

Edgar Filing: Huntsman CORP - Form 10-K

Huntsman CORP  
Form 10-K  
February 26, 2009

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

Form 10-K

(Mark  
One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2008

OR

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

Commission File Number	Exact Name of Registrant as Specified in its Charter, Principal Office Address and Telephone Number	State of Incorporation/Organization	I.R.S. Employer Identification No.
001-32427	Huntsman Corporation 500 Huntsman Way Salt Lake City, Utah 84108 (801) 584-5700	Delaware	42-1648585
333-85141	Huntsman International LLC 500 Huntsman Way Salt Lake City, Utah 84108 (801) 584-5700	Delaware	87-0630358

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

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

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

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

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

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

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

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

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

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

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

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

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

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

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

On June 30, 2008, the last business day of the registrants' most recently completed second fiscal quarter, the aggregate market value of voting and non-voting common equity held by nonaffiliates was as follows:

Registrant	Common Equity	Market Value Held by Nonaffiliates
Huntsman Corporation	Common Stock	\$ 1,857,576,135(1)
Huntsman International LLC	Units of Membership Interest	\$ 0(2)

(1) Based on the closing price of \$11.40 per share of common stock as quoted on the New York Stock Exchange.

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

On February 13, 2009, the number of shares outstanding of each of the registrant's classes of common equity were as follows:

Registrant	Common Equity	Outstanding
Huntsman Corporation	Common Stock	234,430,334
Huntsman International LLC	Units of Membership Interest	2,728

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

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

### **Documents Incorporated by Reference**

Part III: Proxy Statement for the 2009 Annual Meeting of Stockholders or an amendment to this report to be filed within 120 days of Huntsman Corporation's fiscal year ended December 31, 2008.

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**HUNTSMAN CORPORATION AND SUBSIDIARIES**

**HUNTSMAN INTERNATIONAL LLC AND SUBSIDIARIES**

**2008 ANNUAL REPORT ON FORM 10-K**

Certain information set forth in this report contains "forward-looking statements" within the meaning of the federal securities laws. Forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future revenues or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions or dispositions and other information that is not historical information. In some cases, forward-looking statements can be identified by terminology such as "believes," "expects," "may," "will," "should," "anticipates" or "intends" or the negative of such terms or other comparable terminology, or by discussions of strategy. We may also make additional forward-looking statements from time to time. All such subsequent forward-looking statements, whether written or oral, by us or on our behalf, are also expressly qualified by these cautionary statements.

All forward-looking statements, including without limitation management's examination of historical operating trends, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith and we believe there is a reasonable basis for them, but there can be no assurance that management's expectations, beliefs and projections will result or be achieved. All forward-looking statements apply only as of the date made. We undertake no obligation to publicly update or revise forward-looking statements which may be made to reflect events or circumstances after the date made or to reflect the occurrence of unanticipated events.

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

This report includes information with respect to market share, industry conditions and forecasts that we obtained from internal industry research, publicly available information (including industry publications and surveys), and surveys and market research provided by consultants. The publicly available information and the reports, forecasts and other research provided by consultants generally state that the information contained therein has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy and completeness of such information. We have not independently verified any of the data from third-party sources, nor have we ascertained the underlying economic assumptions relied upon therein. Similarly, our internal research and forecasts are based upon our management's understanding of industry conditions, and such information has not been verified by any independent sources.

For convenience in this report, the terms "Company," "our," "us," or "we" may be used to refer to Huntsman Corporation and, unless the context otherwise requires, its subsidiaries and predecessors. Any references to our "Company," "we," "us" or "our" as of a date prior to October 19, 2004 (the date of our formation) are to Huntsman Holdings, LLC and its subsidiaries (including their respective predecessors). In this report, "Huntsman International" refers to Huntsman International LLC (our 100% owned subsidiary) and, unless the context otherwise requires, its subsidiaries; "HPS" refers to Huntsman Polyurethanes Shanghai Ltd. (our consolidated splitting joint venture with Shanghai Chlor-Alkali Chemical Company, Ltd); "SLIC" refers to Shanghai Liengheng Isocyanate Investment BV (our unconsolidated manufacturing joint venture with BASF AG and three Chinese chemical companies); "HMP Equity Trust" refers to HMP Equity Trust (the holder of approximately 20% of our common stock); and "Hexion" refers to Hexion Specialty Chemicals, Inc., an entity owned by an affiliate of Apollo Management, L.P. ("Apollo").

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

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**PART I**

**ITEM 1. BUSINESS**

**GENERAL**

Our Company, a Delaware corporation, was formed in 2004 to hold the Huntsman businesses. Jon M. Huntsman founded the predecessor to our Company in the early 1970s as a small packaging company. Since then, we have grown through a series of significant acquisitions and now own a global portfolio of businesses. In 2005, we completed an initial public stock offering.

In 2006 and 2007, we completed a series of transactions pursuant to which we have disposed of our former commodity chemicals businesses:

On November 5, 2007, we completed the sale of our U.S. base chemicals business to Flint Hills Resources, a wholly owned subsidiary of Koch, (the "U.S. Base Chemicals Disposition"), and, on August 1, 2007, we closed on the sale of our North American polymers business assets to Flint Hills Resources (the "North American Polymers Disposition" and together with the U.S. Base Chemicals Disposition, the "U.S. Petrochemicals Disposition"). For more information, see "Note 3. Discontinued Operations" to our consolidated financial statements included elsewhere in this report.

On December 29, 2006, we sold all of the outstanding equity interests of Huntsman Petrochemicals (UK) Limited to SABIC (the "U.K. Petrochemicals Disposition"). For more information, see "Note 3. Discontinued Operations European Base Chemicals and Polymers Business" to our consolidated financial statements included elsewhere in this report.

We operate all of our businesses through Huntsman International, our 100% owned subsidiary. Huntsman International is a Delaware limited liability company and was formed in 1999. Other than the \$250 million 7% convertible senior notes discussed in "Recent Developments Sale of Notes in Connection with Settlement Agreement" below, substantially all of our debt obligations are obligations of Huntsman International and/or its subsidiaries.

Our principal executive offices are located at 500 Huntsman Way, Salt Lake City, Utah 84108, and our telephone number at that location is (801) 584-5700.

**TERMINATION OF MERGER AGREEMENT AND SETTLEMENT OF RELATED LITIGATION**

On July 12, 2007, we entered into an Agreement and Plan of Merger (the "Merger Agreement") with Hexion pursuant to which Hexion agreed to acquire all of our outstanding common stock for \$28.00 per share (plus a ticking fee) in cash (the "Merger"). On June 18, 2008, Hexion, Apollo and certain of their affiliates filed an action for declaratory judgment against us in Delaware Chancery Court (the "Delaware Litigation"). On June 23, 2008, we sued Apollo and certain of its affiliates in the District Court of Montgomery County, Texas (the "Texas Apollo Litigation") alleging tortious interference with our previously executed merger agreement with Basell (the "Basell Merger Agreement"). On July 2, 2008, we countersued Hexion and Apollo in the Delaware Litigation seeking specific performance of the Merger Agreement and, alternatively, damages.

Following a six-day trial in the Delaware Chancery Court, Vice Chancellor Stephen P. Lamb issued an Opinion and an Order and Final Partial Judgment, ruling that, among other things, we had not suffered a material adverse effect in our business and that Hexion knowingly and intentionally breached numerous of its covenants under the Merger Agreement (as a result of which Hexion's liability for damages for failing to consummate the Merger would not be limited to the \$325 million termination fee (the "Termination Fee") as provided in the Merger Agreement). Vice Chancellor Lamb ordered Hexion to specifically perform its covenants under the Merger Agreement, including its covenants to (i) use reasonable best efforts to consummate the Merger and financing provided under the

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commitment letter provided to Hexion (the "Commitment Letter") by affiliates of Credit Suisse and Deutsche Bank A.G. (the "Lenders"), (ii) refrain from taking any further action that could reasonably be expected to materially impair, delay or prevent consummation of financing, and (iii) take all actions necessary to obtain antitrust approval for the Merger by October 2, 2008. A copy of Vice Chancellor Lamb's opinion and order are attached to our current report on Form 8-K filed on September 30, 2008.

On September 30, 2008, we filed suit in the 9th Judicial District Court in Montgomery County, Texas against the Lenders alleging, among other things, that the Lenders had conspired with Apollo to tortiously interfere with the Basell Merger Agreement (the "Texas Bank Litigation").

As a result of the Delaware Litigation, Hexion and our Company agreed to schedule the closing of the Merger Agreement for October 28, 2008. The Commitment Letter required that the Lenders be provided, at closing, with either (i) a solvency opinion of a reputable valuation firm, (ii) a solvency certificate signed by the chief financial officer of Hexion or (iii) a solvency certificate signed by our chief financial officer. This closing condition could be satisfied if any one of such opinions/certificates was delivered and was in a form customary for transactions involving portfolio companies of Apollo. On September 12, 2008, we announced that we had engaged a reputable valuation firm, American Appraisal Associates, Inc. ("American Appraisal"), to provide an opinion that the combined Hexion/Huntsman entity was solvent based on traditional solvency tests. On October 23, 2008, five days prior to the anticipated closing, American Appraisal provided us with a solvency opinion that the combined entity was solvent. On October 28, 2008, American Appraisal issued an additional opinion that the combined entity was solvent, and J. Kimo Esplin executed a certificate in his capacity as our chief financial officer that the combined entity was solvent.

