
Mark A. Shelnitz (56)	Vice President, General Counsel and Secretary	04/27/05

Messrs. Festa, Poling, La Force and Shelnitz have been actively engaged in Grace's business for the past five years.

Ms. Brown joined Grace in 2015. From 2010 until she joined Grace, Ms. Brown held leadership positions in human resources for Tyco International Limited. Prior to joining Tyco, Ms. Brown held leadership positions in human resources for LyondellBasell Industries.

Mr. Cole joined Grace in 2014. From 2002 until he joined Grace, Mr. Cole held leadership positions in government relations and public policy for General Motors Corporation.

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PART II

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

Except as provided below, the disclosure required by this Item appears in this Report in: Item 6 (Selected Financial Data); under the heading "Selected Financial Data" opposite the caption "Other Statistics—Common shareholders of record" in the Financial Supplement; Item 8 (Financial Statements and Supplementary Information) in the Financial Supplement in Note 15 (Shareholders' Equity) and Note 20 (Quarterly Summary and Statistical Information (Unaudited) opposite the caption "Market price of common stock") to the Consolidated Financial Statements; and Item 12 (Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters), and such disclosure is incorporated herein by reference.

SHAREHOLDER RIGHTS AGREEMENT

On March 31, 1998, we paid a dividend of one Preferred Stock Purchase Right on each share of Company common stock. Subject to our prior redemption for $.01 per right, rights will become exercisable on the earlier of:

- 10 days after an acquiring person, composed of an individual or group, has acquired beneficial ownership of 20% or more of the outstanding Company common stock or
- 10 business days (or a later date fixed by the Board of Directors) after an acquiring person commences (or announces the intention to commence) a tender offer or exchange offer for beneficial ownership of 20% or more of the outstanding Company common stock.

Until these events occur, the rights will automatically trade with the Company common stock, and separate certificates for the rights will not be distributed. The rights do not have voting or dividend rights.

Generally, each right not owned by an acquiring person:

- will initially entitle the holder to buy from Grace one hundredth of a share of the Grace Junior Participating Preferred Stock, at an exercise price of $100, subject to adjustment;
- will entitle such holder to receive upon exercise, in lieu of shares of Grace junior preferred stock, that number of shares of Company common stock having a market value of two times the exercise price of the right; and
- may be exchanged by Grace for one share of Company common stock or one hundredth of a share of Grace junior preferred stock, subject to adjustment.

Generally, if there is an acquiring person and we are acquired, each right not owned by an acquiring person will entitle the holder to buy a number of shares of common stock of the acquiring company having a market value equal to twice the exercise price of the right.

Each share of Grace junior preferred stock will be entitled to a minimum preferential quarterly dividend payment of $1.00 per share but will be entitled to an aggregate dividend equal to 100 times the dividend declared per share of Company common stock whenever such dividend is declared. In the event of liquidation, holders of Grace junior preferred stock will be entitled to a minimum preferential liquidation payment of $100 per share but will be entitled to an aggregate payment equal to 100 times the payment made per share of Company common stock. Each share of Grace junior preferred stock will have 100 votes, voting together with the Company common stock. Finally, in the event of any business combination, each share of Grace junior preferred stock will be entitled to receive an amount equal to 100 times the amount received per share of Company common stock. These rights are protected by customary antidilution provisions.

The terms of the rights may be amended by the Board of Directors without the consent of the holders of the rights. The rights expire on March 30, 2018. The rights have been approved by the U.S. Bankruptcy Court for the District of Delaware and the Official Committee of Equity Security Holders in connection with our Chapter 11 proceedings. This summary of the rights does not purport to be complete and is qualified in its entirety by reference to the Rights Agreement, which has been filed with the SEC.

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DIVIDENDS ON COMPANY COMMON STOCK

We have not paid a cash dividend on our common stock since 1997. Our Board of Directors has made no determination as to whether or when we will begin paying cash dividends. Although our credit agreement and indentures (as described in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 6 (Debt) to the Consolidated Financial Statements and filed as an exhibit to this Report), our deferred payment agreement with the Asbestos Property Damage Trust (as described in Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 2 (Chapter 11 and Joint Plan of Reorganization) to the Consolidated Financial Statements and filed as an exhibit to this Report) and our guarantee agreement with the Asbestos Property Damage Trust (filed as an exhibit to this Report) contain certain restrictions on the payment of dividends on, and redemptions of, equity interests and other restricted payments, we believe that such restrictions do not currently materially limit our ability to pay dividends and we do not believe that such restrictions are likely to limit materially our future payment of dividends.

