GrafTech Technology LLC Form S-4 June 20, 2013

As filed with the Securities and Exchange Commission on June 20, 2013 Registration No. 333-

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

Form S-4 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

GrafTech International Ltd.

(Exact name of registrant as specified in its charter)

Delaware 3620 27-2496053
(State or other jurisdiction of incorporation or organization) Classification Code Number) Identification No.)

12900 Snow Road Parma, Ohio 44130 (216) 676-2000

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

John D. Moran, Esq. Vice President and General Counsel, Secretary 12900 Snow Road Parma, Ohio 44130 (216) 676-2000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to: M. Ridgway Barker, Esq. Kelley Drye & Warren LLP 400 Atlantic Street 13th Floor Stamford, Connecticut 06901 (203) 324-1400

Approximate date of commencement of proposed sale to the public: As soon as practicable following the effectiveness of this registration statement.

If the securities being registered on this Form are to be offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

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

Large accelerated filerx

Accelerated filer

Non-accelerated filer " (Do not check if a smaller reporting company) Smaller reporting company If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) "

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) "

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	*	nProposed maximum aggregate offering price (1)	Amount of registration fee
6.375% Senior Notes due 2020	\$300,000,000	100%	\$300,000,000	\$40,920
Guarantees of 6.375% Senior Notes due 2020	s	_	_	_(2)
Total (3)	\$300,000,000	N/A	\$300,000,000	\$40,920

- (1) Estimated in accordance with Rule 457(f) under the Securities Act of 1933, as amended (the "Securities Act"), solely for purposes of calculating the registration fee.
- (2) Pursuant to Rule 457(n) under the Securities Act, no additional registration fee is payable with respect to the guarantees.
- (3) Such amount represents the principal amount of the exchange notes to be exchanged hereunder.

Each registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Additional Registrant Guarantors ⁽¹⁾⁽²⁾)		
Exact Name of Additional Registrant Guarantor as Specified in its Charter	State or Other Jurisdiction of Incorporation or Organization	Primary Standard Industrial Classification Code Number	I.R.S. Employer Identification Number
GrafTech Holdings Inc.	Delaware	3620	27-2496053
GrafTech USA LLC	Delaware	3620	04-3583868
Seadrift Coke L.P.	Delaware	3620	29-2692750
GrafTech Finance Inc.	Delaware	3620	62-1808846
GrafTech Global Enterprises Inc.	Delaware	3620	06-1415602
GrafTech International Holdings Inc.	Delaware	3620	06-1249029
GrafTech DE LLC	Delaware	3620	36-4645308
GrafTech Seadrift Holding Corp.	Delaware	3620	20-2712563
GrafTech International Trading Inc.	Delaware	3620	33-0308920

GrafTech Technology LLC	Delaware	3620	06-1258220
GrafTech NY Inc.	New York	3620	66-0289036
Graphite Electrode Network LLC	Delaware	3620	62-1866180
Fiber Materials Inc.	Delaware	3620	37-1650609
Intermat	Maine	3620	01-0504952

Address, including zip code, and telephone number, including area code, of each Additional Registrant Guarantor's Principal Executive Offices is 12900 Snow Road, Parma, Ohio 44130, (216) 676-2000.

(2) Name, address, including zip code, and telephone number, including area code, of each Additional Registrant Guarantor's Agent for Service is John D. Moran, Esq., 12900 Snow Road, Parma, Ohio 44130, (216) 676-2000.

PROSPECTUS

GrafTech International Ltd.
Offer to Exchange
Up to \$300,000,000 Principal Amount of its
6.375% Senior Notes due 2020
which have been registered under the Securities Act of 1933
for
a Like Principal Amount of Outstanding Unregistered
6.375% Senior Notes due 2020

GrafTech International Ltd. (the "Company") is offering to exchange (the "exchange offer") up to \$300,000,000 aggregate principal amount of its registered 6.375% Senior Notes due 2020, which are referred to as the "Exchange Notes," for \$300,000,000 aggregate principal amount of its outstanding unregistered 6.375% Senior Notes due 2020, which are referred to as the "Original Notes." Any reference to "notes" refers collectively to the Original Notes and the Exchange Notes, unless the context requires otherwise. The terms of the Exchange Notes are identical in all material respects to the terms of the Original Notes for which they would be exchanged, except that the Exchange Notes are registered under the Securities Act of 1933 (the "Securities Act") and, therefore, the terms relating to transfer restrictions, registration rights and additional interest applicable to the Original Notes are not applicable to the Exchange Notes, and the Exchange Notes will bear different CUSIP numbers.

The Original Notes are, and the Exchange Notes will be, guaranteed on an unsecured and senior basis by each of the Company's subsidiaries that guarantees the Company's revolving credit facility and senior subordinated notes (collectively, the "Guarantors"). All references to the Notes include references to the related guarantees. For a more detailed description of the Exchange Notes, see "Description of the Notes."

The terms of this exchange offer include the following:

This exchange offer will expire at 5:00 p.m., New York City time, on [_____], 2013, unless extended (the "expiration date").

The exchange offer is subject to certain customary conditions that we may waive.

All Original Notes that are validly tendered, and not validly withdrawn, will be exchanged. You should carefully review the procedures for tendering Original Notes beginning on page 38 of this prospectus.

You may validly withdraw tenders of Original Notes at any time before the expiration of this exchange offer.

If you fail to tender your Original Notes, you will continue to hold unregistered, restricted securities, and your ability to transfer them could be adversely affected.

The exchange of Original Notes for Exchange Notes will not be a taxable event for United States federal income tax purposes.

Original Notes may be exchanged for Exchange Notes only in minimum denominations of \$2,000 and integral multiples of \$1,000.

We will not receive any proceeds from this exchange offer.

No public trading market currently exists for the Exchange Notes. The Exchange Notes will not be listed on any national securities exchange and, therefore, an active public trading market is not anticipated.

The Exchange Notes will be issued under the same indenture as the Original Notes.

Each broker-dealer that receives Exchange Notes for its own account in this exchange offer must acknowledge that it will deliver a prospectus meeting the requirements of the Securities Act in connection with any resale of those Exchange Notes. Accordingly, this prospectus, as it may be amended or supplemented from time to time, may be used by a broker-dealer in connection with resales of Exchange Notes received in exchange for Original Notes the broker-dealer acquired as a result of market-making or other trading activities. We have agreed that we will make this prospectus available to any broker-dealer for use in connection with any such resale for a period of 180 days following consummation of the exchange offer. See "The Exchange Offer—Resale of Exchange Notes" and "Plan of Distribution." Each holder of Original Notes wishing to accept this exchange offer must effect a tender of Original Notes by book-entry transfer into the account of U.S. Bank National Association, at The Depository Trust Company. All deliveries are at the risk of the holder. You can find detailed instructions concerning delivery in the section of this prospectus entitled "The Exchange Offer."

See "Risk Factors" beginning on page 22 for a discussion of factors that you should consider in connection with participating in the exchange offer.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

YOU SHOULD READ THIS ENTIRE DOCUMENT AND THE ACCOMPANYING LETTER OF TRANSMITTAL AND RELATED DOCUMENTS AND ANY AMENDMENTS OR SUPPLEMENTS CAREFULLY BEFORE MAKING YOUR DECISION TO PARTICIPATE IN THIS EXCHANGE OFFER.

, 2013

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-4 that we have filed with the Securities and Exchange Commission (the "SEC"). This prospectus does not contain all of the information found in the registration statement. Before you decide to participate in this exchange offer, please review the full registration statement, including the information incorporated by reference in this prospectus, the exhibits to the registration statement and any additional information you may need to make your investment decision. You should rely only on the information contained in the registration statement, including this prospectus and the accompanying letter of transmittal. We have not authorized anyone to provide you with any other information and if anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information contained in this prospectus is accurate only as of the date set forth on the front cover and that any information incorporated by reference herein is accurate only as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since those respective dates. We will disclose any material changes in our affairs in an amendment to this prospectus or a prospectus supplement.

This prospectus is based on information provided by us and other sources that we believe are reliable. We cannot assure you that the information from other sources is accurate or complete. In making an investment decision, you must rely on your own examination of our business and the terms of the exchange offer, including the merits and risks involved. You should contact us with any questions about the exchange offer or for additional information to verify the information contained in this prospectus.

You should not consider any information in this prospectus to be legal, business or tax advice. You should consult your own attorney, business advisor and tax advisor for legal, business and tax advice regarding the exchange offer.

You must comply with all applicable laws and regulations in effect in any applicable jurisdiction, and you must obtain, at your sole cost and expense, any consent, approval or permission required by you for the exchange offer under the laws and regulations in effect in the jurisdictions to which you are subject, and we will not have any responsibility therefor.

Availability of Documents Incorporated by Reference

This prospectus incorporates important business and financial information about us from other documents that are not included in or delivered with this prospectus. See "Incorporation of Certain Documents by Reference." The information is available to you without charge upon your request. You can obtain the documents incorporated by reference in this prospectus by requesting them in writing or by telephone from us at the following address and telephone number: GrafTech International Ltd.

12900 Snow Road Parma, Ohio 44130 Attention: Investor Relations (216) 676-2000

To ensure timely delivery of any of our filings, agreements or other documents, you must make your request to us no later than [], 2013, which is five business days before the exchange offer will expire at 5:00 p.m., New York City time, on [], 2013.

Industry and Market Data

Unless otherwise noted, market and market share data in, or incorporated by reference into, this prospectus are our own estimates. Market data relating to the steel, electronics, semiconductor, solar, thermal management, transportation, petrochemical and other metals industries, our general expectations concerning such industries and our market position and market share within such industries, both domestically and internationally, are derived from trade publications relating to those industries and other industry sources as well as assumptions made by us, based on such data and our knowledge of such industries. Market and market share data relating to the graphite and carbon industry as well as information relating to our competitors, our general expectations concerning such industry and our market position and market share within such industry, both domestically and internationally, are derived from the sources described above and public filings, press releases and other public documents of our competitors as well as assumptions made by us, based on such data and our knowledge of such industry. Such data are used to provide a gauge of the Company's competitiveness against its competitors and are intended to describe things such as customer or potential customer bases, industries or subsets of the industries in which the Company competes and intermediate or end use applications of the product or technology involved. Similarly, product descriptions are used to help understand how the Company develops, produces, sources, manages, markets, sells, or accounts for products. Unless otherwise noted, references to "market share" are based on sales volumes for the relevant year. Market data and product descriptions are not intended to define markets or products from an antitrust, trade regulation, trade remedy, or other regulatory perspective. Our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under "Cautionary Statements Regarding Forward-Looking Statements" and "Risk Factors-Risks Related to Our Business" in this prospectus. We cannot guarantee the accuracy or completeness of this market and market share data and have not independently verified it. None of the sources mentioned above has consented to the disclosure or use of data in this prospectus.

Unless otherwise noted, references to "natural graphite products" do not include mined natural graphite flake. Unless otherwise noted, when we refer to "dollars", we mean U.S. dollars. Unless otherwise noted, all dollars are presented in thousands.

Neither any statement made in this prospectus nor any charge taken by us relating to any legal proceedings constitutes an admission as to any wrongdoing.

Certain Defined Terms

As used in this prospectus, the following terms have the following meanings:

"Credit Agreement" refers to the credit agreement providing for our senior secured credit facilities dated as of October 7, 2011, as amended and further restated pursuant to the First Amendment dated March 26, 2012 and as amended as of October 29, 2012, or as further amended and/or restated from time to time. "Revolving Facility" refers to the revolving credit facility provided under the Credit Agreement, at the relevant time.

"Redeemed Senior Notes" means our 10.25% senior notes due 2012 issued under an Indenture dated February 15, 2002. On September 28, 2009, GTI redeemed all of the Redeemed Senior Notes which remained outstanding under that indenture.

"Senior Subordinated Notes" means our senior subordinated promissory notes issued on November 30, 2010, in connection with the Seadrift Coke L.P. ("Seadrift") and C/G Electrodes LLC ("C/G") acquisitions, for an aggregate total face amount of \$200 million. These senior subordinated notes are non-interest bearing and will mature in 2015. Because the Senior Subordinated Notes are non-interest bearing, we are required to record them at their present value (determined using an interest rate of 7.00%).

"MTM Adjustment" refers to our accounting policy regarding pension and other postretirement benefits plans ("OPEB") whereby we immediately recognize the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each year (referred to as "mark-to-market").

"Subsidiaries" refers to those companies that, at the relevant time, are or were majority owned or wholly-owned directly or indirectly by GTI or its predecessors to the extent that those predecessors' activities related to the graphite and carbon business.

"ConocoPhillips" refers to both ConocoPhillips and Phillips 66, as the case may be, depending upon the time period to which the reference relates. We are parties to multi-year contracts with ConocoPhillips for the supply of needle coke which run through December 31, 2013. In 2012, ConocoPhillips spun off certain refining and chemicals assets into a new separate entity named Phillips 66, to which our agreements with ConocoPhillips have been assigned. We do not believe that this separation will have an adverse impact on these needle coke supply agreements.