Notwithstanding the opinions and certificate, very late on the evening of October 27, 2008, the Lenders sent a letter to Hexion stating that they did not believe that the solvency opinion and certificate proposed to be provided met the condition of the Commitment Letter and effectively said that, as a result, the Lenders would not fund the proposed closing of the Merger scheduled for October 28, 2008. Hexion sent the Lenders a reply letter disputing the Lenders' position and noting that both the American Appraisal opinion and the certificate of our chief financial officer were in forms customary for transactions involving Apollo portfolio companies. Because the Lenders continued to refuse to fund, Hexion brought suit against the Lenders in the Supreme Court of the State of New York, New York County on October 29, 2008 seeking specific performance of the Lenders' commitment under the Commitment Letter (the "New York Bank Litigation"). Hexion also sought an order temporarily restraining the Lenders from terminating the Commitment Letter. On October 31, 2008, the Court refused to grant Hexion a preliminary injunction preventing termination of the Commitment Letter. The Lenders have taken the position that the Commitment Letter expired by its terms on November 2, 2008.

On December 13, 2008, we sent notice to Hexion and Apollo that, pursuant to the terms of the Merger Agreement, we had terminated the Merger Agreement. Following the termination of the Merger Agreement, on December 14, 2008, we, together with certain of our affiliates, including Jon M. Huntsman and Peter R. Huntsman, entered into a Settlement Agreement and Release (the "Settlement Agreement") with Hexion, Hexion's chief executive officer Craig O. Morrison, and Apollo and certain of its affiliates.

Under the Settlement Agreement, upon full and final payment of all amounts due to us as described below, the parties agreed to take all necessary and appropriate action to obtain the dismissal with prejudice of (i) the Delaware Litigation, (ii) the Texas Apollo Litigation and (iii) Apollo and Hexion's lawsuit against us in New York. In addition, we agreed to promptly move to sever and dismiss Apollo from the Texas Bank Litigation and Hexion agreed to seek leave to withdraw its claims in the New York Bank Litigation. We also agreed to cooperate with Hexion and Apollo in a stockholder

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action brought against them in New York by certain of our stockholders, and Hexion and Apollo have agreed to cooperate with us in the Texas Bank Litigation, including by causing certain individuals to testify at trial if we so request. The parties also agreed to release each other from all claims and actions they have or may have against each other, other than claims arising out of ordinary course business commercial dealings and certain other specified matters.

Pursuant to the Settlement Agreement, Hexion and certain Apollo affiliates have paid us an aggregate of \$1 billion. Of the \$1 billion, Apollo affiliates paid us \$425 million in cash and purchased \$250 million of our 7% convertible senior notes (the "Convertible Notes") in that principal amount (as described below). In addition, Hexion paid us the \$325 million Termination Fee as required under the Merger Agreement. Apollo and certain of its affiliates and Hexion and certain of its affiliates are jointly and severally liable for the payment of the aggregate \$1 billion. In the event any payment by or on behalf of Hexion or any of its affiliates is rescinded or required by any court to be returned for any reason having to do with Hexion and its affiliates, the joint and several obligations of Apollo, Hexion and certain of their respective affiliates will continue in full force and effect.

Also pursuant to the Settlement Agreement, we agreed to indemnify and hold harmless Hexion, Apollo and certain of their respective affiliates, officers, directors, managers, members, employees, agents and other representatives (the "Indemnified Parties") from any claim for indemnification or contribution or any other claim asserted against the Indemnified Parties by the Lenders or their affiliates that in any way arises out of any claims made by us and our affiliates against the Lenders, including claims for contribution asserted by the Lenders against Apollo and its affiliates in the Texas Bank Litigation. Our indemnification obligation does not cover legal fees and expenses incurred by the Lenders or the attorneys' fees and expenses of the Indemnified Parties in defending the Lenders' claims. The aggregate amount we must pay pursuant to indemnification will not exceed the amount of our recovery collected, if any, in the Texas Bank Litigation net of attorney fees, costs and expenses related to the Texas Bank Litigation.

In connection with the Settlement Agreement, on December 14, 2008, we, together with certain of our affiliates, entered into a Letter Agreement (the "Letter Agreement") with Hexion and certain of its affiliates and Apollo and certain of its affiliates, pursuant to which we agreed to pay Apollo and certain of its affiliates an amount of cash equal to 20% of the value of cash and non-cash consideration that is in excess of \$500 million that we may obtain or receive in settlement in connection with any claims we made against the Lenders arising from or relating to the Merger Agreement, the transactions contemplated thereby and related matters, including the Texas Bank Litigation, after we first recover our attorneys' fees, costs and expenses in making the claim. In no circumstance will the aggregate amount of payments owed by us to the Apollo parties under the Letter Agreement exceed \$425 million. Moreover, in the event trial commences in the Texas Bank Litigation, any interest on the part of the Apollo parties will terminate immediately and we will not owe any portion of any subsequent recovery to the Apollo parties.

All of the aggregate \$1 billion in payments due under the Settlement Agreement were paid to us before December 30, 2008. As a result, the Delaware Litigation, the Texas Apollo Litigation, and Apollo and Hexion's lawsuit against us in New York have been dismissed. Hexion has withdrawn its claims against the Lenders in the New York Bank Litigation. We used \$423 million of the \$1 billion in proceeds to pay down our Revolving Facility. We intend to use the remaining amount, net of fees and expenses related to the Merger, for general liquidity purposes and possible additional reductions of our indebtedness.

The Texas Bank Litigation remains ongoing, and a court ordered mediation is scheduled to begin May 11, 2009, followed by a trial which is currently set for June 8, 2009. For more information, see "Recent Developments Texas Bank Litigation" below.



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**RECENT DEVELOPMENTS**

**SALE OF CONVERTIBLE NOTES IN CONNECTION WITH SETTLEMENT AGREEMENT**

Pursuant to the Settlement Agreement, on December 23, 2008, we issued \$250 million of our 7% Convertible Notes to Apollo affiliates under a Note Purchase Agreement (the "Note Purchase Agreement"). We recorded these Convertible Notes at a fair value of \$235 million. The Convertible Notes are convertible at any time, at the holder's option, at an initial conversion rate of 127.275 shares of our common stock per \$1,000 principal amount of Convertible Notes (which is equal to an initial conversion price of \$7.857 per share), subject to specified anti-dilution adjustments. The Convertible Notes bear interest at the rate of 7% per year payable semi-annually on July 1 and January 1 of each year, beginning on July 1, 2009. Interest is payable either in cash or, at our option, in shares of our common stock having a market value at that time equal to the interest payment. The Convertible Notes are our senior unsecured obligations and are not guaranteed by any of our subsidiaries, including Huntsman International.

The Convertible Notes will mature on December 23, 2018. At maturity, we may, at our option, pay the principal amount of the Convertible Notes in shares of our common stock having a market value at that time equal to the principal amount of the Convertible Notes, plus an amount equal to the underwriting spread of a nationally-recognized underwriter chosen by us that would be paid by a seller of the shares at such time.

We may redeem the Convertible Notes in whole, for cash, at the principal amount of the Convertible Notes plus accrued and unpaid interest, at any time on or after December 23, 2011 if the closing price of our common stock, for at least 20 consecutive trading days prior to the notice of redemption, exceeds 135% of the conversion price in effect at that time.

Upon the occurrence of certain change of control events, the holders of the Convertible Notes may require us to redeem all or any portion of the holders' Convertible Notes at the principal amount plus accrued and unpaid interest.

In connection with the issuance of the Convertible Notes, we entered into a Registration Rights Agreement, dated as of December 23, 2008 (the "Registration Rights Agreement"), with Apollo and certain of its affiliates. Pursuant to the Registration Rights Agreement, we have agreed to use our reasonable best efforts to register the resale of our common stock issuable upon conversion of the Convertible Notes (and common stock payable as interest or principal on the Convertible Notes) under the Securities Act of 1933, as amended.

**VOTING AND STANDSTILL AGREEMENT**

In addition to the Note Purchase Agreement and the Registration Rights Agreement, we entered into a Voting and Standstill Agreement, dated as of December 23, 2008 (the "Voting and Standstill Agreement") with Apollo and certain other stockholders related to Apollo that prohibits such persons from owning any of our common stock, other than common stock paid to such persons pursuant to the Convertible Notes ("Underlying Securities") or shares of our common stock beneficially owned by such persons as of December 23, 2008. Without our consent, persons subject to the Voting and Standstill Agreement may not transfer the Convertible Notes or the Underlying Securities, other than (i) transfers involving Underlying Securities paid as interest, (ii) certain transfers to certain affiliates and (iii) certain bona fide pledges related to borrowings from financial institutions. The Voting and Standstill Agreement further restricts Apollo and certain related stockholders from taking certain actions, including engaging in or participating in any proxy solicitation relating to the election of our Board of Directors or our Board's publicly disclosed recommendation on certain matters. The shares of our common stock held by such persons must be voted, at our election, either (i) in the manner recommended by our Board or (ii) in the same proportion as our other stockholders. The Voting and

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Standstill Agreement terminates upon the later to occur of (i) December 31, 2010 or (ii) the date on which none of Apollo and its related stockholders beneficially or of record own Convertible Notes or any Underlying Securities representing 3% or more of our then-outstanding common stock.

Copies of the Note Purchase Agreement, the Registration Rights Agreement and the Voting and Standstill Agreement are filed as Exhibit 10.1, Exhibit 10.2 and Exhibit 10.3, respectively, to our current report on Form 8-K filed on December 23, 2008.