SHARE REPURCHASES

Share Repurchase Program

On February 4, 2014, we announced that the Board of Directors had authorized a share repurchase program of up to $500 million. This program was completed in January 2015. On February 5, 2015, we announced that the Board of Directors has authorized an additional share repurchase program of up to $500 million. Repurchases under the program may be made through one or more open market transactions at prevailing market prices; unsolicited or solicited privately negotiated transactions; accelerated share repurchase programs; or through any combination of the foregoing, or in such other manner as determined by management. Repurchased shares are held in treasury. The timing of the repurchases and the actual amount repurchased will depend on a variety of factors, including the market price of Grace's shares, the strategic deployment of capital, and general market and economic conditions.

The following table presents information regarding the repurchase of Company common stock by Grace or any "affiliated purchaser" of Grace during the three months ended December 31, 2014:

	Total number of shares purchased (#)	Average price paid per share ($/share)	Total number of shares purchased as part of publicly announced plans or programs (#)	Approximate dollar value of shares that may yet be purchased under the plans or programs ($ in millions)
10/1/2014 - 10/31/2014	494,307	89.86	494,307	114.7
11/1/2014 - 11/30/2014	434,600	95.54	434,600	73.2
12/1/2014 - 12/31/2014	515,465	95.60	515,465	23.9
Total	1,444,372	93.62	1,444,372	23.9

PI Warrant Settlement

As of February 3, 2014, the effective date of the Grace Joint Plan of Reorganization, we issued to the WRG Personal Injury Trust warrants (the "PI Warrant") to acquire 10 million shares of Company common stock. On February 3, 2015, we repurchased the PI Warrant for a payment of $490 million.

STOCK TRANSFER RESTRICTIONS

Under the terms of our Certificate of Incorporation, as approved by the Bankruptcy Court as part of the confirmation of the Joint Plan, in order to preserve significant tax benefits which are subject to elimination or limitation, the Board of Directors has the authority to impose restrictions on the transfer of Company common stock with respect to certain 5% shareholders. Imposing such restrictions requires at least a 25% ownership shift to occur (as determined under Internal Revenue Code regulations) and at least a two-thirds vote of all of the directors. These restrictions would generally not limit the ability of a person that holds less than 5% of Company common stock to either buy or sell stock on the open market.

This summary does not purport to be complete and is qualified in its entirety by reference to the Certificate of Incorporation, which has been filed with the SEC as Exhibit 3.1 to this Report.

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STOCK PERFORMANCE GRAPH

The following information in Item 5 is not deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934, as amended (the "Exchange Act") or to the liabilities of Section 18 of the Exchange Act, and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent Grace specifically incorporates it by reference into such a filing.

The line graph and table below compare the cumulative total shareholder return on Company common stock with the cumulative total return of companies on the Standard & Poor's ("S&P") 500 Stock Index, the S&P Composite 1500 Specialty Chemicals Index and S&P 1500 Diversified Chemicals Index. This graph and table assume the investment of $100 in Company common stock on December 31, 2009. Grace has not paid cash dividends during the period presented.

	2009	2010	2011	2012	2013	2014
W. R. Grace & Co.	$100	$139	$181	$265	$390	$376
S&P 500 Index	100	115	117	136	179	204
S&P 1500 Specialty Chemicals	100	129	139	192	253	299
S&P 1500 Diversified Chemicals	100	140	132	159	227	243

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Item 6. SELECTED FINANCIAL DATA

The disclosure required by this Item appears in the Financial Supplement under the heading "Selected Financial Data" which disclosure is incorporated herein by reference.

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

The disclosure required by this Item appears in the Financial Supplement under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" which disclosure is incorporated herein by reference.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our global operations, raw materials and energy requirements, and debt obligations expose us to various market risks. We use derivative financial instruments to mitigate certain of these risks. The following is a discussion of our primary market risk exposures, how those exposures are managed, and certain quantitative data pertaining to our market risk-sensitive instruments.