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" based on management's current belief, based on currently available information, as to the outcome and timing of future events. Forward-looking statements may include statements that relate to, among other things, expected future or targeted operational and financial performance; growth rates and future production and sales of products that incorporate or that are produced using our products; changes in production capacity in our operations and our competitors' or customers' operations and the utilization rates of that capacity; growth rates for, future prices and sales of, and demand for our products and our customers' products; costs of materials and production, including anticipated increases or decreases therein, our ability to pass on any such increases in our product prices or surcharges thereon, or customer or market demand to reduce our prices due to such decreases; changes in customer order patterns due to changes in economic conditions; productivity, business process and operational initiatives, and their impact on us; our position in markets we serve; financing and refinancing activities; investments and acquisitions that we have made or may make in the future and the performance of the businesses underlying such acquisitions and investments; employment and contributions of key personnel; employee relations and collective bargaining agreements covering many of our operations; tax rates; capital expenditures and their impact on us; nature and timing of restructuring charges and payments; stock repurchase activities; supply chain management; customer and supplier contractual provisions and related opportunities and issues; competitive activities; strategic plans and business projects; regional and global economic and industry market conditions, the timing and magnitude of changes in such conditions and the impact thereof; interest rate management activities; currency rate management activities; deleveraging activities; rationalization, restructuring, realignment, strategic alliance, raw material and supply chain, technology development and collaboration, investment, acquisition, venture, operational, tax, financial and capital projects; legal proceedings, contingencies and environmental compliance including any regulatory initiatives with respect to greenhouse gas emissions which may be proposed; consulting projects; potential offerings, sales and other actions regarding debt or equity securities of us or our subsidiaries; and costs, working capital, revenues, business opportunities, debt levels, cash flows, cost savings and reductions, margins, earnings and growth. The words "will," "may," "plan," "estimate," "project," "believe," "anticipate," "expect," "intend," "should," "would," "goal," "continue to," "positioned to" and similar expressions, or the negatives thereof, identify some of these statements.

Our expectations and targets are not predictors of actual performance and historically our performance has deviated, often significantly, from our expectations and targets. Actual future events and circumstances (including future results and trends) could differ materially, positively or negatively, from those set forth in these statements due to various factors. These factors include:

the possibility that additions to capacity for producing EAF steel (as defined below), increases in overall EAF steel production capacity and increases or other changes in steel production may not occur or may not occur at the rates that we anticipate or may not be as geographically disbursed as we anticipate;

the possibility that increases or decreases in graphite electrode manufacturing capacity (including growth by producers in developing countries), competitive pressures (including changes in, and the mix, distribution and pricing of, their products), reduction in specific consumption rates, increases or decreases in customer inventory levels, or other changes in the graphite electrode markets may occur, which may impact demand for, prices or unit and dollar volume sales of graphite electrodes and growth or profitability of our graphite electrodes business;

the possible failure of changes in EAF steel production or graphite electrode production to result in stable or increased, or offset decreases in, graphite electrode demand, prices or sales volume;

the possibility that a determination that we have failed to comply with one or more export controls or trade sanctions to which we are subject with respect to products or technology exported from the United States or other jurisdictions or the denial of export privileges to which our subsidiary, Fiber Materials Inc. (which we acquired in 2011), is subject could result in civil or criminal penalties, including imposition of significant fines, denial of export privileges and loss of revenues from certain customers;

the possibility that, for all of our product lines, capital improvement and expansion in our customers' operations and increases in demand for their products may not occur or may not occur at the rates that we anticipate or the demand for their products may decline, which may affect their demand for the products we sell or supply to them; the possibility that continued global consolidation of the world's largest steel producers could impact our business or

the possibility that continued global consolidation of the world's largest steel producers could impact our business or industry;

the possibility that average graphite electrode revenue per metric ton in the future may be different than current spot or market prices due to changes in product mix, changes in currency exchange rates, changes in competitive market conditions or other factors;

the possibility that price increases, adjustments or surcharges may not be realized or that price decreases may occur; the possibility that current challenging economic conditions and economic demand reduction may continue to impact our revenues and costs;

the possibility that the current debt crisis in certain European countries could cause the value of the euro to deteriorate, reducing the purchasing power of European customers;

the possibility that continuing uncertainty over U.S. fiscal policy may adversely affect global economic activity and the demand for our products;

the possibility that the European debt crisis could contribute to further instability in global credit markets and reduce demand for our products;

the possibility that potential future cuts in defense spending by the United States government as a part of efforts to reduce federal budget deficits could reduce demand for certain of our products and revenue;

the possibility that decreases in prices for energy and raw materials may lead to downward pressure on prices for our products and delays in customer orders for our products as customers anticipate possible future lower prices; the possibility that (i) increases in prices for our raw materials (and the magnitude of such increases), (ii) global events that influence energy pricing and availability and (iii) increases in our energy needs or other developments may adversely impact or offset our productivity and cost containment initiatives;

the possibility that current economic disruptions may result in idling or permanent closing of blast furnace capacity or delay blast furnace capacity additions or replacements which may affect demand and prices for our refractory products;

the possibility that economic conditions may cause customers to seek to delay or cancel orders and that we may not be able to correspondingly reduce production costs or delay or cancel raw material purchase commitments; the possibility that economic, political and other risks associated with operating globally, including national and international conflicts, terrorist acts, political and economic instability, civil unrest and natural or nuclear calamities might interfere with our supply chains, customers or activities in a particular location;

the possibility that reductions in customers' production, increases in competitors' capacity, competitive pressures or other changes in other markets we serve may occur, which may impact demand for, prices of or unit and dollar volume sales of our other products, or impact growth or profitability of our other product lines, or change our share of such markets;

the possibility that we will not be able to hire and retain key personnel, maintain appropriate relations with unions, associations and employees or to renew or extend our collective bargaining or similar agreements on reasonable terms as they expire or do so without a work stoppage or strike;

the possibility that an adverse determination in litigation pending in Brazil involving disputes related to the proper interpretation of certain collectively bargained wage increase provisions applicable to both us and other employers in the Bahia region might result in the filing of claims against our Brazilian subsidiary;

the possibility of delays in or failure to achieve successful development and commercialization of new or improved engineered solutions or that such solutions could be subsequently displaced by other products or technologies; the possibility that we will fail to develop new customers or applications for our engineered solutions products; the possibility that our manufacturing capabilities may not be sufficient or that we may experience delays in expanding or fail to expand our manufacturing capacity to meet demand for existing, new or improved products; the possibility that we may propose acquisitions or divestitures in the future, that we may not complete such acquisitions or divestitures, and that the investments and acquisitions that we may make in the future may not be successfully integrated into our business or provide the performance or returns expected;

the possibility that challenging conditions or changes in the capital markets will limit our ability to obtain financing for growth and other initiatives, on acceptable terms or at all;

the possibility that conditions or changes in the global equity markets may have a material impact on our future pension funding obligations and liabilities on our balance sheet;

the possibility that the amount or timing of our anticipated capital expenditures may be limited by our financial resources or financing arrangements or that our ability to complete capital projects may not occur timely enough to adapt to changes in market conditions or changes in regulatory requirements;

the possibility that the actual outcome of uncertainties associated with assumptions and estimates using judgment when applying critical accounting policies and preparing financial statements may have a material impact on our results of operations or financial position;

the possibility that we may be unable to protect our intellectual property or may infringe the intellectual property rights of others, resulting in damages, limitations on our ability to produce or sell products or limitations on our ability to prevent others from using that intellectual property to produce or sell products;

the occurrence of unanticipated events or circumstances or changing interpretations and enforcement agendas relating to legal proceedings or compliance programs;

the occurrence of unanticipated events or circumstances or changing interpretations and enforcement agendas relating to health, safety or environmental compliance or remediation obligations or liabilities to third parties or relating to labor relations;

the possibility that new or expanded regulatory initiatives with respect to greenhouse gas emissions, if implemented, could have an impact on our facilities, increase the capital intensive nature of our business and add to our costs of production of our products;

the possibility that our provision for income taxes and effective income tax rate or cash tax rate may fluctuate significantly due to (i) changes in applicable tax rates or laws, (ii) changes in the sources of our income, (iii) changes in tax planning, (iv) new or changing interpretations of applicable regulations, (v) changes in profitability, (vi) changes in our estimate of our future ability to use foreign tax credits and (vii) other factors;

the possibility of changes in interest or currency exchange rates, in competitive conditions, or in inflation or deflation; the possibility that our outlook could be significantly impacted by, among other things, changes in United States or other monetary or fiscal policies or regulations in response to the capital markets crisis and its impact on global economic conditions, developments in North Africa, the Middle East, North Korea and other areas of concern, the occurrence of further terrorist acts and developments (including increases in security, insurance, data back-up, energy and transportation and other costs, transportation delays and continuing or increased economic uncertainty and weakness) resulting from terrorist acts and the war on terrorism;

the possibility that our outlook could be significantly impacted by changes in demand as a result of the effect on customers of the volatility in global credit and equity markets;

the possibility that interruption in our major raw material, energy or utility supplies due to, among other things, natural or nuclear disasters, process interruptions, actions by producers and capacity limitations may adversely affect our ability to manufacture and supply our products or result in higher costs;

the possibility that our key or other raw materials become unavailable and that the magnitude of changes in the cost of key and other raw materials, including petroleum based coke, by reason of shortages, market pricing, pricing terms in applicable supply contracts or other events may adversely affect our ability to manufacture and supply our products or result in higher costs;

the possibility of interruptions in production at our facilities due to, among other things, critical equipment failure, which may adversely affect our ability to manufacture and supply our products or result in higher costs; the possibility that we may not achieve the earnings or other financial or operational metrics that we provide as guidance from time to time;

the possibility that the anticipated benefits from organizational and work process redesign, changes in our information systems, or other system changes, including operating efficiencies, production cost savings and improved operational performance, including leveraging infrastructure for greater productivity and contributions to our continued growth, may be delayed or may not occur or may result in unanticipated disruption;

the possibility of security breaches in the Company's information technology systems;

the possibility that our disclosure or internal controls may become inadequate because of changes in conditions or personnel, that the degree of compliance with our policies and procedures related to those controls may deteriorate or that those controls may not operate effectively and may not prevent or detect misstatements or errors; the amount, prices and timing of purchases, if any, of shares purchased pursuant to our share repurchase program adopted in July 2012;

the possibility that severe economic conditions may adversely affect our liquidity or capital resources; the possibility that delays may occur in the financial statement closing process due to a change in our internal control environment or personnel;

the possibility of changes in performance that may affect financial covenant compliance or funds available for borrowing; and

other risks and uncertainties, including those described elsewhere in this prospectus or our filings with the SEC, as well as future decisions by us.

Occurrence of any of the events or circumstances described above could also have a material adverse effect on our business, financial condition, results of operations, cash flows or the market price of our common stock. No assurance can be given that any future transaction about which forward-looking statements may be made will be completed or as to the timing or terms of any such transaction.

We believe that it is important to communicate our expectations of future performance to our investors. However, events may occur in the future that we are unable to accurately predict, or over which we have no control. We caution you against putting undue reliance on forward-looking statements or projecting any future results based on such statements. When considering our forward-looking statements, you should keep in mind the risk factors and other cautionary statements in this prospectus which provide examples of risks, uncertainties and events that may cause our actual results to differ materially from those contained in any forward-looking statement. Please review the "Risk Factors" included in this prospectus so that you are aware of the various risks associated with the exchange offer. All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section and any other cautionary statements that may accompany such forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this prospectus.

You should not place undue reliance on forward-looking statements. Each forward-looking statement speaks only as of the date of the particular statement.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information that we incorporate by reference is considered to be part of this prospectus.

Any reports filed by us with the SEC after the date of this prospectus and prior to the termination of the effectiveness of this prospectus will automatically update and, where applicable, supersede any information contained in this prospectus or incorporated by reference into this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any documents previously incorporated by reference have been modified or superseded. We incorporate by reference into this prospectus the following documents filed with the SEC (other than, in each case, documents or information deemed furnished and not filed in accordance with the

SEC rules, including pursuant to Item 2.02 or Item 7.01 of Form 8-K, and no such information shall be deemed specifically incorporated by reference hereby or in any accompanying prospectus supplement):

Annual Report on Form 10-K for the year ended December 31, 2012.

Quarterly Report on Form 10-Q for the quarter ended March 31, 2013.

Definitive Proxy Statement on Schedule 14A filed on March 28, 2013.

Current Report on Form 8-K filed on March 19, 2013.

Current Report on Form 8-K filed on May 16, 2013.

All documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on or after the date of this prospectus and prior to the termination of the effectiveness of this prospectus.

You may request a copy of these filings at no cost, by writing or telephoning us at the following address or number: GrafTech International Ltd.

12900 Snow Road Parma, Ohio 44130 Attention: Investor Relations

(216) 676-2000

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC. Our SEC filings are available to the public from the SEC's website at http://www.sec.gov. You may also read and copy any document we file, including the registration statement of which this prospectus forms a part, at the SEC's public reference facilities at 100 F Street N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the operation of the public reference room.

In order to obtain timely delivery of such materials, you must request information from us no later than five business days prior to the expiration of the exchange offer.

PROSPECTUS SUMMARY

This summary highlights certain information appearing elsewhere in this prospectus concerning our business and the exchange offer. Because this is a summary, it may not contain all of the information that may be important to you and to your investment decision. In addition, certain statements contained in this prospectus include forward-looking information that involve many risks and uncertainties, including but not limited to those discussed under "Cautionary Statements Regarding Forward-Looking Statements" on page 5. The following summary is qualified in its entirety by the more detailed information and financial statements and notes thereto included elsewhere in, or incorporated by reference into, this prospectus. You should read this prospectus carefully and should consider, among other things, the matters set forth in "Risk Factors" beginning on page 22 before deciding to participate in the exchange offer. Except as otherwise indicated or unless the context otherwise requires, the terms (i) "GrafTech", "our Company", "the Company", "we", "us" and "our" refer to GrafTech International Ltd. and its subsidiaries and (ii) "Issuer" and "GTI" refer to GrafTech International Ltd. only and not to any of its subsidiaries.

Our Company

We are a leading manufacturer of a broad range of high quality graphite electrodes, products essential to the production of electric arc furnace ("EAF") steel and various other ferrous and nonferrous metals. We also produce needle coke products, which are the primary raw material needed in the manufacture of graphite electrodes. We are one of the largest manufacturers of high quality graphite products, enabling thermal management solutions for the electronics industry and fuel cell solutions for the transportation and power generation industries. We are one of the largest manufacturers and providers of advanced graphite and carbon materials used in the transportation, solar and oil and gas exploration industries.

We currently manufacture our products in 20 manufacturing facilities strategically located on four continents. We believe our Industrial Materials segment has the largest manufacturing capacity and the lowest manufacturing cost structure of all of our major competitors and delivers the highest-level quality products. We currently have the operating capability, depending on product mix, to manufacture approximately 255,000 metric tons of graphite electrodes annually.