## **TEXAS BANK LITIGATION**

As noted above, on September 30, 2008, we filed suit in the 9th Judicial District Court in Montgomery County, Texas against the Lenders alleging, among other things, that the Lenders had conspired with Apollo to tortiously interfere with the Basell Merger Agreement. Our petition against the Lenders includes claims of common law fraud, civil conspiracy, tortious interference with contract and unjust enrichment. We are seeking to recover damages measured by the benefit of the bargain or the amount by which the Lenders were unjustly enriched as a result of the injuries we believe they inflicted on us. Discovery, including depositions, has commenced. A court ordered mediation is scheduled to begin May 11, 2009. Trial is currently set for June 8, 2009. Also pending before the same court is a motion for summary judgment by certain entities and persons affiliated with Apollo, which seeks entry of an order barring contribution claims that have been asserted against them by the Lenders. That motion is not currently set for hearing. We intend to prosecute our claims vigorously.

## **OVERVIEW**

We are a global manufacturer of differentiated organic chemical products and of inorganic chemical products. As of December 31, 2008, we operated in four segments: Polyurethanes, Materials and Effects, Performance Products and Pigments. In a series of transactions completed in 2006 and 2007, we sold substantially all of our Polymers and Base Chemicals operations. We report the results from these discontinued operations in our Polymers and Base Chemicals segments. For more information, see "Note 3. Discontinued Operations" to our consolidated financial statements included elsewhere in this report.

Our products comprise a broad range of chemicals and formulations, which we market globally to a diversified group of consumer and industrial customers. Our products are used in a wide range of applications, including those in the adhesives, aerospace, automotive, construction products, durable and non-durable consumer products, electronics, medical, packaging, paints and coatings, power generation, refining, synthetic fiber, textile chemicals and dye industries. We are a leading global producer in many of our key product lines, including MDI, amines, surfactants, epoxy-based polymer formulations, textile chemicals, dyes, maleic anhydride and titanium dioxide. Our administrative, research and development and manufacturing operations are primarily conducted at the facilities listed in "Item 2. Properties" below, which are located in 25 countries. As of December 31, 2008, we employed approximately 12,600 associates worldwide. We had revenues for the years ended December 31, 2008, 2007 and 2006 of \$10,215 million, \$9,651 million and \$8,731 million, respectively.

## **Our Products**

We produce differentiated organic chemical and inorganic chemical products. Our Polyurethanes, Materials and Effects and Performance Products segments produce differentiated organic chemical products and our Pigments segment produces inorganic chemical products. Our former Polymers and Base Chemicals operations, which have been sold, produced commodity organic chemical products. For more information, see "Note 3. Discontinued Operations" to our consolidated financial statements included elsewhere in this report.

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

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- (1) Percentage allocations in this chart do not give effect to Corporate and Other unallocated items, eliminations and EBITDA from discontinued operations. For a detailed disclosure of our revenues, total assets and EBITDA by segment, see "Note 30. Operating Segment Information" to our consolidated financial statements included elsewhere in this report. For a discussion of EBITDA by segment and a reconciliation of EBITDA to net income and cash provided by operating activities, see "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Results of Operations."

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

<b>Segment</b>	<b>Products</b>	<b>End Markets and Applications</b>	<b>Representative Customers</b>
Polyurethanes	MDI, PO, polyols, PG, TPU, aniline and MTBE	Refrigeration and appliance insulation, construction products, adhesives, automotive, footwear, furniture, cushioning, specialized engineering applications and fuel additives	BMW, Electrolux, Firestone, GE, Haier, Lear, Louisiana Pacific, Weyerhaeuser
Materials and Effects	Epoxy resin compounds and formulations; cross-linking, matting and curing agents; epoxy, acrylic and polyurethane-based adhesives, tooling resin formulations, textile chemicals and dyes and APAO	Adhesives, aerospace, electrical power transmission, consumer electronics, civil engineering, wind power generation, automotive, apparel, home and technical textiles	ABB, Akzo, BASF, Boeing, Bosch, Cytec, Hexcel, Rohm & Haas, Russell, Sara Lee, Sherwin Williams, Wellspan, Hanesbrands, Milliken
Performance Products	Amines, surfactants, LAB, maleic anhydride, other performance chemicals, EG, olefins and technology licenses	Detergents, personal care products, agrochemicals, lubricant and fuel additives, adhesives, paints and coatings, construction, marine and automotive products and PET fibers and resins	Chevron, Henkel, The Sun Products Corporation, Monsanto, Procter & Gamble, Unilever, Lubrizol, Reichhold, Dow, L'Oreal, Afton
Pigments	Titanium dioxide	Paints and coatings, plastics, paper, printing inks, fibers and ceramics	Akzo, Sigma Kalon, Clariant, Jotun, PolyOne
Polymers(1)	LDPE and LLDPE, polypropylene, EPS and styrene	Flexible and rigid packaging, adhesives and automotive, medical and construction products	Ashland, Berry, Kimberly Clark, Pliant, Polymer Group, PolyOne, Sealed Air
Base Chemicals(1)	Olefins and cyclohexane	Packaging film, polyester and nylon fibers, PVC and polymer resins	Ineos, Dow, DuPont, Invista, Nova, Shell, Solutia

(1)

In a series of transactions completed in 2006 and 2007, we sold substantially all of our Polymers and Base Chemicals operations. For more information, see "Note 3. Discontinued Operations" to our consolidated financial statements included elsewhere in this report.

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**Polyurethanes**

***General***

We are a leading global manufacturer and marketer of a broad range of polyurethane chemicals, including MDI products, PO, polyols, PG and TPU. Polyurethane chemicals are used to produce rigid and flexible foams, as well as coatings, adhesives, sealants and elastomers. We focus on the higher-margin, higher-growth markets for MDI and MDI-based polyurethane systems. Growth in our Polyurethanes segment has been driven primarily by the continued substitution of MDI-based products for other materials across a broad range of applications. We operate five primary Polyurethanes manufacturing facilities in the U.S., Europe and China. We also operate 12 Polyurethanes formulation facilities, which are located in close proximity to our customers worldwide.

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

We are a leading North American producer of PO. We and some of our customers process PO into derivative products, such as polyols for polyurethane products, PG and various other chemical products. End uses for these derivative products include applications in the home furnishings, construction, appliance, packaging, automotive and transportation, food, paints and coatings and cleaning products industries. We also produce MTBE as a co-product of our PO manufacturing process. MTBE is an oxygenate that is blended with gasoline to reduce harmful vehicle emissions and to enhance the octane rating of gasoline. See " Environmental, Health and Safety Matters MTBE Developments" below and "Part I. Item 1A. Risk Factors" for a discussion of legal and regulatory developments that have resulted in the curtailment and potential elimination of MTBE in gasoline in the U.S. and elsewhere. Also see, " Manufacturing and Operations" below and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" for a discussion of material changes concerning sales of MTBE. We sold our U.S. butadiene and MTBE business operated in our Base Chemicals segment in June 2006; however, the PO/MTBE operations in our Polyurethanes segment were not included in this transaction.

In 1992, we were the first global supplier of polyurethane chemicals to open a technical service center in China. We have since expanded this facility to include an integrated polyurethanes formulation facility. In January 2003, we entered into two related joint ventures to build MDI production and finishing facilities near Shanghai, China. Production at our MDI finishing plant near Shanghai, China operated by HPS, our consolidated subsidiary, was commissioned on June 30, 2006. Production at the MNB, aniline and crude MDI plants operated by SLIC, our unconsolidated joint venture, commenced on September 30, 2006. These world-scale facilities strengthen our ability to service our customers in the critical Chinese market and will support the significant demand growth that we believe this region will continue to experience.

***Products and Markets***

MDI is used primarily in rigid foam applications and in a wide variety of customized higher-value flexible foam and coatings, adhesives, sealants and elastomers. Polyols, including polyether and polyester polyols, are used in conjunction with MDI and TDI in rigid foam, flexible foam and other

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non-foam applications. PO is one of the principal raw materials for producing polyether polyols. The following chart illustrates the range of product types and end uses for polyurethane chemicals.

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

**MDI.** MDI has a substantially larger market size and a higher growth rate than TDI. This is primarily because MDI can be used to make polyurethanes with a broader range of properties and can therefore be used in a wider range of applications than TDI. We believe that future growth of MDI is expected to be driven by the continued substitution of MDI-based polyurethane for fiberglass and other materials currently used in rigid insulation foam for construction. We expect that other markets, such as binders for reconstituted wood board products, specialty cushioning applications and coatings will further contribute to the continued growth of MDI.

The U.S. and European markets currently consume the largest quantities of MDI. With the recent rapid growth of the developing Asian economies, the Asian markets have become an important market for MDI, and we currently believe that per-capita demand for MDI in Asia will continue to increase as its less-developed economies continue to grow.

There are four major global producers of MDI: Bayer, our Company, BASF and Dow. While there are also some regional producers in Asia and Europe, we believe it is unlikely that any new global producers of MDI will emerge in the foreseeable future due to the substantial requirements for entry, such as the limited availability of licenses for MDI technology and the substantial capital commitment and integration that is required to develop both the necessary technology and the infrastructure to manufacture and market MDI.

**TPU.** TPU is a high-quality, fully formulated thermal plastic derived from the reaction of MDI or an aliphatic isocyanate with polyols to produce unique qualities such as durability, flexibility, strength, abrasion-resistance, shock absorbency and chemical resistance. We can tailor the performance characteristics of TPU to meet the specific requirements of our customers. TPU is used in injection

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molding and small components for the automotive and footwear industries. It is also extruded into films, wires and cables for use in a wide variety of applications in the coatings, adhesives, sealants and elastomers markets.

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

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

**PO.** PO is an intermediate chemical used mainly to produce a wide range of polyols and PG. Demand for PO depends largely on overall economic demand, especially that of consumer durables. The following chart illustrates the primary end markets and applications for PO.