Currency Exchange Rate Risk

Because we do business in over 40 countries, our results of operations are exposed to changes in currency exchange rates. We seek to minimize exposure to these changes by matching revenue streams in volatile currencies with expenditures in the same currencies, but it is not always possible to do so. From time to time, we use financial instruments such as currency forward contracts, options, or combinations of the two to reduce the risk of certain specific transactions. However, we do not have a policy of hedging all exposures, because management does not believe that such a level of hedging would be cost-effective. We do not hedge translation exposures that are not expected to affect cash flows in the near-term. Significant uses of derivatives to mitigate the effects of changes in currency exchange rates are as follows.

In November 2007, we executed intercompany loans in the aggregate amount of €250 million between our principal U.S. operating subsidiary and a newly established German subsidiary as part of a legal restructuring. In conjunction with the loans, our U.S. subsidiary entered into a series of currency forward contracts in order to fix the dollar/euro exchange rate that will apply to convert the euro principal payments to dollars. Currency fluctuations on these loans and the related forward contracts were recorded as components of operating results. The intercompany loans were repaid, and the related forward contracts were settled, when we emerged from bankruptcy.

The following table provides information about our significant currency forward exchange agreements as of December 31, 2013, specifically, the notional, or contract, amounts (in millions of U.S. dollars), and weighted average exchange rates (U.S. dollars to euros) by expected (contractual) maturity dates. These notional amounts generally are used to calculate the contractual payments to be exchanged under the contract. The fair values represent the fair value of the derivative contracts and are presented as other assets or other liabilities and allocated between current and non-current, as appropriate, in the Consolidated Balance Sheets. There were no significant currency forward exchange agreements outstanding at December 31, 2014.

	Euro Forward Contracts—December 31, 2013		
Currency Forward Exchange Agreements	2014 Expected Maturity Date	Fair Value	
Contract amount	$261.3	$(6.9	)
Average contractual exchange rate	1.34	N/A	

Commodity Price Risk

We operate in markets where the prices of raw materials and energy are commonly affected by cyclical movements in the economy and other factors. The principal raw materials used in our products include molybdenum, amines, polycarboxylates, sodium silicate, rare earths, rubber and latex, tungsten, alumina, caustic soda, solvents, napthalene sulfonate, lignin, and saccharides. Natural gas is the largest single energy source that we purchase. These commodities are generally available to be purchased from more than one supplier. In order to minimize the risk of increasing prices on certain raw materials and energy, we use a centralized supply chain

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organization for sourcing in order to optimize procurement activities. We have a risk management committee to review proposals to hedge purchases of raw materials and energy.

We have implemented a risk management program under which we hedge natural gas and aluminum supply in a way that provides protection against price volatility in the natural gas and aluminum markets. In order to mitigate volatility in natural gas prices, we have entered into both fixed price swaps and options contracts to hedge a portion of our U.S. natural gas requirements. Additionally, in order to mitigate volatility in aluminum prices, we have entered into fixed price swaps to hedge a portion of our U.S. aluminum requirements.

The following tables provide information about our commodity derivatives. For natural gas commodity derivatives, contract volumes, or notional amounts, are presented in millions of MMBtu (million British thermal units), weighted average contract prices are presented in U.S. dollars per million MMBtu, and the total contract amount and fair value are presented in millions of U.S. dollars. For aluminum commodity derivatives, contract volumes, or notional amounts, are presented in millions of pounds, weighted average contract prices are presented in U.S. dollars per pound, and the total contract amount and fair value are presented in millions of U.S. dollars. The fair values of the commodity derivative contracts represent the excess of the variable price (market price) over the fixed price (pay price) multiplied by the nominal contract volumes. All commodity derivative instruments mature within 12 months.

	Commodity Derivatives—December 31, 2014			
Type of Contract	Contract Volumes	Weighted Average Price	Total Contract Amount	Fair Value
Natural gas swaps	5.0	$3.54	$17.5	$(2.5)
Aluminum swaps	1.3	$0.92	$1.2	$(0.1)

	Commodity Derivatives—December 31, 2013			
Type of Contract	Contract Volumes	Weighted Average Price	Total Contract Amount	Fair Value
Natural gas swaps	0.3	$4.44	$1.2	$—
Aluminum swaps	1.4	$0.89	$1.2	$(0.1)

The fair value of commodity derivative contracts is presented as other assets or other liabilities and allocated between current and non-current, as appropriate, in the Consolidated Balance Sheets.

The following tables provide information about our natural gas option contracts. Contract volumes, or notional amounts, are presented in millions of MMBtu, both strike prices and futures trading prices are presented in U.S. dollars per million MMBtu, and the fair value is presented in millions of U.S. dollars. The fair values of the natural gas option contracts represent the excess of the futures trading price (market price) over the strike price multiplied by the nominal contract volumes. All natural gas option contracts mature within 18 months.