Our Engineered Solutions segment leverages our core competencies in graphite material sciences to create and commercialize innovative new products and services. The key markets in which we participate, including those involving thermal management, light-weight structures, energy storage and lighting, are forecasted to grow rapidly over the next 3 to 5 years.

We have over 125 years of experience in the research and development of graphite and carbon-based solutions and our intellectual property portfolio is extensive. We hold approximately 777 issued and pending patent applications and have been the recipient of seven R&D 100 Awards in the past 10 years. Our technological capabilities include developing products with superior thermal, electrical and physical characteristics that provide a differentiated advantage.

We service customers in over 70 countries and believe that our global manufacturing network provides us with competitive advantages as a result of our proximity to customers, in addition to our product quality, timely and reliable product delivery and product costs. Given our global network, we are well positioned to serve the growing number of consolidated, global, multi-plant steel customers as well as certain smaller, regional customers and segments.

Our segments and products

Our business consists of seven major product categories: graphite electrodes, refractory products, needle coke products, advanced graphite materials, advanced composite materials, advanced electronics technologies (formerly referred to as natural graphite products), and advanced materials, and is reported in the following reportable segments: Industrial Materials, which produces graphite electrodes, refractory products and needle coke products and Engineered Solutions, which produces advanced electronics technology products, advanced graphite materials, advanced composite materials, and advanced materials.

The charts below summarize our percentage of revenue by segment and geography.

Revenue breakdown

EMEA refers to Europe, the Middle East and Africa.

Industrial Materials. Our Industrial Materials segment manufactures and delivers high quality graphite electrodes, refractory products and needle coke products. We are a leading producer of a broad range of high quality graphite electrodes and currently have the operating capability, depending on product mix, to manufacture approximately 255,000 metric tons of graphite electrodes annually.

Electrodes are key components of conductive power systems used to produce steel and other non-ferrous metals. Graphite electrodes are essential to EAF steel production. Approximately 70% of our graphite electrodes sold is consumed in the EAF steel melting process, the steel making technology used by all "mini-mills," typically at a rate of one graphite electrode every eight to ten operating hours. We believe that mini-mills constitute a higher long-term growth sector of the steel industry, compared to large integrated steel mills, and that there is currently no commercially viable substitute for graphite electrodes in EAF steel making. The remaining approximately 30% of our graphite electrodes sold is primarily used in various other ferrous and non-ferrous melting applications, including steel refining (ladle furnace operations for both EAF and basic oxygen furnace steel production), fused materials, chemical processing, and alloy metals.

Additionally, we are a producer of petroleum needle coke. Needle coke is the key raw material in the manufacture of graphite electrodes used in melting operations, as well as other graphite products. Petroleum needle coke, a crystalline form of carbon derived from decant oil, is used primarily in the production of graphite electrodes. We believe we are the second largest producer in the global petroleum-based needle coke market. As a result of our acquisition of Seadrift on November 30, 2010, our graphite electrode production is vertically integrated. Seadrift currently provides a substantial portion of our needle coke requirements.

We are also a leading global supplier of carbon, semi-graphitic and graphite refractory hearth linings for blast and submerged arc furnaces used to produce iron and ferro alloys. Refractory products are used to protect the walls of these furnaces due to their high thermal conductivity and the ease with which they can be machined to large or complex shapes. Among the major refractory product suppliers, we have one of the most complete offerings, including a full range of brick, block, ramming paste, cement and grout products.

Our Industrial Materials segment had net sales of \$834 million in 2010, \$1,132 million in 2011 and \$1,026 million in 2012. Industrial Materials sales represented approximately 83%, 86% and 82% of consolidated net sales for 2010, 2011, and 2012, respectively. Customers for these products are located in all major geographic regions. Engineered Solutions. Our Engineered Solutions segment manufactures advanced electronics technology products, advanced graphite materials, advanced composite materials, and advanced materials. Our advanced electronics technology

products are natural and synthetic graphite products convertible to flexible graphite for applications including thermal management and sealing solutions used in advanced consumer electronics, automotive sealing and the petrochemical and alternative energy industries. Advanced graphite materials are extruded, molded and isomolded graphite blocks used in many applications including metallurgy, high-temperature industrial and alternative energy applications and a line of high-temperature insulation for induction furnaces, high-temperature vacuum furnaces, direct solidification furnaces and other high-temperature furnace applications. These products are used in the transportation, defense, solar, metallurgical, chemical, oil and gas exploration and other industries. Advanced composite materials' products include ultra-light-weight thermal protection, high-strength heat shields and various other components used for automotive, petrochemical and aerospace/defense markets. Our advanced materials are primary synthetic graphite powders, natural flake graphite powders, coke powders, and various other carbon/graphite powder derivatives used for industrial lubricants, hot metal forming lubricants, conductive polymer fillers and energy storage requirements.

Our Engineered Solutions segment had sales of \$173.1 million in 2010, \$188.0 million in 2011 and \$222.7 million in 2012. Engineered Solutions represented approximately 17% of consolidated net sales for 2010, approximately 14% for 2011 and approximately 18% for 2012.

Our industry

Industrial Materials. We estimate that the worldwide demand for our industrial materials products was approximately \$6.8 billion in 2011 and approximately \$7.0 billion in 2012.

In the most demanding product applications (i.e., graphite electrodes that can operate in the largest, most productive and demanding EAF steel mills in the world), we compete primarily on product quality, price, delivery reliability and customer technical service.

In other product applications, including ladle furnaces requiring less demanding performance and certain other ferrous and non-ferrous segments, we compete based on product differentiation and product quality and price. We believe our product quality, global manufacturing network, proximity to regional and local customers and the related lower cost structure allow us to deliver a broad range of product offerings across various applications.

We believe that there are certain cost and technology barriers to entry in the Industrial Materials' industry, including the need for extensive product and process know-how and other intellectual property and a high initial capital investment. Entry into this industry also requires high quality raw material sources and a developed energy supply infrastructure.

Coke represents a significant portion of the cost to produce a graphite electrode. Competition in the needle coke industry is based primarily on price, reliability and product specifications. Our Seadrift facility competes primarily on the specifications and price of its needle coke. In 2012, we commenced production and sale of a super-premium grade of our needle coke which we believe will enable our needle coke customers to produce high quality large diameter graphite electrodes. While this grade of needle coke requires slightly longer processing cycles (and, therefore, to a certain extent, reduces available capacity), we believe that this impact will be more than offset by higher margins on this grade.

Our refractory products compete based on product quality, useful life, and technology. We believe our proprietary hot press process and the smaller shape of our refractory bricks provides a more diverse product that is easier to install than larger refractory bricks.

Engineered Solutions. We estimate that our addressable worldwide demand for engineered solutions was \$1,100 million in 2010, \$1,400 million in 2011 and \$2,800 million in 2012. Our addressable market has increased due to industry growth and the inclusion of markets served by our recent acquisitions and capital investment in new products that allow us to penetrate new markets. We routinely update our estimates as more information becomes available. Our Engineered Solutions segment competes on product differentiation and innovation, quality, price, delivery reliability and customer service depending on the specific product demands or product applications.

We believe we are the technology leader within the markets we participate in, and we differentiate ourselves based on our ability to provide customers with a solution that gives them one of the lowest total operational costs in meeting their product manufacturing needs. We achieve this by using our extensive product, process and application knowledge.

There are certain barriers to entry in the Engineered Solutions' industry, including the need for extensive product and process know-how, intellectual property and a high initial capital investment.

Leading manufacturer of graphite electrodes with global manufacturing footprint. We currently have the operating

Our competitive strengths

capability, depending on product mix, to manufacture approximately 255,000 metric tons of graphite electrodes annually. Our graphite electrode production capacity represented approximately 13% of total global capacity in 2012. We believe that our global manufacturing network provides us with competitive advantages in product quality, product costs, timely and reliable delivery, and operational flexibility to adjust product mix to meet the diverse needs of a wide range of applications and customers. We have six graphite electrode manufacturing facilities strategically located on four continents. Our proximity to our customers positions us well to meet their delivery demands. Vertically integrated lowest cost producer among major manufacturers of graphite electrodes. We believe we are the lowest cost producer of graphite electrodes among major manufacturers. The acquisition of Seadrift allowed us to secure a source for the key raw material for the production of graphite electrodes as well as other graphite products. Seadrift currently provides a substantial portion of our needle coke needs. As a result, we are a backward integrated producer of graphite electrodes, which we believe gives us an advantage over our competitors, in addition to the product cost advantages provided by our global manufacturing network and efficiency initiatives. Long standing and diverse customer relationships. We service customers in over 70 countries across a variety of end markets. Our core client base in the steel industry includes such blue-chip companies as ArcelorMittal, Gerdau, ThyssenKrupp, Baosteel and Steel Dynamics. Furthermore, we service customers in the transportation, semiconductor, solar, petrochemical, electronics and other industries, giving us significant end market diversification. Examples of customers in these industries include Elkem Solar, Samsung and Griffin Wheel. No customer accounted for more than 10% of our net sales in 2012. Our customers are geographically diverse, with 70% of our revenues generated outside the U.S. in 2012.

Technology investment in advanced graphite science provides access to new growth markets. We believe we are an industry leader in graphite and carbon materials science. We have deep high temperature processing knowledge and operate premier research, development and testing facilities. We hold approximately 777 issued and pending patent applications and have been the recipient of seven R&D 100 Awards in the past 10 years. Our technological capabilities include developing products with superior thermal, electrical and physical characteristics that provide a differentiated advantage. Our commitment to technology leadership has allowed us to diversify our product capabilities and end market exposure, accelerate the scale-up process and access fast growing industries such as aerospace and defense, oil and gas, transportation, lighting and mobile computing.

Strong credit profile with proven ability to generate cash flow. Our business generates cash flow by operating reliable, strategically located, low-cost manufacturing facilities while managing capital expenditures and working capital requirements. We generated over \$940 million of operating cash flow from 2005 to 2012, representing eight straight years of positive operating cash flows. Maintaining liquidity is a priority for us and our business strategies support our goal of maximizing the cash generated from operations. We believe that our low leverage and strong balance sheet will allow us to withstand any reasonably foreseeable potential industry downturn and provide us with the ability to be opportunistic with regards to acquisitions and other opportunities to further expand our geographic and product reach. We have successfully integrated four strategic acquisitions during the last three years.

Our strategies

Leveraging our global manufacturing network. We believe that our global manufacturing network provides us with competitive advantages in product quality, product costs, timely and reliable delivery, and operational flexibility to adjust product mix to meet the diverse needs of a wide range of applications and customers.

We continue to leverage our network to seek to achieve significant increases in throughput generated from our existing assets, through productivity improvements, capital expenditures, and other efficiency initiatives. We believe we can further exploit our network by focusing our technical and customer service capabilities on:

the increasing number of large global customers created by the consolidation trend within the steel industry, to whom we believe we are well positioned to offer products that meet their volume, product quality, product mix, delivery reliability and service needs at competitive prices; and

customers in targeted segments where we have competitive advantages to meet identified customer needs due to the range and quality of our products, the utilization of our capacity, the value of our customer technical service and our low cost supplier advantage.

We sell our products in every major geographic region. Sales of our products to buyers outside the U.S. accounted for about 80% of net sales in 2010, about 73% of net sales in 2011 and about 70% of net sales in 2012.

Driving continuous improvement with LEAN and Six Sigma. We believe a consistent focus on our customers and diligence towards aligning our processes to satisfy their needs is essential in today's global market. We have undertaken a comprehensive launch of LEAN and Six Sigma with dedicated resources at all of our key manufacturing plants intended to create a common language and tool set centering around LEAN and Six Sigma.

Our focus on waste reduction using a team approach creates knowledge at all levels of the organization. Concentrating on creating flow within processes generally enables us to capitalize on lower inventories while still maintaining a high percentage of on-time-delivery. At year end 2011 and continuing through 2012, we experienced increases in inventory levels resulting from lower sales volumes driven by reduced demand for our products as well as from contractually obligated raw material purchases. During 2012 we reduced operating rates at certain of our manufacturing facilities to better align with customer demand. We expect to reduce inventory levels significantly over the next twelve months. Our metric driven behavior and process of deploying corrective actions to anomalies drives us towards customer centric solutions.

We believe we will be able to continue to leverage our streamlined processes as a sustainable competitive advantage with shorter lead times, lower costs, higher quality products, and exceptional service. We apply these methodologies and tools not only to our manufacturing processes, but also to our transactional and business processes such as accounts receivable, new product introduction and cash forecasting in order to drive a high-performing value stream. Accelerating commercialization of advantaged technologies. We believe that our technological capabilities for developing products with superior thermal, electrical and physical characteristics provide us with a potential growth opportunity as well as a competitive advantage. We exploit these capabilities and our intellectual property portfolio to accelerate development and commercialization of these technologies across all of our businesses, to improve existing products and to develop and commercialize new products for higher growth rate areas such as electronic thermal management technologies. We received R&D Magazine's prestigious R&D 100 Award in seven of the past ten years. The R&D 100 Award honors the 100 most technologically significant products introduced into the marketplace each year. We received this award in 2003 and 2004 for our achievements in electronic thermal management products, in 2005 for our large-diameter pinless graphite electrodes, in 2006 for GRAFOAM® carbon foam, a unique high strength, light weight carbon foam, in 2007 for GrafCell® flow field plates, a key component to the commercialization of fuel cells, in 2009 for our GRAFIHXTM Flexible Heat Exchangers, a graphite solution uniquely suited for radiant floor heating systems, and in 2011 for the eGRAF® Spreadershield SS1500.

Delivering exceptional and consistent quality. We believe that our products are among the highest quality products available in our industry. We have been recognized as a preferred or certified supplier by many major steel companies and have received numerous technological innovation and other awards by industry groups, customers and others. Using our technological capabilities, we continually seek to improve the consistent overall quality of our products and services, including the performance characteristics of each product, the uniformity of the same product manufactured at different facilities and the expansion of the range of our products. We believe that improvements in overall quality create significant efficiencies and opportunities for us, provide us the opportunity to increase sales volumes and potential demand share, and create production efficiencies for our customers.