**MTBE.** MTBE is an oxygenate that is blended with gasoline to reduce harmful vehicle emissions and to enhance the octane rating of gasoline. The use of MTBE is controversial, and it has been effectively eliminated in the U.S. market. See " Environmental, Health and Safety Matters MTBE Developments" below and "Part I. Item 1A. Risk Factors." We continue to sell MTBE for use as a gasoline additive, substantially all of which is sold for use outside the U.S. See " Manufacturing and Operations" below and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

***Sales and Marketing***

We manage a global work force which sells our polyurethane chemicals to over 2,000 customers in more than 90 countries. Our sales and technical resources are organized to support major regional markets, as well as key end-use markets which require a more global approach. These key end-use





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markets include the appliance, automotive, footwear, furniture and coatings, construction products, adhesives, sealants and elastomers industries.

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

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

***Manufacturing and Operations***

Our MDI production facilities are located in Geismar, Louisiana, Rozenburg, Netherlands and, through our joint ventures, Shanghai, China. These facilities receive aniline, which is a primary material used in the production of MDI, from our facilities located in Geismar, Louisiana; Wilton, U.K.; and Shanghai, China. We believe that this relative scale and product integration of our large facilities provide a significant competitive advantage over other producers. In addition to reducing transportation costs for our raw materials, integration helps reduce our exposure to cyclical prices.

The following table sets forth the annual production capacity of polyurethane chemicals at each of our polyurethanes facilities:

	MDI(1)	Polyols	TPU	Aniline	Nitrobenzene	PO	PG	MTBE (millions of gallons)
	(millions of pounds)							
Geismar, Louisiana	970	160		717(2)	935(2)			
Port Neches, Texas						525	145	260
Ringwood, Illinois			18					
Rozenburg, Netherlands	880	130						
Wilton, U.K.				715	953			
Osnabrück, Germany		26	57					
<b>Total</b>	<b>1,850</b>	<b>316</b>	<b>75</b>	<b>1,432</b>	<b>1,888</b>	<b>525</b>	<b>145</b>	<b>260</b>

(1) In addition to the production referenced, we also are entitled to 50% of the MDI output (265 million pounds) from SLIC, our unconsolidated Chinese joint venture.

(2) Represents our approximately 78% share of capacity under our Rubicon LLC manufacturing joint venture with Chemtura Corporation.

At both our Geismar and Rozenburg facilities we utilize sophisticated proprietary technology to produce our MDI. This technology, which is also used in our Chinese joint venture, contributes to our position as a low cost MDI producer. In addition to MDI, we use a proprietary manufacturing process

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to manufacture PO. We own or license all technology, know-how and patents developed and utilized at our PO facility. Our process combines isobutane and oxygen in proprietary oxidation (peroxidation) reactors, thereby forming TBHP and TBA, which are further processed into PO and MTBE, respectively. Because our PO production process is less expensive relative to other technologies and allows all of our PO co-products to be processed into saleable or useable materials, we believe that our PO production technology possesses several distinct advantages over its alternatives.

We also operate polyurethane systems houses in Deerpark, Australia; Shanghai, China; Cartagena, Colombia; Deggendorf, Germany; Thane (Maharashtra), India; Ternate, Italy; Tlalnepantla, Mexico; Mississauga, Ontario; Kuan Yin, Taiwan; Samuprakam, Thailand; Osnabrück, Germany and Dammam, Saudi Arabia.

***Joint Ventures***

***Rubicon Joint Venture.*** We and Chemtura Corporation own Rubicon LLC, which owns aniline, nitrobenzene and DPA manufacturing facilities in Geismar, Louisiana. We are entitled to approximately 78% of the nitrobenzene and aniline production capacity of Rubicon LLC, and Chemtura Corporation is entitled to 100% of the DPA production. In addition to operating the joint venture's owned aniline, nitrobenzene and DPA facilities, Rubicon LLC also operates our wholly owned MDI and polyol facilities at Geismar and is responsible for providing other auxiliary services to the entire Geismar complex. As a result of this joint venture, we are able to achieve greater scale and lower costs for our products than we would otherwise have been able to obtain. Rubicon LLC is consolidated in our financial statements..

***Chinese MDI Joint Ventures.*** In January 2003, we entered into two related joint venture agreements to build MDI production facilities near Shanghai, China. SLIC, our manufacturing joint venture with BASF AG and three Chinese chemical companies, built three plants that manufacture MNB, aniline and crude MDI. We effectively own 35% of SLIC and it is our unconsolidated affiliate. HPS, our splitting joint venture with Shanghai Chlor-Alkali Chemical Company, Ltd, has constructed a plant to manufacture pure MDI, polymeric MDI and MDI variants. We own 70% of HPS and it is our consolidated affiliate. These projects have been funded by a combination of equity invested by the joint venture partners and borrowed funds. SLIC and HPS commenced operations during 2006. The total production capacity of the SLIC facilities is 530 million pounds per year of MDI and the production capacity of the HPS facility is 270 million pounds per year of pure MDI, polymeric MDI and MDI variants.

***Raw Materials***

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

A major cost in the production of polyols is attributable to the costs of PO. The integration of our PO business with our polyurethane chemicals business gives us access to a competitively priced, strategic source of PO and the opportunity to develop polyols that enhance our range of MDI products. The primary raw materials used in our PO production process are butane/isobutane, propylene, methanol and oxygen, which accounted for 55%, 30%, 14% and 1%, respectively, of total raw material costs in 2008. We purchase our raw materials primarily under long-term contracts. While most of these feedstocks are commodity materials generally available to us from a wide variety of suppliers at competitive prices in the spot market, all the propylene used in the production of our PO is produced internally and delivered through a pipeline connected to our PO facility.

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**Competition**

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

The market in which our Polyurethanes segment operates is highly competitive. Among our competitors in this market are some of the world's largest chemical companies and major integrated petroleum companies that have their own raw material resources. Some of these companies may be able to produce products more economically than we can. In addition, some of our competitors in this market have greater financial resources, which may enable them to invest significant capital into their businesses, including expenditures for research and development. If any of our current or future competitors in this market develops proprietary technology that enables them to produce products at a significantly lower cost, our technology could be rendered uneconomical or obsolete.

**Materials and Effects**

**General**

Our Materials and Effects segment is a leading global manufacturer and marketer of technologically advanced epoxy, acrylic and polyurethane-based polymer products and textile solutions, including dye and chemical products. We focus on formulations and systems that are used to address customer-specific needs in a wide variety of industrial and consumer applications. Our products are used either as replacements for traditional materials, such as metal, wood, clay, glass, stone, ceramics and natural fibers, or in applications where traditional materials do not meet demanding engineering specifications. For example, structural adhesives are used to replace metal rivets and advanced composites are used to replace traditional aluminum panels in the manufacture of aerospace components. Our textile solutions enhance the color of finished textiles and improve such performance characteristics as wrinkle resistance and the ability to repel water and stains. Our Materials and Effects segment is characterized by the breadth of our product offering, our expertise in complex chemistry, our long-standing relationships with our customers, our ability to develop and adapt our technology and our applications expertise for new markets and new applications.

We operate synthesis, formulating and production facilities in North America, Europe, Asia, South America and Africa. We market over 6,000 products to more than 5,000 customers in over 20 end-markets, which are grouped as follows:

**Market Groups**

Advanced Materials

**End Markets**

civil engineering, shipbuilding and marine maintenance, consumer appliances, food and beverage packaging, industrial appliances, consumer/do it yourself ("DIY"), aerospace, DVD, LNG transport, electrical power transmission and distribution, printed circuit boards, consumer and industrial electronics, aerospace, wind power generation, automotive, recreational sports equipment, medical appliances, design studios and prototype manufacturers

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**Market Groups**

**End Markets**

Textile Effects                      consumer fashion apparel, sportswear, career and uniform apparel, military, automotive, home textiles and furnishings, carpet and other functional textiles

In October 2006 and December 2008, we announced restructuring programs for our textile effects operations. These restructuring programs are necessary to allow our Materials and Effects segment to adapt to the dynamic business shifts that have occurred in the textile market. Through December 31, 2008, we have spent approximately \$50 million to significantly expand resources and capacity in Asia, while refocusing and consolidating resources in Europe and North America and to transition from a regional to a global, market-focused organization. Other elements of our plan include simplifying global distribution networks, enhancing research and development activities and continuing investments in environmental, health and safety projects to ensure that all of our acquired manufacturing units are operating in accordance with our standards. We expect to spend approximately \$60 million over approximately the next year to complete these projects. We have targeted approximately \$100 million in annual savings when all phases of the restructuring are fully completed.

***Products and Markets***

Advanced Materials product range spans from basic liquid and solid resins, to specialty components like curing agents, matting agents, accelerators, cross-linkers, reactive diluents, thermoplastic polyamides and additives. In addition to these components, which we typically sell to formulators in various industries, we also produce and sell ready to use formulated polymer systems.

***Base Resins and Specialty Component Markets.*** Our products are used for the protection of steel and concrete substrates, such as flooring, metal furniture and appliances, buildings, linings for storage tanks and food and beverage cans, and the primer coat of automobile bodies and ships. Epoxy-based surface coatings are among the most widely used industrial coatings due to their structural stability and broad application functionality combined with overall economic efficiency.

Base resins and specialty components are also used for composite applications. A structural composite is made by combining two or more different materials, such as fibers, resins and other specialty additives, to create a product with enhanced structural properties. Specifically, structural composites are lightweight, high-strength, rigid materials with high resistance to chemicals, moisture and high temperatures. Our product range comprises basic and advanced epoxy resins, curing agents and other advanced chemicals, additives and formulated polymer systems. The four key target markets for our structural composites are aerospace, windmill blades for wind power generation, other industrial and automotive applications, and recreational products (mainly sports equipment such as skis). Structural composites continue to substitute for traditional materials, such as metals and wood, in a wide variety of applications due to their light weight, strength and durability.