	Natural Gas Option Contracts—December 31, 2014			
Type of Contract	Contract Volumes	Strike Price	Futures Trading Price	Fair Value
Natural gas options	0.3	$5.00	$2.88 - 2.95	$—

	Natural Gas Option Contracts—December 31, 2013			
Type of Contract	Contract Volumes	Strike Price	Futures Trading Price	Fair Value
Natural gas options	7.1	$5.00	$4.01 - 4.41	$—

The fair value of the natural gas option contracts is presented as other assets or other liabilities and allocated between current and non-current, as appropriate, in the Consolidated Balance Sheets. The premium paid for the call options is presented at amortized cost in other assets and allocated between current and non-current, as appropriate, in the Consolidated Balance Sheets.

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We have also entered into forward contracts for natural gas and aluminum that qualify for the normal purchases and normal sales exception from Accounting Standards Codification ("ASC") 815 "Derivatives and Hedging" as they do not contain net settlement provisions and result in physical delivery of natural gas and aluminum from suppliers. Therefore, the fair values of these contracts are not recorded in our Consolidated Balance Sheets.

Interest Rate Risk

As of December 31, 2014, approximately $972.6 million of our borrowings were at variable interest rates and expose us to interest rate risk. As a result, we have been and will continue to be subject to the variations on interest rates in respect of our floating-rate debt. A 100 basis point increase in the interest rates payable on our variable rate debt outstanding as of December 31, 2014, would increase our annual interest expense by approximately $9.7 million.

In connection with our emergence financing, we entered into an interest rate swap beginning on February 3, 2015, and maturing on February 3, 2020, fixing $250 million of term debt at 4.643% as of December 31, 2014. While we have and may continue to enter into agreements intending to limit our exposure to higher interest rates, any such agreements may not offer complete protection from this risk.

See Item 8 (Financial Statements and Supplementary Data) in the Financial Supplement under Note 7 (Fair Value Measurements and Risk) to the Consolidated Financial Statements for additional disclosure around market risk, which disclosure is incorporated herein by reference.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The disclosure required by this Item appears in the Financial Supplement which disclosure is incorporated herein by reference.

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

None.

Item 9A. CONTROLS AND PROCEDURES

Except as provided below, the disclosure required by this Item appears in the Financial Supplement under the heading "Management's Report on Financial Information and Internal Controls" which disclosure is incorporated herein by reference.

There was no change in Grace's internal control over financial reporting during the quarter ended December 31, 2014, that has materially affected, or is reasonably likely to materially affect, Grace's internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

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PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Incorporated by reference to the sections entitled "Proposal One: Election of Directors," "—Nominees for Election as Directors," "—Continuing Directors," and "—Corporate Governance," "Questions and Answers—Where can I find Grace corporate governance materials?," and "Other Information—Section 16(a) Beneficial Ownership Reporting Compliance" of the 2015 Proxy Statement. Required information on executive officers of Grace appears at Part I after Item 4 of this report.

Item 11. EXECUTIVE COMPENSATION

Incorporated by reference to the sections entitled "Proposal One: Election of Directors—Corporate Governance," and "—Director Compensation," and "Executive Compensation—Compensation Discussion and Analysis," "—Compensation Committee Report," "—Compensation Committee Interlocks and Insider Participation," and "—Compensation Tables" of the 2015 Proxy Statement.

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

Incorporated by reference to the sections entitled "Other Information—Equity Security Ownership of Management and Certain Other Beneficial Owners" and "—Equity Compensation Plan Information" of the 2015 Proxy Statement.

Item 13. CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Incorporated by reference to the sections entitled "Proposal One: Election of Directors—Corporate Governance" and "Other Information—Related Party Transactions" of the 2015 Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Incorporated by reference to the sections entitled "Proposal Two: Ratification of the Appointment of the Registered Public Accounting Firm—Principal Accountant Fees and Services" and "—Audit Committee Pre-Approval Policies and Procedures" of the 2015 Proxy Statement.

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PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Financial Statements and Schedules. The required information is set forth in the Financial Supplement under the heading "Table of Contents" which is incorporated herein by reference.

Exhibits. The exhibits to this Report are listed below. Other than exhibits that are filed herewith, all exhibits listed below are incorporated by reference.