Providing superior technical service. We have a large customer technical service organization, with supporting engineering and scientific groups and more than 250 engineers and specialists around the world, and we believe that we are recognized as one of the industry leaders in providing value added technical services to customers for our major product lines. A portion of these employees assist key steel and other metals customers in furnace applications, operations and upgrades to reduce energy consumption, improve raw material costs and increase output.

Maintaining Liquidity and Building Stockholder Value. We believe that our business strategies support our goal of growing revenues and operating income and maximizing the cash generated from operations. Maintaining liquidity remains a priority for us. As of March 31, 2013, we had outstanding borrowings under our Revolving Facility of \$83 million, \$300 million of Senior Notes, \$167 million carrying value outstanding related to Senior Subordinated Notes, and cash and cash equivalents of \$11.3 million. Additionally, at March 31, 2013, we had approximately \$461 million of unused borrowing capacity under the Revolving Facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately \$6.8 million).

We continually review our assets, product lines and businesses to seek out opportunities to maximize value, through re-deployment, merger, acquisition, divestiture or other means, which could include taking on more debt or issuing more equity. We may at any time buy or sell assets, product lines or businesses.

Summary of the Terms of the Exchange Offer

We have summarized the terms of the exchange offer below. You should read the discussion under "The Exchange Offer", beginning on page 35, for further information about this exchange offer and resale of the Exchange Notes.

Background....

On November 20, 2012, we completed a private placement of \$300,000,000 of our 6.375% Senior Notes due 2020. In connection with this private placement, we entered into a registration rights agreement in which we agreed, among other things, to complete this exchange offer. We are offering to exchange \$300,000,000 of Exchange Notes for a like principal amount of Original Notes. The Original Notes may only be tendered in an amount equal to \$2,000 in principal amount or in integral multiples of \$1,000 in excess thereof. See "The Exchange Offer—Terms of the Exchange Offer."

The Exchange Offer

In order to exchange the Original Notes, you must follow the required procedures, and we must accept the Original Notes for exchange. We will exchange all Original Notes validly tendered and not validly withdrawn prior to the expiration date. See "The Exchange Offer." Based on interpretations of the staff of the SEC, as described in previous no-action letters, we believe that Exchange Notes issued pursuant to the exchange offer in exchange for Original Notes may be offered for resale, resold and otherwise transferred without compliance with the registration and prospectus delivery provisions of the Securities Act, provided that:

Resale of Exchange Notes

I you are acquiring the Exchange Notes issued in this offer in the ordinary course of your business;

1 you have not engaged in, do not intend to engage in, and have no arrangement or understanding with any person to participate in a distribution (within the meaning of the Securities Act), of the Exchange Notes to be issued in the exchange offer; and

1 you are not an "affiliate" of ours, as defined in Rule 405 of the Securities Act.

By tendering your Original Notes as described in "The Exchange Offer—Procedures for Tendering Original Notes," you will be making representations to this effect. If you fail to satisfy any of these conditions, you cannot rely on the position of the SEC set forth in the no-action letters referred to above and you must comply with the registration and prospectus delivery requirements of the Securities Act in connection with a resale of the Exchange Notes.

We base our belief on interpretations by the staff of the SEC in no-action letters issued to other issuers in exchange offers like ours. We cannot guarantee that the SEC would make a similar decision about our exchange offer. If our belief is wrong, you could incur liability under the Securities Act. We will not protect you against any loss incurred as a result of this liability under the Securities Act.

Each broker-dealer that receives Exchange Notes for its own account in exchange for Original Notes, where such Original Notes were acquired by such broker-dealer as a result of market-making activities or other trading activities, must acknowledge that it will deliver a prospectus meeting the requirements of the Securities Act in connection with any

offer to resell, resale or other transfer of Exchange Notes in the exchange offer. See "Plan of Distribution."

Consequences if You Do Not Exchange Your Original Notes	Original Notes that are not tendered in the exchange offer or are not accepted for exchange will continue to bear legends restricting their transfer. You will not be able to offer or sell such Original Notes unless you are able to rely on an exemption from the requirements of the Securities Act or the Original Notes are registered under the Securities Act.
Expiration	After the exchange offer is completed, we will no longer have an obligation to register the Original Notes, except under limited circumstances. To the extent that Original Notes are tendered and accepted in the exchange offer, the market for any remaining Original Notes will be adversely affected. See "Risk Factors—Risks Relating to this Exchange Offer and the Exchange Notes— If you do not properly tender your Original Notes for Exchange Notes, you will continue to hold unregistered notes that are subject to transfer restrictions." The exchange offer expires at 5:00 p.m., New York City time, on,
Date	2013, unless we extend such Exchange Offer. See "The Exchange Offer—Expiration Date; Extension; Termination; Amendment."
Issuance of Exchange Notes	We will issue Exchange Notes in exchange for Original Notes tendered and accepted in the exchange offer promptly following the expiration date (unless amended as described in this prospectus). See "The Exchange Offer—Terms of the Exchange Offer."
Conditions to the Exchange Offer	The exchange offer is subject to certain customary conditions, which we may amend or waive. The exchange offer is not conditioned upon any minimum principal amount of outstanding Original Notes being tendered. See "The Exchange Offer—Conditions to the Exchange Offer."
Procedures for Tendering Original Notes	To participate in the exchange offer, you must (i) complete, sign and date the accompanying letter of transmittal, or a facsimile copy of such letter, in accordance with its instructions and the instructions of this prospectus, and (ii) mail or otherwise deliver the executed letter of transmittal, together with the Original Notes and any other required documentation to the exchange agent at the address set forth in the letter of transmittal. If you are a broker, dealer, commercial bank, trust company or other nominee and you hold Original Notes through the Depository Trust Company ("DTC"), and wish to accept this offer, you must do so pursuant to DTC's automated tender offer program. See "The Exchange Offer—Procedures for Tendering Original Notes."
Special Procedures for Beneficial Holders	If you beneficially own Original Notes which are registered in the name of a broker, dealer, commercial bank, trust company or other nominee and you wish to tender in the exchange offer, you should contact the registered holder promptly and instruct such person to tender on your behalf. If you wish to tender in this offer on your own behalf, you must, prior to completing and executing the letter of transmittal and delivering your Original Notes, either arrange to have the Original Notes registered in your name or obtain a properly completed bond power from the registered holder. The transfer of registered ownership may take a considerable amount of time. See "The Exchange Offer—Procedures for Tendering Original Notes."
Withdrawal Rights	You may withdraw your tender of Original Notes at any time before the expiration date for this offer. See "The Exchange Offer—Withdrawal Right

Regulatory Requirements	

We do not believe that the receipt of any material federal or state regulatory approval will be necessary in connection with the exchange offer, other than the notice of effectiveness under the Securities Act of the registration statement pursuant to which the exchange offer is being made.

Accounting Treatment	We will not recognize any gain or loss for accounting purposes upon the completion of the exchange offer. The expenses of the exchange offer that we pay will increase our deferred financing costs in accordance with accounting principles generally accepted in the United States ("GAAP"). See "The Exchange Offer—Accounting Treatment." The exchange of Original Notes for Exchange Notes pursuant to the
Federal Income Tax	exchange offer generally will not be a taxable event for U.S. federal
Consequences	income tax purposes. See "Certain U.S. Federal Income Tax
•	Considerations."
Use of	We will not receive any cash proceeds from the exchange or issuance of
Proceeds	Exchange Notes in connection with the exchange offer.
	U.S. Bank National Association is serving as exchange agent in
Exchange	connection with the exchange offer. The address and telephone number
Agent	of the Exchange Agent are set forth under "The Exchange Offer—Exchange
	Agent."

Summary of the Terms of the Exchange Notes

Notes offered	\$300,000,000 aggregate principal amount of 6.375% Senior Notes due 2020.
Maturity date	The Exchange Notes will mature on November 15, 2020.
Interest rate	
Interest payment	Interest on the Exchange Notes will be payable on May 15 and November 15 of each year,
dates	commencing on May 15, 2013. Interest will accrue from November 20, 2012.
Panking	The Exchange Notes and the guarantees will be GTI's and the subsidiary guarantors'
Kanking	senior unsecured debt obligations and will, respectively:
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rank equally in right of payment to all of GTI's and the subsidiary guarantors' existing and future senior unsecured debt;

rank senior in right of payment to any of GTI's and the subsidiary guarantors' existing and future debt that is expressly subordinated in right of payment to the notes and the guarantees;

be effectively subordinated to GTI's and the subsidiary guarantors' existing and future secured indebtedness, including indebtedness under the Revolving Facility, to the extent of the value of the collateral securing such indebtedness (the collateral securing the Revolving Facility consists of substantially all of the assets of GTI and its U.S. subsidiaries and certain assets of certain of GTI's indirect foreign subsidiaries); and

be structurally subordinated to all of the existing and future indebtedness, claims of holders of preferred stock and other liabilities of GTI's existing and future subsidiaries that do not guarantee the notes.

At March 31, 2013, the Company and the subsidiary guarantors had approximately \$554.0 million of total indebtedness outstanding, of which \$83.0 million was secured indebtedness under the Revolving Facility and \$167 million (\$200 million due at maturity in 2015) was subordinated indebtedness. Additionally, at March 31, 2013, on such basis, the Company and the subsidiary guarantors had approximately \$461.0 million available for borrowing as additional senior secured debt under the Revolving Facility (after considering financial covenants restrictions and outstanding letters of credit of approximately \$6.8 million).

At March 31, 2013, GTI's subsidiaries that are not guarantors of the Exchange Notes had total liabilities, including trade payables (but excluding intercompany liabilities), of approximately \$211.0 million, or 23% of our total liabilities, and total assets (excluding intercompany receivables) of approximately \$1,117.9 million, or 49% of our total assets. In addition, for the twelve months ended March 31, 2013, GTI's subsidiaries that are not guarantors of the Exchange Notes generated approximately \$710.9 million, or 56%, of our consolidated revenues and approximately \$108.0 million, or 73%, of our consolidated operating income.

	The Exchange Notes will be jointly and severally and unconditionally guaranteed on
	a senior unsecured basis, subject to certain limitations described herein, by each of
Guarantees	.GTI's subsidiaries that guarantees the Revolving Facility, and each of GTI's
	subsidiaries that guarantees our Senior Subordinated Notes. See "Description of the
	Notes—Subsidiary Guarantees."

On and after November 15, 2016, we may redeem some or all of the Exchange Notes at any

time at the redemption prices described in the section "Description of the Notes—Optional redemption" plus accrued and unpaid interest, if any, to the redemption date, Prior to such date, we also may redeem some or all of the Exchange Notes at a redemption price of 100% of the principal amount plus accrued and unpaid interest, if any, to the redemption date, plus Optional a "make-whole" premium. In addition, we may redeem up to 35% of the aggregate principal redemption..... amount of the Exchange Notes before November 15, 2015 with the net cash proceeds of certain equity offerings at a redemption price of 106.375% of the principal amount plus accrued and unpaid interest, if any, to the redemption date. Our other existing and future indebtedness may limit our ability to make any optional redemption. See "Description of the Notes—Optional redemption." If a change of control repurchase event occurs, we must offer to purchase the Exchange Notes at 101% of their principal amount, plus accrued and unpaid interest, if any, to the Change of control..... purchase date. For more details, see the section "Description of the Notes—Change of control offer." Certain The indenture governing the Exchange Notes will contain covenants that, among other things: covenants..... limit GTI's ability and the ability of its subsidiaries to create liens or use assets as security in other transactions; limit GTI's ability and the ability of certain of its subsidiaries to engage in certain sale/leaseback transactions; and limit GTI's ability and the ability of the subsidiary guarantors to merge or consolidate, or sell, transfer, lease or dispose of substantially all of our, or their, assets. These covenants are subject to a number of important exceptions and qualifications. For more details, see "Description of the Notes—Covenants." The Exchange Notes will not be listed on any securities exchange or any automated dealer quotation system and there is currently no market for the Exchange Notes. Accordingly, there can No public trading be no assurance that a market for the Exchange Notes will develop upon the completion of the market..... exchange offer or, if developed, that such market will be sustained or as to the liquidity of any market. You should carefully consider the information under "Risk Factors" beginning on page Risk 22 and the other information included in this prospectus before deciding to participate factors..... in the exchange offer.

RISK FACTORS

You should carefully consider the following risk factors discussed below and the matters addressed under "Cautionary Statements Regarding Forward-Looking Statements" on page 5 together with all the other information presented in this prospectus, including our audited consolidated financial statements and related notes. The risks described below are not the only risks facing us or that may materially adversely affect our business. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially and adversely affect our business. If any of the following risks develop into actual events, our business, financial condition or results of operations could be materially adversely affected and you may lose all or part of your investment.

Risk Factors Relating to this Exchange Offer and the Exchange Notes

If you do not properly tender your Original Notes for Exchange Notes, you will continue to hold unregistered notes that are subject to transfer restrictions.

We will only issue Exchange Notes in exchange for Original Notes that are received by the exchange agent in a timely manner together with all required documents. Therefore, you should allow sufficient time to ensure timely delivery of the Original Notes, and you should carefully follow the instructions on how to tender your Original Notes set forth under "The Exchange Offer—Procedures for Tendering Original Notes" and in the letter of transmittal that you receive with this prospectus. Neither we nor the exchange agent are required to tell you of any defects or irregularities with respect to your tender of the Original Notes.