***Formulated Systems.*** The structural adhesives market requires high-strength "engineering" adhesives for use in the manufacture and repair of items to bond various engineering substrates. Our business focus is on engineering adhesives based on epoxy, polyurethane, acrylic and other technologies which are used to bond materials, such as steel, aluminum, engineering plastics and composites in substitution of traditional joining techniques. Our Araldite brand name has considerable value in the industrial and consumer adhesives markets. In many countries, Araldite® branded products are known as high-performance adhesives, and we generally believe that this is the value-added segment of the market where recognition of our long-standing Araldite® brand is a key competitive advantage. Packaging is a key characteristic of our adhesives products. Our range of adhesives is sold in a variety

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of packs and sizes, specifically targeted to three specific end-markets and sold through specifically targeted routes to market:

*General Industrial Bonding.* We sell a broad range of advanced formulated adhesives to a broad base of small-to medium-sized customers, including specialist distributors.

*Industry Specific.* We sell our adhesive products on a global basis into diverse, industry-specific markets, which include the aerospace, wind turbine, DVD, LNG transport, filterbonding, solar cell and other industrial applications markets. Our target markets are chosen because we believe it is worthwhile to utilize our direct sales force and applications experts to tailor products and services to suit the needs and performance specifications of the specific market segments.

*Consumer/DIY.* We package and sell consumer adhesives through strategic distribution arrangements with a number of the major marketers of consumer/DIY adhesives, such as Bostik and Shelleys. These products are sold globally through a number of major retail outlets, often under the Araldite® brand name.

Our electrical materials are formulated polymer systems, which make up the insulation materials used in equipment for the generation, transmission and distribution of electrical power, such as transformers, switch gears, ignition coils, sensors, motors and magnets, and for the protection of electrical and electronic devices and components. The purpose of these products is to insulate, protect or shield either the environment from electrical current or electrical devices from the environment, such as temperature or humidity. Our electrical insulating materials target two key market segments: the heavy electrical equipment market and the light electrical equipment market.

Products for the heavy electrical equipment market segment are used in power plant components, devices for power grids and insulating parts and components. In addition, there are numerous devices, such as motors and magnetic coils used in trains and medical equipment, which are manufactured using epoxy and related technologies. Products for the light electrical equipment market segment are used in applications such as industrial automation and control, consumer electronics, car electronics and electrical components. The end customers in the electrical insulating materials market encompass the relevant original equipment manufacturer ("OEM") as well as numerous manufacturers of components used in the final products. We also develop, manufacture and market materials used in the production of printed circuit boards. Our products are ultimately used in industries ranging from telecommunications and personal computer mother board manufacture to automotive electronic systems manufacture. Soldermasks are our most important product line in printed circuit board technologies, particularly in Europe. Sales are made mainly under the Probimer®, Probimage®, and Probelec® trademarks. Our Probimer® trademark is a widely recognized brand name for soldermasks.

We produce mainly polyurethane-based and epoxy formulated polymer systems used in the production of models, prototypes, patterns, molds and a variety of related products for design, prototyping and short-run manufacture. Our products are used extensively in the automotive, aerospace and industrial markets as productivity tools to quickly and efficiently create accurate prototypes and develop experimental models, and to lower the cost of manufacturing items in limited quantities primarily using computer-aided-design techniques. We separate the overall tooling and modeling materials market into two distinct groups standard tooling and modeling materials and stereolithography technology.

Our standard tooling and modeling materials are polymer-based materials used by craftsmen to make the traditional patterns, molds, models, jigs and fixtures required by the foundry, automotive, ceramics and other such industries. Stereolithography is a technology that is used to accurately produce physical three-dimensional models directly from computer-aided-design data without cutting, machining or tooling. The models are produced by selectively curing a light-sensitive liquid resin with a laser beam. We sell our stereolithography products to customers in the aerospace, appliance, automotive, consumer, electronics and medical markets.

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**Textile Effects.** Textiles generally involve a complex matrix of fibers, effects and functionality, and the resulting products range from fashion apparel to bulletproof vests, home linens to air and water filters, and upholstery to automotive interiors. Our broad range of dyestuffs and chemicals enhance both the aesthetic appearance of these products and the functionality needed to ensure that they perform in their end-use markets. Since the requirements for these markets vary dramatically, our business strategy focuses on the two major markets apparel and technical textiles. We work to provide the right balance of products and service to meet the technical challenges in each of these markets.

The apparel market, which also includes our home interiors products, focuses on products that provide an aesthetic effect and/or improve the processing efficiency within the textile mill. We offer a complete range of colors for cotton, polyester and nylon that cover the range of shades needed for sportswear, intimate apparel, towels, sheeting and casual wear. Our dyes have been developed to ensure that they offer the highest levels of wash fastness currently available in the market. Optical brighteners and other pretreatment products provide "bright white" effects for apparel, towels and sheeting. Pretreatment and dyeing auxiliaries ensure that these fabrics are processed efficiently and effectively cleaning the fabrics with fewer chemicals, less energy and less water and thereby minimizing the environmental footprint and reducing the processing costs. Silicone softeners may be used to enhance the feel of products.

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

***Sales and Marketing***

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

We conduct sales activities for our market groups through separate dedicated regional sales teams in the Americas, Europe, Africa and the Middle East ("EAME") and Asia. Our global customers are covered by key account managers who are familiar with the specific requirements of these clients. The management of long-standing customer relationships, some of which are 20 to 30 years old, is at the heart of the sales and marketing process. We are also supported by a strong network of distributors. We serve a highly fragmented customer base.

For our consumer adhesives, we have entered into exclusive branding and distribution arrangements with, for example, Bostik in Europe and Shelleys in Australia. Under these arrangements, our distribution partners fund advertising and sales promotions, negotiate and sell to major retail chains, own inventories and provide store deliveries (and sometimes shelf merchandising) in exchange for a reliable, high-quality supply of Araldite® branded, ready-to-sell packaged products.

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For our textile effects products, we focus on providing effect competence and process competence to our customers. Effect competence delivering value-added effects to our customer's products enables us to capitalize on new and innovative technologies and to assist our customers in their efforts to differentiate themselves from competitors. Process competence applying know-how and expertise to improve customers' processes allows us to utilize our technical service to reduce cost and enhance efficiency.

## Manufacturing and Operations

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

Location	Description of Facility
Taboão da Serra, Brazil	Formulating Facility
Panyu, China(1)(3)	Production Facility
Sadat City, Egypt	Formulating Facility
Bad Saeckingen, Germany(1)	Formulating Facility
Bergkamen, Germany	Synthesis Facility
Langweid am Leich, Germany(1)	Formulating Facility
Chennai, India(2)	Resins and Synthesis Facility
Atotonilquillo, Mexico	Synthesis Facility
Pamplona, Spain	Resins and Synthesis Facility
Basel, Switzerland(1)	Synthesis Facility and Technology Center
Monthey, Switzerland	Resins and Synthesis Facility
Schweizerhalle, Switzerland(1)	Formulating Facility
Samutsakorn (Mahachai), Thailand(1)	Synthesis Facility
Istanbul, Turkey(1)	Formulating Facility
Duxford, U.K.	Formulating Facility
McIntosh, Alabama, U.S.	Resins and Synthesis Facility
Los Angeles, California, U.S.	Formulating Facility
East Lansing, Michigan, U.S.	Formulating Facility
Charlotte, North Carolina, U. S.(1)	Formulating Facility

- (1) Leased land and/or building.
- (2) 76%-owned manufacturing joint venture with Tamilnadu Petroproducts Limited.
- (3) 95%-owned manufacturing joint venture with Guangdong Panyu Shilou Town Economic Development Co. Ltd.

Our facilities in Asia are well-positioned to take advantage of the market growth that is expected in this region. Furthermore, we believe that we are the largest producer of epoxy resin compounds in India.

## Raw Materials

The principal raw materials we purchase for the manufacture of basic and advanced epoxy resins are epichlorohydrin, bisphenol A and BLR. We also purchase amines, polyols, isocyanates, acrylic materials, hardeners and fillers for the production of our formulated polymer systems and complex chemicals and additives. The manufacture of textile effects products requires a wide selection of raw

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materials (approximately 3,000 different chemicals), including amines, fluorochemicals and sulfones. No one raw material represents greater than 2% of our textile effects raw material expenditures. Raw material costs constitute a sizeable percentage of sales for certain applications. We have supply contracts with a number of suppliers, including, for example, Dow. The terms of our supply contracts vary. In general, these contracts contain provisions that set forth the quantities of product to be supplied and purchased and formula-based pricing.

Additionally, we produce some of our most important raw materials, such as BLR and its basic derivatives, which are the basic building blocks of many of our products. We are the fourth largest producer of BLR in the world. Approximately 50% of the BLR we produce is consumed in the production of our formulated polymer systems. The balance of our BLR is sold as liquid or solid resin in the merchant market, allowing us to increase the utilization of our production plants and lower our overall BLR production cost. We believe that manufacturing a substantial proportion of our principal raw material gives us a competitive advantage over other epoxy-based polymer systems formulators, most of whom must buy BLR from third-party suppliers. This position helps protect us from pricing pressure from BLR suppliers and aids in providing us a stable supply of BLR in difficult market conditions.

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

***Competition***

The market in which our Materials and Effects segment operates is highly competitive. Among our competitors in this market are some of the world's largest chemical companies and major integrated companies that have their own raw material resources. Some of these companies may be able to produce products more economically than we can. In addition, some of our competitors in this market have greater financial resources, which may enable them to invest significant capital into their businesses, including expenditures for research and development. If any of our current or future competitors in this market develops proprietary technology that enables them to produce products at a significantly lower cost, our technology could be rendered uneconomical or obsolete.