In reviewing the agreements included as exhibits to this and other Reports filed by Grace with the Securities and Exchange Commission, please remember they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about Grace or other parties to the agreements. The agreements generally contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other parties to the applicable agreement. These representations and warranties:

- are not statements of fact, but rather are used to allocate risk to one of the parties if the statements prove to be inaccurate;
- may have been qualified by disclosures that were made to the other parties in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and do not reflect more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time. Additional information about Grace may be found elsewhere in this report and Grace's other public filings, which are available without charge through the Securities and Exchange Commission's website at http://www.sec.gov.

Exhibit No.	Exhibit	Location
2.1	Joint Plan of Reorganization of W. R. Grace & Co. and its Debtor Subsidiaries.	Exhibit 2.01 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
2.2	Order Confirming Joint Plan of Reorganization.	Exhibit 2.02 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
2.3	Asbestos Insurance Transfer Agreement dated as of February 3, 2014, by and between W. R. Grace & Co., W. R. Grace & Co.-Conn. and the other insurance contributors identified therein and the Asbestos PI Trust.	Exhibit 2.03 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
3.1	Amended and Restated Certificate of Incorporation.	Exhibit 3.01 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
3.2	Amended and Restated By-laws.	Exhibit 3.01 to Form 8-K (filed 1/23/15) SEC File No.: 001-13953
4.1	Amended and Restated Rights Agreement dated as of March 25, 2008 between W. R. Grace & Co. and Mellon Investor Services LLC, as Rights Agent.	Exhibit 4.1 to Form 10/A (filed 3/25/08) SEC File No.: 001-13953
4.2	Receivables Purchase Agreement dated as of January 23, 2007 between Grace GmbH & Co. KG and Coface Finanz GmbH.	Exhibit 4.10 to Form 10-K (filed 3/02/07) SEC File No.: 001-13953
4.3	Credit Agreement dated as of February 3, 2014 by and among W. R. Grace & Co., W. R. Grace & Co.-Conn., Grace GmbH & Co. KG, a Federal Republic of Germany limited partnership, each lender from time to time party thereto, and Goldman Sachs Bank USA, as Administrative Agent.	Exhibit 4.01 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953

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Exhibit No.	Exhibit	Location
4.4	Deferred Payment Agreement (PI) dated as of February 3, 2014 by and between W. R. Grace & Co.-Conn. and the WRG Asbestos PI Trust.	Exhibit 4.02 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.5	Guarantee Agreement (PI) dated as of February 3, 2014 by and between W. R. Grace & Co. and the WRG Asbestos PI Trust.	Exhibit 4.03 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.6	Obligation Termination Agreement dated August 1, 2014, by and between W. R. Grace & Co.-Conn., W. R. Grace & Co. and the WRG Asbestos PI Trust.	Exhibit 10.1 to Form 8-K (filed 9/9/14) SEC File No.: 001-13953
4.7	Deferred Payment Agreement (PD) dated as of February 3, 2014 by and between W. R. Grace & Co.-Conn. and the WRG Asbestos PD Trust.	Exhibit 4.04 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.8	Guarantee Agreement (PD) dated as of February 3, 2014 by and between W. R. Grace & Co. and the WRG Asbestos PD Trust.	Exhibit 4.05 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.9	Deferred Payment Agreement (PD-ZAI) dated as of February 3, 2014 by and between W. R. Grace & Co.-Conn. and the WRG Asbestos PD Trust.	Exhibit 4.06 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.10	Guarantee Agreement (PD-ZAI) dated as of February 3, 2014 by and between W. R. Grace & Co. and the WRG Asbestos PD Trust.	Exhibit 4.07 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.11	Share Issuance Agreement dated as of February 3, 2014 by and among W. R. Grace & Co., the WRG Asbestos PD Trust and the WRG Asbestos PI Trust.	Exhibit 4.08 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.12	Warrant Agreement dated as of February 3, 2014 by and among W. R. Grace & Co., the WRG Asbestos PI Trust and Computershare.	Exhibit 4.09 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.13	[Warrant] Implementation Letter dated as of October 25, 2012 by and between W. R. Grace & Co., the Official Committee of Asbestos Personal Injury Claimants, the Asbestos PI Future Claimants' Representative and the Official Committee of Equity Security Holders.	Exhibit 4.10 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.14	[Warrant] Registration Rights Agreement dated as of February 3, 2014 by and between W. R. Grace & Co. and the WRG Asbestos PI Trust.	Exhibit 4.11 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
4.15	Indenture, dated as of September 16, 2014, by and among W. R. Grace & Co.—Conn., the guarantors party there to and Wilmington Trust, National Association, as trustee	Exhibit 4.1 to Form 8-K (filed 9/19/14) SEC File No.: 001-13953
4.16	First Supplemental Indenture, dated as of September 16, 2014, by and among W. R. Grace & Co.—Conn., the guarantors party thereto and Wilmington Trust, National Association, as trustee	Exhibit 4.2 to Form 8-K (filed 9/19/14) SEC File No.: 001-13953
4.17	Form of 5.125% Note due 2021 (included as Exhibit A-1 to Exhibit 4.2)	Exhibit 4.3 (included as Exhibit A-1 to Exhibit 4.2) to Form 8-K (filed 9/19/14) SEC File No.: 001-13953
4.18	Form of 5.625% Note due 2024 (included as Exhibit A-2 to Exhibit 4.2)	Exhibit 4.4 (included as Exhibit A-2 to Exhibit 4.2) to Form 8-K (filed 9/19/14) SEC File No.: 001-13953
10.1	WRG Asbestos PI Trust Agreement dated as of February 3, 2014 by and between W. R. Grace & Co., the Asbestos PI Future Claimants' Representative, the Official Committee of Asbestos Personal Injury	Exhibit 10.01 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953