If you do not tender your Original Notes or if we do not accept your Original Notes because you did not tender your Original Notes properly, you will continue to hold Original Notes. Any Original Notes that remain outstanding after the expiration of this exchange offer will continue to be subject to restrictions on their transfer in accordance with the Securities Act. After the expiration of this exchange offer, holders of Original Notes will not have any further rights to have their Original Notes registered under the Securities Act, except under limited circumstances. In addition, if you tender your Original Notes for the purpose of participating in a distribution of the Exchange Notes, you will be required to comply with the registration and prospectus delivery requirements of the Securities Act in connection with any resale of the Exchange Notes. If you continue to hold any Original Notes after this exchange offer is completed, you may have difficulty selling them because of the restrictions on transfer and because we expect that there will be fewer Original Notes outstanding, which could result in an illiquid trading market for the Original Notes. The value of the remaining Original Notes could be adversely affected by the conclusion of this exchange offer. There may be no market for the remaining Original Notes and thus you may be unable to sell such notes.

An active trading market for the Exchange Notes may not develop.

The Exchange Notes will be a new issue of securities for which there is currently no established trading market. We do not intend to apply for the listing of the Exchange Notes on any securities exchange or for quotation of the Exchange Notes on any dealer quotation system. Even if a market for the Exchange Notes does develop, we cannot assure you that there will be liquidity in that market, or that the Exchange Notes might not trade for less than their original value or face amount. The liquidity of any market for the Exchange Notes will depend on the number of holders of the Exchange Notes, the interest of securities dealers in making a market in the Exchange Notes and other factors. If a liquid market for the Exchange Notes does not develop, you may be unable to resell the Exchange Notes for a long period of time, if at all. Accordingly, we cannot assure you as to the development or liquidity of any trading market for the Exchange Notes or as to your ability to sell your Exchange Notes.

The prices of the Exchange Notes will depend on many factors, including prevailing interest rates, our operating results and financial condition and the market for similar securities. Declines in the market prices for debt securities generally may also materially and adversely affect the liquidity of the Exchange Notes, independent of our financial performance.

If you are a broker-dealer, your ability to transfer the Exchange Notes may be restricted.

A broker-dealer that purchased Original Notes for its own account as part of market-making or other trading activities must deliver a prospectus when it resells the Exchange Notes and will be required to acknowledge this obligation in connection with participating in this exchange offer. Our obligation to make this prospectus available to broker-dealers is

limited. Consequently, we cannot guarantee that a proper prospectus will be available to broker-dealers wishing to resell their Exchange Notes.

GTI is a holding company and all of its operations are conducted through its subsidiaries.

GTI is a holding company and derives substantially all of its cash flow from its subsidiaries. Since GTI's operations are conducted through its subsidiaries, its cash flow and its consequent ability to service its indebtedness, including the Exchange Notes, is dependent upon the earnings of its subsidiaries and the distribution of those earnings to GTI or upon the payments of funds by those subsidiaries to GTI or the repayment of intercompany indebtedness owed to GTI. GTI's subsidiaries are separate and distinct legal entities with trade payables and other liabilities. In addition to any statutory restrictions, the payment of dividends and the making of distributions and the making of loans and advances to GTI by its subsidiaries are subject to contractual restrictions provided in the Revolving Facility. In addition, any right GTI may have to receive assets of any of its subsidiaries upon their liquidation or reorganization (and the consequent right of the holders of the Exchange Notes to participate in those assets) is effectively subordinated to the claims of such subsidiary's creditors, including trade creditors.

The Exchange Notes are structurally subordinated to all of the existing and future liabilities, including trade payables, of GTI's subsidiaries that are not, or do not become, guarantors of the Exchange Notes.

The Exchange Notes are not guaranteed by all of GTI's subsidiaries or any of GTI's foreign subsidiaries. The Exchange Notes are therefore structurally subordinated to all of the existing and future liabilities, including trade payables, of any non-guarantor subsidiary such that, in the event of an insolvency, liquidation, reorganization, dissolution or other winding up of any such subsidiary, all of such subsidiary's creditors (including trade creditors and preferred stockholders, if any) would be entitled to payment in full out of such subsidiary's assets before the holders of the Exchange Notes would be entitled to any payment.

As of March 31, 2013, GTI's subsidiaries that are not guarantors of the notes had total liabilities, including trade payables (but excluding intercompany liabilities), of approximately \$211.0 million or 23% of our total liabilities, and total assets (excluding intercompany receivables) of approximately \$1,117.9 million, or 49% of our total assets. In addition, for the twelve months ended March 31, 2013, our subsidiaries that are not guarantors of the notes generated approximately \$710.9 million, or 56%, of our consolidated revenues and approximately \$108.0 million, or 73%, of our consolidated operating income.

Under certain circumstances, subsidiary guarantees may be released.

Those subsidiaries that provide guarantees of the Exchange Notes will be released from such guarantees upon the occurrence of certain events, including the following:

the unconditional release or discharge of any guarantee or indebtedness that resulted in the creation of the guarantee of the Exchange Notes by such subsidiary guarantor;

the sale or other disposition, including by way of merger or consolidation or the sale of its capital stock following which such subsidiary guarantor is no longer a subsidiary of the Company; or

GTI's exercise of its legal defeasance option or its covenant defeasance option as described in the indenture applicable to the Exchange Notes.

If any such subsidiary guarantee is released, no holder of the Exchange Notes will have a claim as a creditor against any such subsidiary and the indebtedness and other liabilities, including trade payables and preferred stock, if any, of such subsidiary will be effectively senior to the claim or any holders of the Exchange Notes.

We may incur substantially more debt ranking senior or equal in right of payment with the Exchange Notes, including secured debt, which would increase the risks described herein.

The agreements relating to our debt, including the Revolving Facility, limit but do not prohibit our ability to incur additional debt, and the amount of debt that we could incur could be substantial. Accordingly, we could incur significant additional debt in the future, including additional debt under the Revolving Facility. Much of this additional debt could

constitute secured debt, to which the Exchange Notes would be effectively subordinated to the extent of the value of the collateral securing such debt (the collateral securing the Revolving Facility consists of substantially all of the assets of GTI and its U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries). At March 31, 2013, we had approximately \$461 million of unused borrowing capacity under the Revolving facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately \$6.8 million). In addition, if we form or acquire any subsidiaries in the future, those subsidiaries also could incur debt, which debt would be effectively senior to the Exchange Notes if those subsidiaries are not required to guarantee the Exchange Notes. If new debt is added to our current debt levels, the related risks that we now face could intensify.

In addition, certain types of liabilities are not considered "Indebtedness" under the Revolving Facility, and the Revolving Facility does not impose any limitation on the amount of liabilities incurred by the subsidiaries, if any, that might be designated as "unrestricted subsidiaries."

Additionally, our Senior Subordinated Notes provide that they will be subordinated to certain indebtedness incurred by us so long as, on the date we incur such debt and after giving effect thereto, our leverage ratio (as defined therein) is below 4.00 to 1.00. As a result, our Senior Subordinated Notes will not be subordinated to any indebtedness if, as a result of its incurrence, our leverage ratio exceeds 4.00 to 1.00. In addition, to the extent that we grant a security interest to secure any such indebtedness, our Senior Subordinated Notes must be equally and ratably secured with such indebtedness. After giving effect to the offering of the Original Notes and the use of proceeds therefrom our leverage ratio was below 4.00 to 1.00. As a result, the Senior Subordinated Notes were subordinated to the Original Notes and will be subordinated to the Exchange Notes. In addition, the indenture governing the Exchange Notes provides that neither we, nor any of our subsidiaries, may grant a security interest for the benefit of the holders of the Senior Subordinated Notes unless we or the applicable subsidiary equally and ratably secure the Exchange Notes. The ability of holders of Exchange Notes to require us to repurchase Exchange Notes as a result of a disposition of "substantially all" of our assets may be uncertain.

The definition of change of control in the indenture governing the Exchange Notes includes a phrase relating to the sale of "all or substantially all" of our assets. Although there is a limited body of case law interpreting the phrase "substantially all," there is no precise established definition of such phrase under applicable law. Accordingly, the ability of a holder of Exchange Notes to require us to repurchase its Exchange Notes as a result of a sale or other disposition of less than all of our assets to another person or group may be uncertain.

If we default on our obligations to pay our other indebtedness, we may not be able to make payments on the Exchange Notes.

Any default under the agreements governing our indebtedness, including a default under the Revolving Facility, that is not waived by the required lenders, and the remedies sought by the holders of such indebtedness, could prevent us from paying principal, premium, if any, and interest on the Exchange Notes and substantially decrease the market value of the Exchange Notes. If we are unable to generate sufficient cash flow and are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or if we otherwise fail to comply with the various covenants, including financial and operating covenants in the instruments governing our indebtedness (including covenants in the Revolving Facility and the indenture that governs the Exchange Notes), we could be in default under the terms of the agreements governing such indebtedness, including the Revolving Facility and the indenture governing the Exchange Notes. In the event of such default:

- the holders of such indebtedness may be able to cause all of our available cash flow to be used to pay such
- •indebtedness and, in any event, could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest;
- the lenders under the Revolving Facility could elect to terminate their commitments thereunder, cease making further loans and institute foreclosure proceedings against our assets; and
- •we could be forced into bankruptcy or liquidation.

Upon any such bankruptcy filing, we would be stayed from making any ongoing payments on the Exchange Notes, and the holders of the Exchange Notes would not be entitled to receive post-petition interest or applicable fees, costs or

charges, or any "adequate protection" under Title 11 of the United States Code (the "Bankruptcy Code"). Furthermore, if a bankruptcy case were to be commenced under the Bankruptcy Code, we could be subject to claims, with respect to any payments made within 90 days prior to commencement of such a case, that we were insolvent at the time any such payments were made and that all or a portion of such payments, which could include repayments of amounts due under the Exchange Notes, might be deemed to constitute a preference, under the Bankruptcy Code, and that such payments should be voided by the bankruptcy court and recovered from the recipients for the benefit of the entire bankruptcy estate. Also, in the event that we were to become a debtor in a bankruptcy case seeking reorganization or other relief under the Bankruptcy Code, a delay and/or substantial reduction in payment under the Exchange Notes may otherwise occur. If our operating performance declines, we may in the future need to obtain waivers from the required lenders under the Revolving Facility to avoid being in default. If we breach our covenants under the Revolving Facility and seek a waiver, we may not be able to obtain a waiver from the required lenders. If this occurs, we would be in default under the Revolving Facility, the lenders could exercise their rights, as described above, and we could be forced into bankruptcy or liquidation.

Federal and state statutes could allow a court to void the Exchange Notes or any of our subsidiaries' guarantees of the Exchange Notes under fraudulent transfer laws and require noteholders to return payments received by us or the subsidiary guarantors to us or the subsidiary guarantors or to fund for the benefit of their respective creditors or subordinate the Exchange Notes or the guarantees to other claims of us or the subsidiary guarantors.

Under the federal bankruptcy laws and comparable provisions of state fraudulent transfer laws, the Exchange Notes or any of the guarantees thereof could be voided, or claims with respect to the Exchange Notes or any of the guarantees could be subordinated to all other debts of GTI or the subsidiary guarantors. In addition, a bankruptcy court could void (i.e., cancel) any payments by GTI or the subsidiary guarantors pursuant to their guarantees and require those payments to be returned to GTI or the subsidiary guarantors or to a fund for the benefit of us or their respective creditors, or subordinate the Exchange Notes or the guarantees to other claims of GTI or the subsidiary guarantors. The bankruptcy court might take these actions if it found, among other things, that GTI or the applicable subsidiary guarantor:

received less than reasonably equivalent value or fair consideration for the issuance of the Exchange Notes or the incurrence of its guarantee; and

was (or was rendered) insolvent by such issuance or such incurrence;

was engaged or about to engage in a business or transaction for which its assets constituted unreasonably small capital to carry on its business;

intended to incur, or believed that it would incur, obligations beyond its ability to pay as the obligations matured; or was a defendant in an action for money damages, or had a judgment for money damages docketed against it and, in either case, after final judgment, the judgment was unsatisfied.

A court would likely find that GTI or a subsidiary guarantor received less than fair consideration or reasonably equivalent value for the Exchange Notes or its guarantee to the extent that it did not receive direct or indirect substantial benefit from the issuance of the Exchange Notes or the incurrence of the guarantee. A court could also void the Exchange Notes or any guarantee if it found that GTI or the subsidiary guarantor issued the Exchange Notes or incurred the guarantee with actual intent to hinder, delay, or defraud any present or future creditors. Although courts in different jurisdictions measure solvency differently, in general, an entity would be deemed insolvent if the sum of its debts, including contingent and unliquidated debts, exceeds the fair value of its assets or if the present fair saleable value of its assets is less than the amount that would be required to pay the expected liability on its debts, including contingent and unliquidated debts, as they become due. We cannot predict what standard a court would apply in order to determine whether any of the Issuer or a subsidiary guarantor was insolvent as of the relevant date or whether, regardless of the method of valuation, a court would determine that the subsidiary guarantor was insolvent on that date, or whether a court would determine that the payments thereunder constituted fraudulent transfers or conveyances on other grounds. If the issuance of the Exchange Notes or the incurrence of the guarantee is deemed to be a fraudulent transfer, it could be voided altogether, or it could be subordinated to all other debts of GTI or the subsidiary guarantor, as applicable. In such case, any payment by GTI or the applicable subsidiary guarantor pursuant to the Exchange Notes or its guarantee could be required to be returned to us or the applicable subsidiary guarantor or to a

fund for the benefit of our or their respective creditors. Moreover, in such a case a court could subordinate the Exchange Notes or guarantees to other claims of us or the subsidiary guaranter. If a guarantee is voided or

held unenforceable for any other reason, holders of the Exchange Notes would cease to have a claim against the subsidiary guarantor based on the guarantee and would be creditors only of GTI and any subsidiary guarantor whose guarantee was not similarly voided or otherwise held unenforceable.

Each guarantee will contain a provision intended to limit the subsidiary guarantor's liability to the maximum amount that it could incur without rendering the incurrence of obligations under its guarantee a fraudulent transfer. This provision may not be effective to protect the guarantees from being voided or subordinated under fraudulent transfer or conveyance law.

Risks Related to our Business

A downturn in global economic conditions may materially adversely affect our business.