***Advanced Materials.*** Competition in basic liquid and solid epoxy resins is primarily driven by price. There are two major manufacturers of basic epoxy resins used in industrial protective coatings, Dow and Hexion. Other participants in this market include BASF, Kukdo, Leuna and NanYa. Competition in coating systems is increasingly becoming more global, with trends toward industry consolidation and the emergence of new competitors in Asia. Our competitors are considerably more fragmented in Asia than in Europe and North America.

Competition in specialty components is primarily driven by product performance, service and customer certification. We believe that the competitive strengths of our coating systems product lines are our strong technology base, broad range of value-added products, leading market positions, diverse customer base and reputation for customer service. Our major competitors for formulated polymer systems and complex chemicals and additives used in coatings systems are Air Products, Arizona, Hexion, Cognis, Cray Valley and Evonics.

Competition in structural composites applications varies but is primarily driven by technology, applications expertise, formulations expertise, product performance, customer service and customer certification. We believe that our competitive strengths are our strong technology base, broad range of value-added products, leading market positions, diverse customer base and reputation for customer service. Pricing dynamics differ greatly among the various end-markets, largely due to their differing structures. Pricing in the aerospace market very much reflects the advanced technology and applications know-how which we provide to customers. Pricing is typically more competitive in the industrial and recreational markets due to the more standardized requirements of the end-user market and higher



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sales volumes compared to those of the aerospace market. Competition in the electrical laminates industry is largely price-driven due to the standard nature of the products supplied, the highly price-sensitive nature of the electronics industry and the ability of customers to source globally. Our competitors in the structural composites markets include Hexion, DIC, Dow, Mitsui and Sumitomo. In the aerospace market, we compete principally with Mitsui and Sumitomo. Our competitors in the automotive, industrial and recreational markets include Dow and Hexion. Finally, our competitors in the laminates market include all of these companies as well as NanYa.

We face substantial competition for the sale of our products for adhesives applications. Competition in the industry specific market segments is based on an understanding of the relevant industry sector and the ability to provide highly reliable and tailored engineering solutions, applications expertise and ease of use with the customer's processing equipment. Competition in the consumer market segment is based on branding, packaging and making widely available, easy-to-use products on which our customers can rely. We believe that our competitive strengths and our focus on defined market needs, provision of a high level of service and recognition as a quality supplier in the chosen sectors, all of which are exemplified by our strong Araldite® brand name. The principal participants in the structural adhesives market include Henkel/Loctite, ITW, National Starch, Sika, 3M and many other regional or industry specific competitors.

Competition for electrical insulating materials applications is based on technology, know-how, applications expertise, formulations expertise, reliability, performance and price. Manufacturers of heavy electrical equipment place more importance on reliability and level of support, while manufacturers of light electrical equipment choose materials offering the lowest cost, but also the required quality and performance. As a result, epoxy products, which offer a combination of price and performance superior to competing polyurethane and silicone and conventional glass and ceramic products, are widely used in heavy electrical equipment, and both epoxy and cheaper polyurethane products are used in light electrical equipment.

We believe that our competitive strengths in the electrical materials market are our long-standing customer relationships, product reliability and technical performance. Our key products used in heavy electrical and light electrical applications, such as resins, hardeners and auxiliaries, are tested and certified according to industry standards established by Underwriters Laboratories, International Electrotechnical Commission, or Cenelec, and also to customer-specific requirements. Our main competitors in the electrical insulating materials market segment include Altana, Hexion, Schenectady, Wuxi, Dexter-Hysol, Hitachi Chemical, Nagase Chemtex and Toshiba Chemical.

Competition in the printed circuit board materials markets is based on price, technological innovation and the ability to provide process expertise and customer support. Consolidation among our customers has led to increased pricing pressure. We believe that our competitive strengths are our fully developed technology, our application technology center in Basel, Switzerland and our technology center in Panyu, China, our global presence and long-standing relationships with key customers and OEMs, and the approval of our products by global OEMs. Major competitors of our soldermask products include Coates, Goo, Peters, Taiyo Ink and Tamura.

Competition in standard tooling and modeling solutions is based on quality of service, technical solutions, range, competitive prices and prompt supply, including 24-hour delivery if required. This market segment is generally characterized by pricing pressure and intense competition. Competition in stereolithography is driven by the requirement for innovative solutions. We believe that our competitive strength is our broad range of products, which we make available on a global basis, covering all of the needs of both our standard tooling and modeling and stereolithography customers. A few large manufacturers (including Axson, DSM and Sika), as well as many small, local manufacturers provide a limited product range to local regions in the plastic tooling and modeling solutions market but none have our breadth of product offering.

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**Textile Effects.** We are the leading global market share provider for textile chemicals and dyes. Competition within the textile chemicals and dyes markets is generally fragmented with few competitors who offer complete solutions for both markets. Our major competitors are Dystar, Clariant, BASF, Cognis and Lanxess. We believe that our competitive strengths include our product offering, which is characterized by its broad range; high quality; significant integration between products and service; reliable technical expertise; long-standing relationships with customers; and strong business infrastructure in Asia. We believe that we have more customer service capacity and account management capacity than any of our competitors worldwide.

**Performance Products**

**General**

Our Performance Products segment is organized around three market groups, performance specialties, performance intermediates and maleic anhydride and licensing, and serves a wide variety of consumer and industrial end markets. In performance specialties, we are a leading global producer of amines, carbonates and certain specialty surfactants. Growth in demand in our performance specialties market tends to be driven by the end-performance characteristics that our products deliver to our customers. These products are manufactured for use in a growing number of niche industrial end uses and have been characterized by growing demand, technology substitution and stable profitability. For example, we are one of two significant global producers of polyetheramines, for which our sales volumes have grown at a compound annual rate of over 10% in the last ten years due to strong demand in a number of industrial applications, such as epoxy curing agents, oil drilling, agrochemicals, fuel additives and civil construction materials. In performance intermediates, we consume internally produced and third-party-sourced base petrochemicals in the manufacture of our surfactants, LAB and ethanolamines products, which are primarily used in detergency, consumer products and industrial applications. We also produce EG, which is primarily used in the production of polyester fibers and PET packaging. We believe we are North America's largest and lowest-cost producer of maleic anhydride. Maleic anhydride is the building block for UPRs, mainly used in the production of fiberglass reinforced resins for marine, automotive and construction products. We are the leading global licensor of maleic anhydride manufacturing technology and are also the largest supplier of butane fixed bed catalyst used in the manufacture of maleic anhydride. Our licensing group also licenses technology on behalf of other Huntsman businesses. We operate 15 Performance Products manufacturing facilities in North America, Europe, Asia and Australia.

We have the annual capacity to produce approximately 1.2 billion pounds of more than 250 amines and other performance chemicals. We believe we are the largest global producer of polyetheramines, propylene carbonates, ethylene carbonates, DGA® agent and morpholine, the second-largest global producer of ethyleneamines and the third-largest North American producer of ethanolamines. We also produce substituted propylamines. Our products are manufactured at our Port Neches, Conroe and Freeport, Texas facilities and at our facilities in Llanelli, U.K., Petfurdo, Hungary and Jurong Island, Singapore. We use internally produced ethylene, EO, EG and PO in the manufacture of many of our amines. Our amines are used in a wide variety of consumer and industrial applications, including personal care products, polyurethane foam, fuel and lubricant additives, paints and coatings, composites, solvents and catalysts. Our key amines customers include Akzo, Chevron, Cognis, Hercules, Afton, Unilever, Monsanto and PPG.

We have the capacity to produce approximately 2.5 billion pounds of surfactant products annually at our eight facilities located in North America, Europe and Australia. We are a leading global manufacturer of nonionic, anionic, cationic and amphoteric surfactants products and are characterized by our breadth of product offering and market coverage. Our surfactant products are primarily used in consumer detergent and industrial cleaning applications. In addition, we manufacture and market a diversified range of mild surfactants and specialty formulations for use in baby shampoos and other

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personal care applications. We are also a leading European producer of components for powder and liquid laundry detergents and other cleaners. We continue to strengthen and diversify our surfactant product offering into formulated specialty surfactant products, for use in various industrial applications such as leather and textile treatment, foundry and construction, agrochemicals, fuels and lubricants, polymers and coatings. We are growing our global agrochemical surfactant technology and product offerings. Our key surfactants customers include The Sun Products Corp, L'Oreal, Monsanto, Nufarm, Clorox, Henkel, Colgate, Procter & Gamble and Unilever.

We are North America's second-largest producer of LAB, with alkylation capacity of 375 million pounds per year at our plant in Chocolate Bayou, Texas. LAB is a surfactant intermediate which is converted into LAS, a major anionic surfactant used worldwide for the production of consumer, industrial and institutional laundry detergents. We also manufacture a higher-molecular-weight alkylate which is used as an additive to lubricants. Our key customers for alkylates include Colgate, Lubrizol, Henkel, Procter & Gamble, Unilever and The Sun Products Corp.

We believe we are North America's largest producer of maleic anhydride, a highly versatile chemical intermediate that is used to produce UPRs, which are mainly used in the production of fiberglass reinforced resins for marine, automotive and construction products. Maleic anhydride is also used in the production of lubricants, food additives and artificial sweeteners. We have the capacity to produce approximately 240 million pounds annually at our facility located in Pensacola, Florida. We also own a 50% interest in Sasol-Huntsman GmbH & Co. KG, which is accounted for using the equity method. This joint venture owns and operates a facility in Moers, Germany with an annual capacity of 137 million pounds. We also license our maleic anhydride technology and supply our catalysts to licensees and to worldwide merchant customers, including supplying catalyst to two of the three other U.S. maleic anhydride producers. As a result of our long-standing research and development efforts aided by our pilot and catalyst preparation plants, we have successfully introduced six generations of our maleic anhydride catalysts. Patents have been recently filed for our seventh generation catalyst which should be commercially available in late 2009. Revenue from licensing and catalyst comes from new plant commissioning, as well as current plant retrofits and catalyst change schedules. Our key maleic anhydride customers include AOC, Oronite, Cook Composites, Dixie, Lubrizol and Reichhold.