	Claimants, the Asbestos PI Trustees, the Wilmington Trust Company, and the members of the Trust Advisory Committee.	
10.2	WRG Asbestos Property Damage Settlement Trust Agreement dated as of February 3, 2014 by and between W. R. Grace & Co., the Asbestos PD Future Claimants' Representative, the Official Committee of Asbestos Property Damage Claimants, the Asbestos PD Trustees, Wilmington Trust Company, and the members of the Zonolite Attic Insulation Trust Advisory Committee.	Exhibit 10.02 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953
10.3	Settlement Agreement dated December 23, 2013 by and between W. R. Grace & Co. and the other debtors named therein and the holders of Grace's pre-petition credit facilities named therein.	Exhibit 10.3 to Form 10-K (filed 2/27/14) SEC File No.: 001-13953

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Exhibit No.	Exhibit	Location
10.4	W. R. Grace & Co. 2000 Stock Incentive Plan, as amended.	Exhibit 10 to Form 10-Q (filed 8/14/00) SEC File No.: 001-13953*
10.5	W. R. Grace & Co. 2011 Stock Incentive Plan.	Exhibit 10.1 to Form 8-K (filed 4/13/11) SEC File No.: 001-13953*
10.6	W. R. Grace & Co. Amended and Restated 2011 Stock Incentive Plan.	Exhibit 10.1 to Form 8-K (filed 5/01/13) SEC File No.: 001-13953*
10.7	W. R. Grace & Co. 2014 Stock Incentive Plan.	Exhibit 10.03 to Form 8-K (filed 2/07/14) SEC File No.: 001-13953*
10.8	Form of Performance-based Unit Agreement.	Exhibit 10.2 to Form 10-Q (filed 8/02/13) SEC File No.: 001-13953*
10.9	Form of Stock Option Award Agreement.	Exhibit 10.2 to Form 8-K (filed 4/13/11) SEC File No.: 001-13953*
10.10	Form of Restricted Stock Award Agreement	Exhibit 10.4 to Form 8-K (filed 5/8/14) SEC File No.: 001-13953*
10.10	W. R. Grace & Co. Supplemental Executive Retirement Plan, as amended.	Exhibit 10.7 to Form 10-K (filed 3/28/02) SEC File No.: 001-13953*
10.11	W. R. Grace & Co. Executive Salary Protection Plan, as amended.	Exhibit 10.8 to Form 10-K (filed 3/28/02) SEC File No.: 001-13953*
10.12	Form of Executive Severance Agreement between Grace and certain officers.	Exhibit 10.17 to Form 10-K (filed 3/13/03) SEC File No.: 001-13953*
10.13	Severance Pay Plan for Salaried Employees.	Exhibit 10.17 to Form 10-K (filed 3/02/07) SEC File No.: 001-13953*
10.14	Form of Retention Agreement between Grace and certain officers (includes enhanced severance provision).	Exhibit 10.28 to Form 10-K (filed 4/16/01) SEC File No.: 001-13953*
10.15	Annual Incentive Compensation Program.	Exhibit 10.15 to Form 10-Q (filed 5/8/14) SEC File No.: 001-13953*
10.16	Letter Agreement dated May 27, 2009 between John F. Akers, on behalf of Grace, and Fred Festa (includes enhanced severance provision).	Exhibit 10.1 to Form 8-K (filed 5/29/09) SEC File No.: 001-13953*
10.17	Letter Agreement dated February 28, 2008 between Fred Festa, on behalf of Grace, and Hudson La Force III (includes enhanced severance provision)	Exhibit 10.1 to Form 8-K (filed 3/07/08) SEC File No.: 001-13953*
10.18	Letter Agreement dated June 19, 2009 between Fred Festa, on behalf of Grace, and Pamela Wagoner (includes enhanced severance provision).	Exhibit 10.18 to Form 10-K (filed 2/27/14) SEC File No.: 001-13953*
10.19	Letter Agreement dated September 24, 2014, between Fred Festa, on behalf of Grace, and Pamela K. Wagoner.	Exhibit 10.1 to Form 10-Q (filed 11/06/14) SEC File No.: 001-13953*
10.20	Letter Agreement dated November 13, 2013, between Fred Festa, on behalf of Grace, and Keith N. Cole	Filed herewith
12	Computation of Ratio of Earnings to Fixed Charges and Combined Fixed Charges and Preferred Stock Dividends.	Filed herewith
21	List of Subsidiaries of W. R. Grace & Co.	Filed herewith
23	Consent of Independent Accountants.	Filed herewith
24	Powers of Attorney.	Filed herewith
31.(i).1	Certification of Periodic Report by Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith

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Exhibit No.	Exhibit	Location
31.(i).2	Certification of Periodic Report by Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32	Certification of Periodic Report by Chief Executive Officer and Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002	Filed herewith
95	Mine Safety Disclosure Exhibit	Filed herewith
101.INS	XBRL Instance Document	Filed herewith
101.SCH	XBRL Taxonomy Extension Schema	Filed herewith
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	Filed herewith
101.DEF	XBRL Taxonomy Extension Definition Linkbase	Filed herewith
101.LAB	XBRL Taxonomy Extension Label Linkbase	Filed herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase	Filed herewith

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* Management contracts and compensatory plans, contracts or arrangements required to be filed as exhibits to this Report.

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SIGNATURES

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

W. R. GRACE & CO.

By: /s/ A. E. FESTA
A. E. Festa
(Chairman and Chief Executive Officer)

By: /s/ HUDSON LA FORCE III
Hudson La Force III
(Senior Vice President and
Chief Financial Officer)

By: /s/ WILLIAM C. DOCKMAN
William C. Dockman
(Vice President and Controller)

Dated: February 25, 2015

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 25, 2015.

Signature		Title
H. F. Baldwin*	}	
R. C. Cambre*	}	
R. F. Cummings, Jr.*	}	
M. A. Fox*	}	
D. H. Gulyas*	}	Directors
J. K. Henry*	}	
J. N. Quinn*	}	
C. J. Steffen*	}	
M. E. Tomkins*	}	

/s/ A. E. FESTA (A. E. Festa)	Chairman, Chief Executive Officer and Director (Principal Executive Officer)
/s/ HUDSON LA FORCE III (Hudson La Force III)	Senior Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ WILLIAM C. DOCKMAN (William C. Dockman)	Vice President and Controller (Principal Accounting Officer)

* By signing his name hereto, Mark A. Shelnitz is signing this document on behalf of each of the persons indicated above pursuant to powers of attorney duly executed by such persons and filed with the Securities and Exchange Commission.

By: /s/ MARK A. SHELNITZ
Mark A. Shelnitz
(Attorney-in-Fact)

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FINANCIAL SUPPLEMENT
W. R. GRACE & CO.
ANNUAL REPORT ON FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2014

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The Financial Statement Schedule should be read in conjunction with the Consolidated Financial Statements and Notes thereto. Financial statements of less than majority-owned persons and other persons accounted for by the equity method have been omitted as provided in Rule 3-09 of the United States Securities and Exchange Commission's (SEC) Regulation S-X. Financial Statement Schedules not included have been omitted because they are not applicable or the required information is shown in the Consolidated Financial Statements or Notes thereto.