While the global recovery continues, the pace of recovery remains sluggish and uneven geographically. Downside risks remain, including high unemployment, reduced consumer spending, high deficit spending by governments, turbulent financial markets (particularly in the euro area), tighter monetary policies (particularly in emerging markets) and continuing uncertainty over U.S. fiscal policy, commonly referred to as the "fiscal cliff." Although the U.S. Congress recently took action to avert certain of the immediate tax concerns associated with the fiscal cliff, it only delayed potential U.S. government spending cuts known as sequestration. Continued uncertainty concerning U.S. fiscal policy is likely to continue to adversely affect global economic activity which may adversely affect demand for our products.

We are currently facing a challenging environment for our products, particularly our Industrial Materials products, as a result of global economic conditions.

Based on the International Monetary Fund's April 16, 2013 report, the estimate for global GDP growth has been reduced to 3.25 percent in 2013, a reduction from its January estimate of 3.5 percent. The reported GDP growth figure for 2012 was 3.2%. We believe that in the graphite electrode markets the capacity utilization rate was approximately 83% in 2011 and 73% in 2012. While improved compared to 2009 levels, these lower capacity utilization rates may continue to be driven by a challenging environment for our customers which would negatively impact demand for our Industrial Materials products and may adversely affect our results of operations for 2013.

We are dependent on the global steel industry and also sell products used in the transportation, semiconductor, solar, petrochemical, electronics, and other industries which are susceptible to global and regional economic downturns. We sell our Industrial Materials products, which accounted for about 82% of our total net sales in 2012, primarily to the EAF steel production industry. Many of our other products are sold primarily to the electronics, transportation, alternative energy, and oil and gas exploration industries. These are global basic industries, and they are experiencing various degrees of contraction, growth and consolidation. Customers in these industries are located in every major geographic region. As a result, our customers are affected by changes in global and regional economic conditions. This, in turn, affects overall demand and prices for our products sold to these industries. As a result of changes in economic conditions, demand and pricing for our products sold to these industries has fluctuated and in some cases declined significantly, which could have a material adverse effect on our results of operations.

Demand for our products sold to these industries may be adversely affected by improvements in our products as well as in the manufacturing operations of customers, which reduce the rate of consumption or use of our products. Our customers, including major steel producers, are experiencing and may continue to experience downturns or financial distress that could adversely impact our ability to collect our accounts receivable or to collect them on a timely basis. Sales volumes and prices of our products sold to these industries are impacted by the supply/demand balance as well as overall changes in demand, excess capacity and growth of and consolidation within, the end markets for our products. In addition to the factors mentioned above, the supply/demand balance is affected by factors such as business cycles, rationalization, and increases in capacity and productivity initiatives within our industry and the end markets for our products, and certain of such factors are affected by decisions by us. Changes in the supply/demand balance could have a material adverse effect on our results of operations.

The steel industry, in particular, has historically been highly cyclical and is affected significantly by general economic conditions. Significant customers for the steel industry include companies in the automotive, construction,

appliance, machinery, equipment and transportation industries, all of which continue to be affected by the general economic downturn and the deterioration in financial markets, including severely restricted liquidity and credit availability.

In addition, a continuation of the current difficult economic conditions may lead current or potential customers of our Engineered Solutions business to delay or reduce technology purchases or slow their adoption of new technologies. This may result in a continued reduction, or slower rate of recovery, of sales of our Engineered Solutions products and increased price competition, which could materially and adversely affect our financial position and results of operations.

Our indebtedness could limit our financial and operating activities, and adversely affect our ability to incur additional debt to fund future needs.

As of March 31, 2013, we had approximately \$554 million of total indebtedness outstanding, including approximately \$83 million of secured indebtedness outstanding under the Revolving Facility, \$300 million of Original Notes, and approximately \$167 million (\$200 million due at maturity in 2015) of Senior Subordinated Notes. Additionally, at March 31, 2013, we had approximately \$461 million of unused borrowing capacity under the Revolving Facility (after considering financial covenants restrictions and the outstanding letters of credit of approximately \$6.8 million). This substantial amount of indebtedness could:

require us to dedicate a substantial portion of our cash flow to the payment of principal and interest, thereby reducing the funds available for operations and future business opportunities;

make it more difficult for us to satisfy our obligations with respect to the notes, including our repurchase obligations; limit our ability to borrow additional money if needed for other purposes, including working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes, on satisfactory terms or at all;

limit our ability to adjust to changing economic, business and competitive conditions;

place us at a competitive disadvantage with competitors who may have less indebtedness or greater access to financing;

make us more vulnerable to an increase in interests rates, a downturn in our operating performance or a decline in general economic conditions; and

make us more susceptible to changes in credit ratings, which could impact our ability to obtain financing in the future and increase the cost of such financing.

If compliance with our debt obligations under the Revolving Facility materially limits our financial or operating activities, or hinders our ability to adapt to changing industry conditions, we may lose market share, our revenue may decline and our operating results may be negatively affected.

The terms of the Revolving Facility and the indenture governing the notes include covenants that could restrict or limit our financial and business operations.

The Revolving Facility and the indenture governing the notes contain a number of restrictive covenants that, subject to certain exceptions and qualifications, restrict or limit GTI's ability and the ability of GTI's subsidiaries to, among other things:

incur, repay or refinance indebtedness;

ereate liens on or sell our assets;

engage in certain fundamental corporate changes or changes to our business activities;

make investments or engage in mergers or acquisitions;

engage in sale-leaseback transactions;

pay dividends or repurchase stock;

engage in certain affiliate transactions;

enter into agreements or otherwise restrict GTI's subsidiaries from making distributions or paying dividends to the borrowers under the Revolving Facility; and

repay intercompany indebtedness owed to GTI or make distributions or pay dividends to GTI.

The Revolving Facility also contains certain affirmative covenants and requires us to comply with financial coverage ratios regarding both our cash interest expense and our senior secured debt relative to our EBITDA (as defined in the Revolving Facility).

These covenants and restrictions could affect our ability to operate our business, and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. Additionally, our ability to comply with these covenants may be affected by events beyond our control, including general economic and credit conditions and industry downturns.

If we fail to comply with the covenants in the Revolving Facility and are unable to obtain a waiver, or amendment, an event of default would result, and the lenders could, among other things, declare outstanding amounts due and payable, refuse to lend additional amounts to us, require deposit of cash collateral in respect of outstanding letters of credit, or refuse to waive any restrictive covenants in the Revolving Facility, including the restriction which prohibits dividends and distributions from GTI's subsidiaries to GTI to fund payment of indebtedness, including the notes, during a default or event of default. If we were unable to repay or pay the amounts due, the lenders could, among other things, proceed against the collateral granted to them to secure such indebtedness, which includes substantially all of the assets of GTI and its U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries. Our cash flows may not be sufficient to service our indebtedness, and if we are unable to satisfy our obligations under our indebtedness, we may be required to seek other financing alternatives, which may not be successful. Our ability to make timely payments of principal and interest on our debt obligations, including the notes and our obligations under the Revolving Facility, depends on our ability to generate positive cash flows from operations, which is subject to general economic conditions, competitive pressures and certain financial, business and other factors beyond our control. If our cash flows and capital resources are insufficient to make these payments, we may be required to seek additional financing sources, reduce or delay capital expenditures, sell assets or operations or refinance our indebtedness. These actions could have a material adverse effect on our business, financial conditions and results of operations. In addition, we may not be able to take any of these actions, and, even if successful, these actions may not permit us to meet our scheduled debt service obligations. Our ability to restructure or refinance the debt under the Revolving Facility will depend on, among other things, the condition of the capital markets and our financial condition at such time. There can be no assurance that we will be able to restructure or refinance any of our indebtedness on commercially reasonable terms or at all. If we cannot make scheduled payments on our debt, we will be in default and the outstanding principal and interest on our debt could be declared to be due and payable, in which case we could be forced into bankruptcy or liquidation or required to substantially restructure or alter our business operations or debt obligations.

Borrowings under the Revolving Facility bear interest at a variable rate, which subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.

All of our borrowings under the Revolving Facility are at variable rates of interest and expose us to interest rate risk. If interest rates increase, our debt service obligations on this variable rate indebtedness would increase even though the amount borrowed remained the same.

We may not be able to raise the funds necessary to finance a change of control repurchase.

Upon the occurrence of a change of control repurchase event under the indenture governing the notes, holders of notes may require us to purchase their notes. However, it is possible that we would not have sufficient funds at that time to make the required purchase of notes. We cannot assure you that we will have sufficient financial resources, or will be able to arrange financing, to pay the repurchase price in cash with respect to any notes tendered by holders for repurchase upon a change of control. Our failure to repurchase the notes when required would result in an event of default under the indenture governing the notes which could, in turn, constitute a default under the terms of our other indebtedness, if any.

The terms of the Revolving Facility include covenants that could restrict or limit our ability to repurchase the notes in a change of control repurchase event.

Upon the occurrence of a change of control repurchase event under the indenture governing the notes, holders of notes may require us to purchase their notes. The Revolving Facility contains a restrictive covenant on the repurchase or retirement of indebtedness, which could limit or restrict our ability to make the required repurchase of notes. If the repurchase of notes does violate covenants in the Revolving Facility and if we are unable to obtain a waiver or amendment, an event of default would occur if we repurchased the notes, and the lenders under the Revolving Facility could, among other things, declare outstanding amounts thereunder due and payable, refuse to lend additional amounts to us, and require a deposit of cash collateral in respect of outstanding letters of credit. If we were unable to repay or pay the amounts due, the lenders could, among things, proceed against the collateral granted to them to secure such indebtedness, which includes substantially all of the assets of GTI and GTI's U.S. subsidiaries and certain assets of certain of GTI's foreign subsidiaries.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies may increase our future borrowing costs and reduce our access to capital.

Any rating assigned to our debt could be lowered or withdrawn entirely by a rating agency if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing.

Disruptions in the capital and credit markets, which may continue indefinitely or intensify, could adversely affect our results of operations, cash flows and financial condition, or those of our customers and suppliers.

Disruptions in the capital and credit markets may adversely impact our results of operations, cash flows and financial condition, or those of our customers and suppliers. Disruptions in the capital and credit markets as a result of uncertainty, changing or increased regulation, reduced alternatives or failures of significant financial institutions could adversely affect our access to liquidity needed to conduct or expand our businesses or conduct acquisitions or make other discretionary investments, as well as our ability to effectively hedge our currency or interest rate risks and exposures. Such disruptions may also adversely impact the capital needs of our customers and suppliers, which, in turn, could adversely affect our results of operations, cash flows and financial condition.

We are subject to risks associated with operations in multiple countries.

A substantial majority of our net sales are derived from sales outside the U.S., and a majority of our operations and our total property, plant and equipment and other long- lived assets are located outside the U.S. As a result, we are subject to risks associated with operating in multiple countries, including:

currency devaluations and fluctuations in currency exchange rates, including impacts of transactions in various currencies, impact on translation of various currencies into dollars for U.S. reporting and financial covenant compliance purposes, and impacts on results of operations due to the fact that costs of our foreign subsidiaries are primarily incurred in local currencies while their products are primarily sold in dollars and euros; imposition of or increases in customs duties and other tariffs;

imposition of or increases in currency exchange controls, including imposition of or increases in limitations on conversion of various currencies into dollars, euros, or other currencies, making of intercompany loans by subsidiaries or remittance of dividends, interest or principal payments or other payments by subsidiaries;

imposition of or increases in revenue, income or earnings taxes and withholding and other taxes on remittances and other payments by subsidiaries;

imposition of or increases in investment or trade restrictions by the U.S. or by non-U.S. governments or trade sanctions adopted by the U.S.;

inability to definitively determine or satisfy legal requirements, inability to effectively enforce contract or legal rights and inability to obtain complete financial or other information under local legal, judicial, regulatory, disclosure and other systems; and

nationalization or expropriation of assets, and other risks which could result from a change in government or government policy, or from other political, social or economic instability.

We cannot assure you that such risks will not have a material adverse effect on us or that we would be able to mitigate such material adverse effects in the future.

In addition to the factors noted above, our results of operations and financial condition are affected by inflation, deflation and stagflation in each country in which we have a manufacturing facility. We cannot assure you that future increases in our costs will not exceed the rate of inflation or the amounts, if any, by which we may be able to increase prices for our products.

Our ability to grow and compete effectively depends on protecting our intellectual property. Failure to protect our intellectual property could adversely affect us.

We believe that our intellectual property, consisting primarily of patents and proprietary know-how and information, is important to our growth. Failure to protect our intellectual property may result in the loss of the exclusive right to use our technologies. We rely on patent, trademark, copyright and trade secret laws and confidentiality and restricted use agreements to protect our intellectual property. Some of our intellectual property is not covered by any patent or patent application or any such agreement.

Patents are subject to complex factual and legal considerations. Accordingly, there can be uncertainty as to the validity, scope and enforceability of any particular patent. Therefore, we cannot assure you that:

any of the U.S. or foreign patents now or hereafter owned by us, or that third parties have licensed to us or may in the future license to us, will not be circumvented, challenged or invalidated;

any of the U.S. or foreign patents that third parties have non-exclusively licensed to us, or may non-exclusively license to us in the future, will not be licensed to others; or

any of the patents for which we have applied or may in the future apply will be issued at all or with the breadth of claim coverage sought by us.

Moreover, patents, even if valid, only provide protection for a specified limited duration.

We cannot assure you that agreements designed to protect our proprietary know-how and information will not be breached, that we will have adequate remedies for any such breach, or that our strategic alliance suppliers and customers, consultants, employees or others will not assert rights to intellectual property arising out of our relationships with them against us.

In addition, effective patent, trademark and trade secret protection may be limited, unavailable or not applied for in the U.S. or in any of the foreign countries in which we operate.

Further, we cannot assure you that the use of our patented technology or proprietary know-how or information does not infringe the intellectual property rights of others.

Intellectual property protection does not protect against technological obsolescence due to developments by others or changes in customer needs.