We also have the capacity to produce approximately 945 million pounds of EG annually at our facilities in Botany, Australia and Port Neches, Texas.

**Products and Markets**

**Performance Specialties.** The following table shows the end-market applications for our performance specialties products:

Product Group	Applications
Specialty Amines	liquid soaps, personal care, lubricant and fuel additives, polyurethane foams, fabric softeners, paints and coatings, refinery processing, water treating
Polyetheramines	polyurethane foams and insulation, construction and flooring, paints and coatings, lubricant and fuel additives, adhesives, epoxy composites, agrochemicals, oilfield chemicals, printing inks, pigment dispersion
Ethyleneamines	lubricant and fuel additives, epoxy hardeners, wet strength resins, chelating agents, fungicides
Morpholine/DGA® agent and Gas Treating	hydrocarbon processing, construction chemicals, synthetic rubber, water treating, electronics applications, gas treatment and agriculture

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<b>Product Group</b>	<b>Applications</b>
Carbonates	lubricant and fuel additives, agriculture, electronics applications, textile treatment, solar panels
Specialty Surfactants	agricultural herbicides, construction, paper de-inking, lubricants
Our performance specialties products are organized around the following end markets: coatings, polymers and resins; process additives; resources, fuels and lubricants; and agrochemicals.	

**Amines.** Amines broadly refers to the family of intermediate chemicals that are produced by reacting ammonia with various ethylene and propylene derivatives. Generally, amines are valued for their properties as a reactive, emulsifying, dispersant, detergent, solvent or corrosion inhibiting agent. Growth in demand for amines is highly correlated with GDP growth due to its strong links to general industrial and consumer products markets. However, certain segments of the amines market, such as polyetheramines, have grown at rates well in excess of GDP growth due to new product development, technical innovation, and substitution and replacement of competing products. For example, polyetheramines are used by customers who demand increasingly sophisticated performance characteristics as an additive in the manufacture of highly customized epoxy formulations, enabling the customers to penetrate new markets and substitute for traditional curing materials. As amines are generally sold based upon the performance characteristics that they provide to customer-specific end use application, pricing does not generally fluctuate with movements in underlying raw materials. On June 29, 2005, we signed a memorandum of understanding with the Zamil Group to form a joint venture to build an ethyleneamines manufacturing facility in Jubail Industrial City, Saudi Arabia. This facility is now under construction and we expect it to come on line in early 2010 with annual capacity of 60 million pounds.

**Morpholine/DGA® Agent.** Morpholine and DGA® agent are produced as co-products by reacting ammonia with DEG. Morpholine is used in a number of niche industrial applications including rubber curing (as an accelerator) and flocculants for water treatment. DGA® agent is primarily used in gas treating, electronics, herbicides and metalworking end-use applications.

**Carbonates.** Ethylene and propylene carbonates are manufactured by reacting EO and PO with carbon dioxide. Carbonates are used as solvents and as reactive diluents in polymer and coating applications. They are also increasingly being used as a photo-resist solvent in the manufacture of printed circuit boards, solar panels, LCD screens and the production of lithium batteries. Also, propylene carbonates have recently received approval by the U.S. Environmental Protection Agency for use as a solvent in certain agricultural applications. We expect these solvents to replace traditional aromatic solvents that are increasingly subject to legislative restrictions and prohibitions.

**Performance Intermediates.** The following table sets forth the end markets for our performance intermediates products:

<b>Product Group</b>	<b>End Markets</b>
<b>Surfactants</b>	
Alkoxylates	household detergents, industrial cleaners, anti-fog chemicals for glass, asphalt emulsions, shampoos, polymerization additives, de-emulsifiers for petroleum production
Sulfonates/Sulfates	powdered detergents, liquid detergents, shampoos, body washes, dishwashing liquids, industrial cleaners, emulsion polymerization, concrete superplasticizers, gypsum wallboard
Esters and Derivatives	shampoo, body wash, textile and leather treatment

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Product Group	End Markets
Nitrogen Derivatives	bleach thickeners, baby shampoo, fabric conditioners, other personal care products
Formulated Blends	household detergents, textile and leather treatment, personal care products, pharmaceutical intermediates
EO/PO Block Co-Polymers	automatic dishwasher detergents
<i>Ethanolamines</i>	wood preservatives, herbicides, construction, gas treatment, metalworking
<i>LAB</i>	consumer detergents, industrial and institutional detergents, synthetic lubricants
<i>EG</i>	polyester fibers and PET bottle resins, antifreeze

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

Demand growth for surfactants is relatively stable and exhibits little cyclicalilty. The main consumer product applications for surfactants can demand new formulations with improved performance characteristics which affords considerable opportunity for innovative surfactants manufacturers like us to provide surfactants and blends with differentiated specifications and properties. For basic surfactants, pricing tends to have a strong relationship to underlying raw material prices and usually lags raw material price movements.

*Ethanolamines.* Ethanolamines are a range of chemicals produced by the reaction of EO with ammonia. They are used as intermediates in the production of a variety of industrial, agricultural and consumer products. There are a limited number of competitors due to the technical and cost barriers to entry. Growth in this sector has typically been higher than GDP and in the last few years has benefited in particular from the conversion to ethanolamines in the formulation of wood treatment products and higher demand for agriculture products. We believe the ethanolamines market in North America is balanced with industry operating rates currently running about of 90% of stated capacity. During 2007, we expanded the manufacturing capacity of our Port Neches, Texas facility by 70 million pounds per year. Some of our competitors have also announced their intention to debottleneck their facilities to meet the continuing growing demand for ethanolamines.

*LAB.* LAB is a surfactant intermediate which is produced through the reaction of benzene with either normal paraffins or linear alpha olefins. Nearly all the LAB produced globally is converted into LAS, a major anionic surfactant used worldwide for the production of consumer, industrial and institutional laundry detergents.

Four major manufacturers lead the traditional detergency market for LAB in North America: Procter & Gamble, Henkel, The Sun Products Corp and Unilever. We believe that two-thirds of the LAB global capacity lies in the hands of seven producers, with two or three major players in each of the three regional markets. Although the North American market for LAB is mature, we expect Latin America and other developing countries to grow as detergent demand grows at a faster rate than GDP.

From a competition perspective, compounds derived from alcohol can be used in certain instances as an alternative to LAB in detergent formulations. In the past several years, a significant amount of new alcohol production capacity has come on stream resulting in lower prices for these alcohol-based compounds. Despite this threat to LAB margins, the lack of investment in new LAB capacity and inability to fully substitute LAB in detergent formulations has resulted in a tightened supply position

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which has bolstered profitability. In addition, we have developed a high molecular weight alkylate for the lubricants market. This has allowed us greater diversity in our portfolio and strengthened our competitive position.

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

***Maleic Anhydride and Licensing.*** The following table sets forth the end markets for our maleic anhydride products:

<b>Product Group</b>	<b>End Markets</b>
Maleic anhydride	boat hulls, automotive, construction, lubricant and fuel additives, countertops, agrochemicals, paper, and food additives
Maleic anhydride catalyst and technology licensing	maleic anhydride, BDO and its derivatives, and PBT manufacturers

Maleic anhydride is a chemical intermediate that is produced by oxidizing either benzene or normal butane through the use of a catalyst. The largest use of maleic anhydride in the U.S. is in the production of UPRs, which we believe account for approximately 57% of U.S. maleic anhydride demand. UPR is the main ingredient in fiberglass reinforced resins, which are used for marine and automotive applications and commercial and residential construction products.

Our maleic anhydride technology is a proprietary fixed bed process with solvent recovery and is characterized by low butane consumption and an energy-efficient, high-percentage-recovery solvent recovery system. This process competes against two other processes, the fluid bed process and the fixed bed process with water recovery. We believe that our process is superior in the areas of feedstock and energy efficiency and solvent recovery. The maleic anhydride-based route to BDO manufacture is currently the preferred process technology and is favored over the other routes, which include PO, butadiene and acetylene as feedstocks. As a result, the growth in demand for BDO has resulted in increased demand for our maleic anhydride technology and catalyst.

Total U.S. demand for maleic anhydride in 2008 was approximately 500 million pounds. Over time, demand for maleic anhydride has generally grown at rates that slightly exceed GDP growth. However, given its dependence on the UPR market, which is heavily influenced by construction end markets, demand for this application can be cyclical. Pricing for maleic anhydride in North America over the past several years has been increasing but has recently declined with the drop in feedstock costs. Generally, changes in price have resulted from changes in industry capacity utilization as opposed to changes in underlying raw material costs; however in the second half of 2008 pricing was more driven by the latter.

We are currently constructing a new 100 million pounds-per-year maleic anhydride facility at our Geismar, Louisiana site. We expect the new facility to come on stream at the end of the first quarter of 2009. On April 1, 2008, we announced that Sasol-Huntsman GmbH KG, our 50/50 maleic anhydride joint venture located in Moers, Germany, would be expanding its manufacturing capacity by approximately 100 million pounds per year. The new capacity is expected to be available during 2011.

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The joint venture has received committed nonrecourse financing that together with its cash flows from operations will be used to fund the expansion.