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Management's Report on Financial Information and Internal Controls

Responsibility For Financial Information—We are responsible for the preparation, accuracy, integrity and objectivity of the Consolidated Financial Statements and the other financial information included in this report. Such information has been prepared in conformity with accounting principles generally accepted in the United States of America and accordingly, includes certain amounts that represent management's best estimates and judgments. Actual amounts could differ from those estimates.

Responsibility For Internal Controls—We and our management are also responsible for establishing and maintaining adequate internal controls over financial reporting. These internal controls consist of policies and procedures that are designed to assess and monitor the effectiveness of the control environment including risk identification, governance structure, delegations of authority, information flow, communications and control activities. A chartered Disclosure Committee oversees Grace's public financial reporting process and key managers are required to confirm their compliance with Grace's policies and internal controls quarterly. While no system of internal controls can ensure elimination of all errors and irregularities, Grace's internal controls, which are reviewed and modified in response to changing conditions, have been designed to provide reasonable assurance that assets are safeguarded, policies and procedures are followed, transactions are properly executed and reported, and appropriate disclosures are made. The concept of reasonable assurance is based on the recognition that there are limitations in all systems of internal control and that the costs of such systems should be balanced with their benefits. The Audit Committee of the Board of Directors, which is composed solely of independent directors, meets regularly with Grace's senior financial management, internal auditors and independent registered public accounting firm to review audit plans and results, as well as the actions taken by management in discharging its responsibilities for accounting, financial reporting and internal controls. The Audit Committee is responsible for the selection and compensation of the independent registered public accounting firm. Grace's financial management, internal auditors and independent registered public accounting firm have direct and confidential access to the Audit Committee at all times.

Report On Internal Control Over Financial Reporting—We and our management have evaluated Grace's internal control over financial reporting as of December 31, 2014. This evaluation was based on criteria for effective internal control over financial reporting set forth in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, we and our management have concluded that Grace's internal control over financial reporting is effective as of December 31, 2014. Grace's independent registered public accounting firm that audited our financial statements included in Item 15 has also audited the effectiveness of Grace's internal control over financial reporting as of December 31, 2014, as stated in their report, which appears on the following page.

Report On Disclosure Controls And Procedures—As of December 31, 2014, we and our management carried out an evaluation of the effectiveness of the design and operation of Grace's disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based upon that evaluation, we concluded that Grace's disclosure controls and procedures are effective in ensuring that information required to be disclosed in Grace's periodic filings and submissions under the Exchange Act is accumulated and communicated to us and our management to allow timely decisions regarding required disclosures, and such information is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

/s/ A. E. FESTA

A. E. Festa
Chief Executive Officer

/s/ HUDSON LA FORCE III
Hudson La Force III
Senior Vice President and
Chief Financial Officer

February 25, 2015

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of W. R. Grace & Co.:

In our opinion, the consolidated financial statements listed in the accompanying index accompanying consolidated balance sheets and the related consolidated statements of operations, of comprehensive income, of equity, and of cash flows present fairly, in all material respects, the financial position of W. R. Grace & Co. and its subsidiaries (the “Company”) at December 31, 2014 and December 31, 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, 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 Financial Information and Internal Controls. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP
Baltimore, Maryland
February 25, 2015

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Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-194171, 333-173785, 333-37024) of W. R. Grace & Co. of our report dated February 25, 2015 relating to the financial statements, financial statement schedule, and the effectiveness of internal control over financial reporting, which appears in this Form 10 K.

/s/ PricewaterhouseCoopers LLP
Baltimore, Maryland
February 25, 2015

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W. R. Grace & Co. and Subsidiaries
Consolidated Statements of Operations

(In millions, except per share amounts)	Year Ended December 31, 2014	2013	2012
Net sales	$3,243.0	$3,060.7	$3,155.5
Cost of goods sold	2,050.6	1,918.6	2,041.1
Gross profit	1,192.4	1,142.1	1,114.4
Selling, general and administrative expenses	664.0	505.7	635.2
Research and development expenses	79.5	65.2	64.5
Interest expense and related financing costs	61.5	43.8	46.5
Interest accretion on deferred payment obligations	65.7	—	—
Gain on termination of postretirement plans	(39.5)	—	—
Chapter 11 expenses, net of interest income	11.0	15.3	16.6
Default interest settlement	—	129.0	—
Asbestos and bankruptcy-related charges, net	7.1	21.9	