The protection of our intellectual property rights may be achieved, in part, by prosecuting claims against others whom we believe have misappropriated our technology or have infringed upon our intellectual property rights, as well as by

defending against misappropriation or infringement claims brought by others against us. Our involvement in litigation to protect or defend our rights in these areas could result in a significant expense to us, adversely affect the development of sales of the related products, and divert the efforts of our technical and management personnel, regardless of the outcome of such litigation.

If necessary, we may seek licenses to intellectual property of others. However, we can give no assurance to you that we will be able to obtain such licenses or that the terms of any such licenses will be acceptable to us. Our failure to obtain a license from a third party for its intellectual property that is necessary for us to make or sell any of our products could cause us to incur substantial liabilities and to suspend the manufacture or shipment of products or use of processes requiring the use of such intellectual property.

Our current and former manufacturing operations are subject to increasingly stringent health, safety and environmental requirements.

We use and generate hazardous substances in our manufacturing operations. In addition, both the properties on which we currently operate and those on which we have ceased operations are and have been used for industrial purposes. Further, our manufacturing operations involve risks of personal injury or death. We are subject to increasingly stringent environmental, health and safety laws and regulations relating to our current and former properties, neighboring properties, and our current raw materials, products, and operations. These laws and regulations provide for substantial fines and criminal sanctions for violations and sometimes require evaluation and registration or the installation of costly pollution control or safety equipment or costly changes in operations to limit pollution or decrease the likelihood of injuries. It is also possible that the impact of such regulations on our suppliers could affect the availability and cost of our raw materials. In addition, we may become subject to potential material liabilities for the investigation and cleanup of contaminated properties, for claims alleging personal injury or property damage resulting from exposure to or releases of hazardous substances, or for personal injury as a result of an unsafe workplace. Further, alleged noncompliance with or stricter enforcement of, or changes in interpretations of, existing laws and regulations, adoption of more stringent new laws and regulations, discovery of previously unknown contamination or imposition of new or increased requirements could require us to incur costs or become the basis of new or increased liabilities that could be material.

We may face risks related to greenhouse gas emission limitations and climate change.

There is growing scientific, political and public concern that emissions of greenhouse gases ("GHG") are altering the atmosphere in ways that are affecting, and are expected to continue to affect, the global climate. Legislators, regulators and others, as well as many companies, are considering ways to reduce GHG emissions. GHG emissions are regulated in the European Union via an Emissions Trading Scheme ("ETS"), otherwise known as a "Cap and Trade" program. In the United States, environmental regulations issued in 2009 and 2010 require reporting of GHG emissions by defined industries, activities and suppliers, and regulate GHG as a pollutant covered under the New Source Review, Prevention of Significant Deterioration ("PSD") and Title V Operating Permit programs of the Clean Air Act Amendments. It is possible that some form of regulation of GHG emissions will also be forthcoming in other countries in which we operate or market our products. Regulation of GHG emissions could impose additional costs, both direct and indirect, on our business, and on the businesses of our customers and suppliers, such as increased energy and insurance rates, higher taxes, new environmental compliance program expenses, including capital improvements, environmental monitoring, and the purchase of emission credits, and other administrative costs necessary to comply with current requirements and potential future requirements or limitations that may be imposed, as well as other unforeseen or unknown costs. To the extent that similar requirements and limitations are not imposed globally, such regulation may impact our ability to compete with companies located in countries that do not have such requirements or do not impose such limitations. The company may also realize a change in competitive position relative to industry peers, changes in prices received for products sold, and changes to profit or loss arising from increased or decreased demand for products produced by the company. The impact of any future GHG regulatory requirements on our global business will be dependent upon the design of the regulatory schemes that are ultimately adopted and, as a result, we are unable to predict their significance to our operations at this point in time. The potential physical impacts of climate change on the company's operations are uncertain and will likely be particular to the geographic circumstances. These physical impacts may include changes in rainfall and storm patterns,

shortages of water or other natural resources, changing sea levels, and changing global average temperatures. For instance, our Seadrift facility and our Calais facility, are located in geographic areas less than 50 feet above sea level. As a result, any future rising sea levels could have an adverse impact on their operations and on their suppliers. Due to these uncertainties, any future physical effects of climate change may or may not adversely affect the operations at each of our production

facilities, the availability of raw materials, the transportation of our products, the overall costs of conducting our business, and our financial performance.

We face certain litigation and legal proceedings risks that could harm our business.

We are involved in various product liability, occupational, environmental, and other legal claims, demands, lawsuits and other proceedings arising out of or incidental to the conduct of our business. The results of these proceedings are difficult to predict. Moreover, many of these proceedings do not specify the relief or amount of damages sought. Therefore, as to a number of the proceedings, we are unable to estimate the possible range of liability that might be incurred should these proceedings be resolved against us. Certain of these matters involve types of claims that, if resolved against us, could give rise to substantial liability, which could have a material adverse effect on our financial position, liquidity and results of operations.

We are dependent on supplies of raw materials and energy. Our results of operations could deteriorate if that supply is substantially disrupted for an extended period.

We purchase raw materials and energy from a variety of sources. In many cases, we purchase them under short term contracts or on the spot market, in each case at fluctuating prices. The availability and price of raw materials and energy may be subject to curtailment or change due to:

4 imitations which may be imposed under new legislation or regulation;

supplier's allocations to meet demand of other purchasers during periods of shortage (or, in the case of energy suppliers, extended cold weather);

interruptions or cessations in production by suppliers; and

market and other events and conditions.

Petroleum and coal products, including decant oil, petroleum coke and pitch, our principal raw materials, and energy, particularly natural gas, have been subject to significant price fluctuations.

We have in the past entered into, and may continue in the future to enter into, derivative contracts and short duration fixed rate purchase contracts to effectively fix a portion of our exposure to certain products.

A substantial increase in raw material or energy prices which cannot be mitigated or passed on to customers or a continued interruption in supply, particularly in the supply of decant oil, petroleum coke or energy, would have a material adverse effect on us.

Seadrift could be impacted by a reduction in the availability of low sulfur decant oil or an increase in the pricing of needle coke feedstocks.

Seadrift uses low sulfur decant oil in the manufacture of needle coke. There is no assurance that Seadrift will always be able to obtain an adequate quantity of suitable feedstocks or that capital would be available to install equipment to allow for utilization of higher sulfur decant oil, which is more readily available in the United States, in the event that suppliers of lower sulfur decant oil were to become more limited in the future. Seadrift purchases approximately 1.5 million barrels of low sulfur decant oil annually. The prices paid by Seadrift for such feedstocks are governed by the market for heavy fuel oils, which prices can fluctuate widely for various reasons including, among other things, worldwide oil shortages and cold winter weather. Seadrift's needle coke is used in the manufacture of graphite electrodes, the price of which is subject to rigorous industry competition thus restricting Seadrift's ability to pass through raw material price increases.

We engage in acquisitions and may encounter unexpected difficulties identifying, pricing or integrating these businesses.

We have pursued growth, in part, through strategic acquisitions that are intended to complement or expand our businesses, and expect to continue to do so in the future. The success of this strategy will depend on our ability to identify, price, finance and complete these transactions. Success will also depend on our ability to integrate the businesses acquired in

these transactions. We may encounter unexpected difficulties in completing and integrating acquisitions with our existing operations, and in managing strategic investments. Furthermore, we may not realize the degree, or timing, of benefits we anticipated when we first entered into a transaction. Any of the foregoing could adversely affect our financial position, liquidity and results of operations.

We have significant goodwill on our balance sheet that is sensitive to changes in the market which could result in impairment charges.

Our annual impairment test of goodwill was performed in the fourth quarter of 2012. The estimated fair values of our reporting units were based on discounted cash flow models derived from internal earnings forecasts and assumptions. The assumptions and estimates used in these valuations incorporated the current and expected economic environment. Our model was based on our internally developed forecast and based on these valuations, the fair value substantially exceeded our net asset value. In addition, to the quantitative analysis, we have qualitatively assessed our reporting units and we believe that the quantitative analysis supporting the fair value in excess of the carrying value is appropriate. However, a further significant deterioration in the global economic environment or in any of the input assumptions in our calculation could adversely affect the fair value of our reporting units and result in an impairment of some or all of the goodwill on the balance sheet. See Item 7 "Management's Discussion and Analysis of Financial Conditions and Results of Operations – Critical Accounting Policies" in our Annual Report to the SEC on Form 10-K for the year ended December 31, 2012 (the "2012 10-K") for further information regarding goodwill.

Our results of operations could deteriorate if our manufacturing operations were substantially disrupted for an extended period.

Our manufacturing operations are subject to disruption due to extreme weather conditions, floods, hurricanes and tropical storms and similar events, major industrial accidents, cybersecurity attacks, strikes and lockouts, adoption of new laws or regulations, changes in interpretations of existing laws or regulations or changes in governmental enforcement policies, civil disruption, riots, terrorist attacks, war, and other events. We cannot assure you that no such events will occur. If such an event occurs, it could have a material adverse effect on us.

We have non-dollar-denominated intercompany loans and have had in the past, and may in the future have, foreign currency financial instruments and interest rate swaps and caps. The related gains and losses have in the past been, and may in the future be, significant.

As part of our cash management, we have non-dollar denominated intercompany loans between our subsidiaries. These loans are deemed to be temporary and, as a result, remeasurement gains and losses on these loans are recorded as currency gains / losses in other income (expense), net, on the Consolidated Statements of Income.

Additionally, we have in the past entered into, and may in the future enter into, interest rate swaps and caps to attempt to manage interest rate expense. We have also in the past entered into, and may in the future enter into, foreign currency financial instruments to attempt to hedge global currency exposures. We may purchase or sell these financial instruments, and open and close hedges or other positions, at any time. Changes in currency exchange rates or interest rates have in the past resulted, and may in the future result, in significant gains or losses with respect thereto. These instruments are marked-to-market monthly and gains and losses thereon are recorded in Other Comprehensive Income in the Consolidated Balance Sheets.

There may be volatility in our results of operations between quarters.

Sales of our products fluctuate from quarter to quarter due to such factors as changes in economic conditions, changes in competitive conditions, scheduled plant shutdowns by customers, national vacation practices, changes in customer production schedules in response to seasonal changes in energy costs, weather conditions, strikes and work stoppages at customer plants and changes in customer order patterns including those in response to the announcement of price increases or price adjustments. We have experienced, and expect to continue to experience, volatility with respect to demand for and prices of our industrial material products, specifically graphite electrodes, both globally and regionally. We have also experienced volatility with respect to prices of raw materials and energy, and we expect to experience volatility in such prices in the future. Accordingly, results of operations for any quarter are not necessarily indicative of the results of operations for a full year.

The graphite and carbon industry is highly competitive. Our market share, net sales or net income could decline due to vigorous price and other competition.

Competition in the graphite and carbon products industry (other than, generally, with respect to new products) is based primarily on price, product differentiation and quality, delivery reliability, and customer service. Electrodes, in particular, are subject to rigorous price competition. In such a competitive market, changes in market conditions, including customer demand and technological development, could adversely affect our competitiveness, sales and/or profitability.

Competition with respect to new products is, and is expected to be, generally based primarily on product innovation, price, performance and cost effectiveness as well as customer service.

Competition could prevent implementation of price increases, require price reductions or require increased spending on research and development, marketing and sales that could adversely affect us.

We have significant deferred income tax assets in multiple jurisdictions, and we may not be able to realize any benefits from those assets.

At December 31, 2012 we had \$136.4 million of gross deferred income tax assets, of which \$26.3 million required a valuation allowance. In addition, we had \$135.5 million of gross deferred income tax liabilities. Our valuation allowance means that we do not believe that these assets are more likely than not to be realized. Until we determine that it is more likely than not that we will generate sufficient taxable income to realize our deferred income tax assets, income tax benefits in each current period will be fully reserved.

Our valuation allowance, which is predominantly in the U.S. tax jurisdiction, does not affect our ability and intent to utilize the deferred income tax assets as we generate sufficient future profitability. We are executing current strategies and developing future strategies, to improve sales, reduce costs and improve our capital structure in order to improve U.S. taxable income of the appropriate character to a level sufficient to fully realize these benefits in future years.

THE EXCHANGE OFFER

General

We are offering to exchange up to \$300,000,000 in aggregate principal amount of Exchange Notes for a like principal amount of Original Notes, properly tendered and not validly withdrawn before the expiration date. Unlike the Original Notes, the Exchange Notes will be registered under the Securities Act. We are making this exchange offer for all of the Original Notes. Your participation in this exchange offer is voluntary, and you should carefully consider whether to accept this offer.

On the date of this prospectus, \$300,000,000 in aggregate principal amount of Original Notes are outstanding. Our obligations to accept Original Notes for Exchange Notes pursuant to this exchange offer are limited by the conditions listed below under "—Conditions to the Exchange Offer." We currently expect that each of the conditions will be satisfied and that no waivers will be necessary.

Purpose of the Exchange Offer

In connection with the issuance and sale of the Original Notes on November 20, 2012, we entered into a registration rights agreement with the initial purchasers for the benefit of the holders of the Original Notes. Under the registration rights agreement, we agreed, among other things, to use our commercially reasonable efforts to file and to have declared effective an exchange offer registration statement under the Securities Act and to consummate an exchange offer. We are conducting this exchange offer to satisfy these obligations under the registration rights agreement. The Exchange Notes will be issued in a like principal amount and will be identical in all material respects to the Original Notes, except that the Exchange Notes will be registered under the Securities Act, will be issued without a restrictive legend, will bear different CUSIP numbers than the Original Notes and will not be entitled to the rights of the Original Notes under the registration rights agreement, including additional interest. Consequently, subject to certain exceptions, the Exchange Notes, unlike the Original Notes, may be resold by a holder without any restrictions on their transfer under the Securities Act, except as noted below in the case of a holder that is a broker-dealer. Holders of Original Notes who do not tender their Original Notes or whose Original Notes are tendered but not accepted will have to rely on an applicable exemption from the registration requirements under the Securities Act and applicable state securities laws in order to resell or otherwise transfer their Original Notes. The exchange offer is not being made to, nor will we accept tenders for exchange from, holders of Original Notes in any jurisdiction in which the exchange offer or the acceptance of tenders would not be in compliance with the securities or blue sky laws of such jurisdiction.