### Sales and Marketing

We sell over 2,000 products to over 4,000 customers globally through our Performance Products marketing groups, which have extensive market knowledge, considerable chemical industry experience and well established customer relationships.

Our performance specialties markets are organized around end-use market applications, such as coatings, polymers and resins and agrochemical. In these end uses, our marketing efforts are focused on how our product offerings perform in certain customer applications. We believe that this approach enhances the value of our product offerings and creates opportunities for on-going differentiation in our development activities with our customers. Our performance intermediates and maleic anhydride markets organize their marketing efforts around their products and geographic regions served. We also provide extensive pre-and post-sales technical service support to our customers where our technical service professionals work closely with our research and development functions to tailor our product offerings to meet our customers unique and changing requirements. Finally, these technical service professionals interact closely with our market managers and business leadership teams to help guide future offerings and market approach strategies.

In addition to our focused direct sales efforts, we maintain an extensive global network of distributors and agents that also sell our products. These distributors and agents typically promote our products to smaller end use customers who cannot be served cost effectively by our direct sales forces.

### Manufacturing and Operations

Our Performance Products segment has the capacity to produce more than seven billion pounds annually of a wide variety of specialty, intermediate and commodity products and formulations at 15 manufacturing locations in North America, Europe, Asia and Australia.

These production capacities are as follows:

Product Area	North America	Current capacity		Total
		Europe	Asia Pacific	
		(millions of pounds)		
<i>Performance Specialties</i>				
Amines	634	124(1)	33	791
Specialty surfactants	100	175	70	345
Carbonates	69			69
<i>Performance Intermediates</i>				
Ethylene	400			400
Propylene	300			300
EO	1,000		100	1,100
EG	890		55	945
Surfactants	470	1,675	30	2,175
Ethanolamines	400			400
LAB	375			375
<i>Maleic anhydride</i>	240	137(2)		377

(1)

Includes up to 30 million pounds of ethyleneamines that are made available from Dow's Terneuzen, Netherlands facility by way of a long-term supply arrangement.

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(2)

Represents total capacity of a facility owned by Sasol-Huntsman GmbH & Co. KG, of which we own a 50% equity interest and Sasol owns the remaining 50% interest.

Our surfactants and amines facilities are located globally, with broad capabilities in amination, sulfonation and ethoxylation. These facilities have a competitive cost base and use modern manufacturing units that allow for flexibility in production capabilities and technical innovation. Through the major restructuring of our surfactant operations, we have significantly improved the competitiveness of our surfactants business.

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

Our LAB facility in Chocolate Bayou, Texas and our maleic anhydride facility in Pensacola, Florida are both located within large, integrated petrochemical manufacturing complexes operated by Solutia. We believe this results in greater scale and lower costs for our products than we would be able to obtain if these facilities were stand-alone operations.

Our unconsolidated ethyleneamine joint venture is currently constructing a plant in Jubail, Saudi Arabia. The plant will have approximate capacity of 30,000 MT/yr with production expected in the first quarter of 2010.

### ***Raw Materials***

We have the capacity to use approximately 850 million pounds of ethylene each year produced in part at our Port Neches, Texas facility in the production of EO and ethyleneamines. We consume all of our EO in the manufacture of our EG, surfactants and amines products. We also use internally produced PO and DEG in the manufacture of these products. We have the capacity to produce 400 million pounds of ethylene and 300 million pounds of propylene at our Port Neches, Texas facility. All of the ethylene is used in the production of EO and substantially all of the propylene is consumed by the PO unit at Port Neches operated by our Polyurethanes business. We purchase or toll the remainder of our ethylene and propylene requirements from third parties.

In addition to internally produced raw materials, our performance specialties market purchases over 250 compounds in varying quantities, the largest of which includes ethylene dichloride, caustic soda, synthetic alcohols, paraffin, nonyl phenol, ammonia, hydrogen, methylamines and acrylonitrile. The majority of these raw materials are available from multiple sources in the merchant market at competitive prices.

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

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

### ***Competition***

In our performance specialties market, there are few competitors for many of our products due to the considerable customization of product formulations, the proprietary nature of many of our product



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applications and manufacturing processes and the relatively high research and development and technical costs involved. Some of our global competitors include BASF, Air Products, Dow, Tosoh, and Akzo. We compete primarily on the basis of product performance, new product innovation and, to a lesser extent, on the basis of price.

There are numerous global producers of many of our performance intermediates products. Our main competitors include global companies such as Dow, Sasol, BASF, Petresa, Lyondell, Clariant, Shell, Cognis, Stepan and Kao, as well as various smaller or more local competitors. We compete on the basis of price with respect to the majority of our product offerings and, to a lesser degree, on the basis of product availability, performance and service with respect to certain of our more value-added products.

In our maleic anhydride market, we compete primarily on the basis of price, customer service and plant location. Our competitors include Lanxess, Flint Hills Resources, Marathon, Polynt and BASF. We are the leading global producer of maleic anhydride catalyst. Competitors in our maleic anhydride catalyst market include Scientific Design and Polynt. In our maleic anhydride technology licensing market, our primary competitor is Scientific Design. We compete primarily on the basis of technological performance and service.

The market in which our Performance Products segment operates is highly competitive. Among our competitors in this market are some of the world's largest chemical companies and major integrated petroleum companies that have their own raw material resources. Some of these companies may be able to produce products more economically than we can. In addition, some of our competitors in this market have greater financial resources, which may enable them to invest significant capital into their businesses, including expenditures for research and development. If any of our current or future competitors in this market develops proprietary technology that enables them to produce products at a significantly lower cost, our technology could be rendered uneconomical or obsolete.

**Pigments**

***General***

We are a leading global manufacturer and marketer of titanium dioxide, which is a white pigment used to impart whiteness, brightness and opacity to products such as paints, plastics, paper, printing inks, fibers and ceramics. We operate eight chloride-based and sulfate-based titanium dioxide manufacturing facilities located in North America, Europe, Asia and Africa. The global titanium dioxide market is characterized by a small number of large, global producers and a growing complement of smaller regional producers.

We offer an extensive range of products that are sold worldwide to approximately 1,500 customers in all major titanium dioxide end markets and geographic regions. The geographic diversity of our manufacturing facilities allows our Pigments segment to service local customers, as well as global customers that require delivery to more than one location. Our diverse customer base includes Ampacet, A. Schulman, Akzo Nobel, BASF, Cabot, Clariant, Jotun, PolyOne and Sigma Kalon. Our pigments business has an aggregate annual nameplate capacity of approximately 600,000 tonnes at our eight production facilities. Five of our titanium dioxide manufacturing plants are located in Europe, one is in North America, one is in Asia, and one is in South Africa. Our North American operation consists of a 50% interest in a manufacturing joint venture with Kronos Worldwide, Inc.

Our Pigments segment is focused on improving our competitive position. We expanded our Greatham, U.K. chloride-based facility by 50% to 150,000 tonnes per annum capacity and on January 22, 2009, we announced our intention to cease pigment production at our Grimsby, U.K. sulphate-based facility during the first quarter of 2009. We are also introducing a number of innovative

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new products to the market and carrying out a number of projects to further improve manufacturing costs at each of our facilities.

***Products and Markets***

Historically, global titanium dioxide demand growth rates tend to closely track global GDP growth rates. However, the demand growth rate and its relationship with the GDP growth rate varies by region. Developed markets such as the U.S. and Western Europe exhibit higher absolute consumption but lower demand growth rates, while emerging markets such as Asia exhibit much higher demand growth rates. The titanium dioxide industry experiences some seasonality in its sales reflecting the high exposure to seasonal coatings end use markets. Coating sales generally peak during the spring and summer months in the northern hemisphere, resulting in greater sales volumes during the second and third quarters of the year.

There are two manufacturing processes for the production of titanium dioxide, the sulfate process and the chloride process. Most recent capacity additions by the five major producers have employed the chloride process technology while those by smaller producers have generally used the sulphate process technology. We currently believe that the chloride process accounts for approximately 60% of global production capacity. However, the global distribution of sulfate- and chloride-based titanium dioxide capacity varies by region, with the sulfate process being predominant in Europe, our primary market. The chloride process is the predominant process used in North America, and both processes are used in Asia. While most end-use applications can use pigments produced by either process, regional market preferences typically favor products that are locally available. We believe the chloride and sulfate manufacturing processes compete effectively in the marketplace.

The titanium dioxide industry currently has five major producers and a large number of small regional or local producers. Titanium dioxide supply has historically kept pace with increases in demand as producers increased capacity through low cost incremental debottlenecks and efficiency improvements. During periods of low titanium dioxide demand, the industry experiences high stock levels and consequently reduces production to manage working capital. Pricing in the industry is driven primarily by supply/demand balance. Based upon current price levels and the long lead times for planning, governmental approvals and construction, we do not expect significant additional greenfield capacity in the near future.

***Sales and Marketing***

Approximately 85% of our titanium dioxide sales are made through our direct sales and technical services network, enabling us to cooperate more closely with our customers and to respond to our increasingly global customer base. Our concentrated sales effort and local manufacturing presence have allowed us to achieve our leading market shares in a number of the countries where we manufacture titanium dioxide.

In addition, we have focused on marketing products to higher growth industries. For example, we believe that our pigments business is well-positioned to benefit from the projected growth in the plastics sector which we expect to grow faster than the overall titanium dioxide market over the next several years.

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***Manufacturing and Operations***

Our pigments business has eight manufacturing sites in seven countries with a total capacity of approximately 600,000 tonnes per year. Approximately 74% of our titanium dioxide capacity is located in Western Europe. The following table presents information regarding our titanium dioxide facilities:

<b>Region</b>	<b>Site</b>	<b>Annual Capacity (tonnes)</b>	<b>Process</b>
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