Resale of Exchange Notes

Based on existing interpretations of the Securities Act by the staff of the SEC set forth in several no-action letters to third parties, and subject to the immediately following sentence, we believe that the Exchange Notes issued pursuant to this exchange offer may be offered for resale, resold and transferred by the holders thereof without further compliance with the registration and prospectus delivery requirements of the Securities Act. However, any holder of Original Notes who is an affiliate of ours or who intends to participate in this exchange offer for the purpose of distributing the Exchange Notes, or any participating broker-dealer who purchased Original Notes from us or one of our affiliates to resell pursuant to Rule 144A or any other available exemption under the Securities Act:

Still not be able to rely on the interpretations of the staff of the SEC set forth in the above mentioned no action letters.

will not be able to rely on the interpretations of the staff of the SEC set forth in the above-mentioned no-action letters; will not be able to tender its Original Notes in this exchange offer; and

must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any sale or transfer of the Original Notes, unless such sale or transfer is made pursuant to an exemption from such requirements.

We do not intend to seek our own no-action letter, and there is no assurance that the staff of the SEC would make a similar determination with respect to the Exchange Notes as it has in such no-action letters to third parties. The information

described above concerning interpretations of and positions taken by the staff of the SEC is not intended to constitute legal advice, and holders should consult their own legal advisors with respect to these matters.

Each holder of Original Notes, other than certain specified holders, who wishes to exchange Original Notes for Exchange Notes pursuant to this exchange offer will be required to represent that:

it is not our affiliate (as defined in Rule 405 under the Securities Act) or, if it is our affiliate, that it will comply with the registration and prospectus delivery requirements of the Securities Act to the extent applicable to it;

if it is not a broker-dealer, that it is not engaged in (and does not intend to engage in) the distribution of the Exchange Notes;

the Exchange Notes to be received by it will be acquired in the ordinary course of its business; and at the time of the commencement and consummation of this exchange offer, it has no arrangement or understanding with any person to participate in the distribution (within the meaning of the Securities Act) of the Exchange Notes in violation of the provisions of the Securities Act.

In addition, in connection with resales of Exchange Notes, any broker-dealer who acquired Original Notes for its own account as a result of market-making activities or other trading activities must deliver a prospectus (or, to the extent permitted by law, make available a prospectus) meeting the requirements of the Securities Act. The staff of the SEC has taken the position that such broker-dealers may fulfill their prospectus delivery requirements with respect to the Exchange Notes (other than a resale of Exchange Notes acquired in exchange for Original Notes comprising an unsold allotment from the original sale of the Original Notes) with this prospectus. Under the registration rights agreement, we will be required to allow such broker-dealers to use this prospectus, for up to 180 days, subject to certain "black out" periods, following this exchange offer, in connection with the resale of Exchange Notes received in exchange for Original Notes acquired by such broker-dealers for their own account as a result of market-making or other trading activities. See "Plan of Distribution."

Terms of the Exchange Offer

Upon the terms and subject to the conditions set forth in this prospectus and in the letter of transmittal, we will accept for exchange any Original Notes validly tendered and not withdrawn before expiration of this exchange offer. The date of acceptance for exchange of the Original Notes and completion of this exchange offer is the exchange date, which will be as soon as practicable after the expiration date. The Original Notes may be tendered only in minimum denominations of \$2,000 and integral multiples of \$1,000. We will issue \$1,000 principal amount of Exchange Notes in exchange for each \$1,000 principal amount of Original Notes surrendered under this exchange offer. The Exchange Notes will be delivered on the earliest practicable date following the expiration date.

The form and terms of the Exchange Notes will be substantially identical to the form and terms of the related series of Original Notes, except the Exchange Notes:

- will be registered under the Securities Act;
- will not bear legends restricting their transfer;
- will bear different CUSIP numbers than the related series of Original Notes; and
- will not be entitled to the rights of holders of Original Notes under the registration rights agreement, including additional interest.

The Exchange Notes will evidence the same debt as the Original Notes. The Exchange Notes will be issued under and entitled to the benefits of the indenture, as described below, under which the Original Notes were issued such that the Exchange Notes and the Original Notes will be treated as a single series of senior debt securities under the indenture. The exchange offer for Original Notes is not conditioned upon any minimum aggregate principal amount of Original Notes being tendered for exchange. This prospectus and the accompanying letter of transmittal are being sent to all registered

holders of outstanding Original Notes. There will be no fixed record date for determining registered holders of Original Notes entitled to participate in this exchange offer.

We intend to conduct this exchange offer in accordance with the applicable requirements of the registration rights agreement, the Securities Act, the Exchange Act and the related rules and regulations of the SEC. Original Notes that are not exchanged in this exchange offer will:

remain outstanding;

continue to accrue interest; and

be entitled to the rights and benefits their holders have under the indenture relating to the Original Notes and Exchange Notes.

However, any Original Notes that are not exchanged will not be freely tradable because they will continue to be subject to transfer restrictions as unregistered securities. Holders of Original Notes do not have any appraisal or dissenters rights under the indenture in connection with this exchange offer. Except as specified in the registration rights agreement, we are not obligated to, nor do we currently anticipate that we will, register the Original Notes under the Securities Act. See "—Consequences of Failure to Exchange" below.

We will be deemed to have accepted for exchange validly tendered Original Notes when we have given oral (promptly confirmed in writing) or written notice of the acceptance to the exchange agent. The exchange agent will act as agent for the holders of Original Notes who surrender them in this exchange offer for the purposes of receiving Exchange Notes from us and delivering Exchange Notes to their holders. The exchange agent will make the exchange as promptly as practicable after the expiration date. We expressly reserve the right to amend or terminate either exchange offer and not to accept for exchange any Original Notes not previously accepted for exchange, upon the occurrence of any of the conditions specified below under "—Conditions to the Exchange Offer."

Holders who tender Original Notes in this exchange offer will not be required to pay brokerage commissions or fees or, subject to the instructions in the letter of transmittal, transfer taxes with respect to the exchange of Original Notes. We will pay all charges and expenses, other than applicable taxes described below, in connection with this exchange offer. It is important that you read "—Solicitation of Tenders; Fees and Expenses" and "—Transfer Taxes" below for more details regarding fees and expenses incurred in this exchange offer.

If any tendered Original Notes are not accepted for exchange for any reason, such Original Notes will be returned, without expense, to the tendering holder thereof as promptly as practicable after the expiration date.

Expiration Date; Extension; Termination; Amendment

The exchange offer for the Original Notes will expire at 5:00 p.m., New York City time, on [], 2013, unless we have extended the period of time that the exchange offer is open.

We reserve the right to extend the period of time that the exchange offer is open, and delay acceptance for exchange of the Original Notes, by giving oral (promptly confirmed in writing) or written notice to the exchange agent and by timely public announcement no later than 9:00 a.m., New York City time, on the next business day after the previously scheduled expiration date. During any extension, all the Original Notes previously tendered will remain subject to the exchange offer unless validly withdrawn.

We also reserve the right, in our sole discretion, subject to applicable law and the terms of the registration rights agreement, to:

terminate the exchange offer and not to accept for exchange any Original Notes not previously accepted for exchange upon the occurrence of any of the events specified below under "—Conditions to the Exchange Offer" that have not been waived by us; or

amend the terms of the exchange offer in any manner.

If any termination or amendment occurs, we will give oral (promptly confirmed in writing) or written notice to the exchange agent and will either make a public announcement or give oral or written notice to holders of Original Notes as promptly as practicable. Without limiting the manner in which we may choose to make a public announcement of any extension, amendment or termination of the exchange offer, we will not be obligated to publish, advertise or otherwise communicate any such public announcement, other than by making a timely press release.

Exchange Notes will only be issued after the exchange agent timely receives (i) a properly completed and duly executed letter of transmittal (or facsimile thereof or an agent's message (as hereinafter defined) in lieu thereof) and (ii) all other required documents. However, we reserve the absolute right to waive any defects or irregularities in the tender or conditions of this exchange offer.

Original Notes submitted for a greater principal amount than the tendering holder desires to exchange will be returned, without expense, to the tendering holder thereof as promptly as practicable after the expiration date.

Procedures For Tendering Original Notes

Valid Tender

Except as set forth below, in order for Original Notes to be validly tendered pursuant to this exchange offer, either (i) (a) a properly completed and duly executed letter of transmittal (or facsimile thereof) or an electronic message agreeing to be bound by the letter of transmittal properly transmitted through DTC's Automated Tender Offer Program ("ATOP") for a book-entry transfer, with any required signature guarantees and any other required documents, must be received by the exchange agent at the address or the facsimile number set forth under "—Exchange Agent" on or prior to the expiration date and (b) tendered Original Notes must be received by the exchange agent, or such Original Notes must be tendered pursuant to the procedures for book-entry transfer set forth below and a book-entry confirmation must be received by the exchange agent, in each case on or prior to the expiration date, or (ii) the guaranteed delivery procedures set forth below must be complied with. To receive confirmation of valid tender of Original Notes, a holder should contact the exchange agent at the telephone number listed under "—Exchange Agent."

If less than all of the Original Notes held by a holder are tendered, a tendering holder should fill in the amount of Original Notes being tendered in the appropriate box on the letter of transmittal. The entire amount of Original Notes delivered to the exchange agent will be deemed to have been tendered unless otherwise indicated.

If any letter of transmittal, endorsement, note power, power of attorney or any other document required by the letter of transmittal is signed by a trustee, executor, administrator, guardian, attorney-in fact, officer of a corporation or other person acting in a fiduciary or representative capacity, such person should so indicate when signing. Unless waived by us, evidence satisfactory to us of such person's authority to so act also must be submitted.

Any beneficial owner of Original Notes that are held by or registered in the name of a broker, dealer, commercial bank, trust company or other nominee is urged to contact such entity promptly if such beneficial holder wishes to participate in this exchange offer.

The method of delivering Original Notes, the letter of transmittal and all other required documents is at the option and sole risk of the tendering holder. Delivery will be deemed made only when actually received by the exchange agent. Instead of delivery by mail, it is recommended that holders use an overnight or hand delivery service. In all cases, sufficient time should be allowed to assure timely delivery and proper insurance should be obtained. No Original Note, letter of transmittal or other required document should be sent to us. Holders may request their respective brokers, dealers, commercial banks, trust companies or other nominees to effect these transactions for them. Book-Entry Transfer

The exchange agent has established an account with respect to the Original Notes at DTC for purposes of this exchange offer. The exchange agent and DTC have confirmed that any financial institution that is a participant in DTC may utilize DTC's ATOP procedures to tender Original Notes. Any participant in DTC may make book-entry delivery of Original Notes by causing DTC to transfer the Original Notes into the exchange agent's account in accordance with DTC's ATOP procedures for transfer.

However, the exchange for the Original Notes so tendered will be made only after a book-entry confirmation of such book-entry transfer of Original Notes into the exchange agent's account and timely receipt by the exchange agent of an agent's message and any other documents required by the letter of transmittal. The term "agent's message" means a message, transmitted by DTC and received by the exchange agent and forming part of a book-entry confirmation, which states that DTC has received an express acknowledgment from a participant tendering Original Notes that are the subject of the book-entry confirmation that the participant has received and agrees to be bound by the terms of the letter of transmittal, and that we may enforce that agreement against the participant. Delivery of documents to DTC does not constitute delivery to the exchange agent.

Signature Guarantees

Certificates for Original Notes need not be endorsed and signature guarantees on a letter of transmittal or a notice of withdrawal, as the case may be, are unnecessary unless (i) a certificate for Original Notes is registered in a name other than that of the person surrendering the certificate or (ii) a registered holder completes the box entitled "Special Issuance Instructions" or "Special Delivery Instructions" in the letter of transmittal. In the case of (i) or (ii) above, such certificates for Original Notes must be duly endorsed or accompanied by a properly executed note power, with the endorsement or signature on the note power and on the letter of transmittal or the notice of withdrawal, as the case may be, guaranteed by a firm or other entity identified in Rule 17Ad-15 under the Exchange Act as an "eligible guarantor institution," including (as such terms are defined therein) (i) a bank, (ii) a broker, dealer, municipal securities broker or dealer or government securities broker or dealer, (iii) a credit union, (iv) a national securities exchange, registered securities association or clearing agency or (v) a savings association that is a participant in a Securities Transfer Association (each an "Eligible Institution"), unless an Original Note is surrendered for the account of an Eligible Institution. See Instruction 3 to the letter of transmittal.

Guaranteed Delivery

If a holder desires to tender Original Notes pursuant to this exchange offer and the certificates for such Original Notes are not immediately available or time will not permit all required documents to reach the exchange agent before the expiration date, or the procedures for book-entry transfer cannot be completed on a timely basis, such Original Notes may nevertheless be tendered, provided that all of the following guaranteed delivery procedures are complied with:

- (i) such tenders are made by or through an Eligible Institution;
- (ii) prior to the expiration date, the exchange agent receives from the Eligible Institution a properly completed and duly executed notice of guaranteed delivery, substantially in the form accompanying the letter of transmittal, or an electronic message through ATOP with respect to guaranteed delivery for book-entry transfers, setting forth the name and address of the holder of Original Notes and the amount of Original Notes tendered, stating that the tender is being made thereby and guaranteeing that within three New York Stock Exchange, Inc. trading days after the date of execution of the notice of guaranteed delivery, or transmission of such electronic message through ATOP for book-entry transfers, the certificates for all physically tendered Original Notes, in proper form for transfer, or a book-entry confirmation, as the case may be, together with a properly completed and duly executed letter of transmittal with any required signature guarantees, or a properly transmitted electronic message through ATOP in the case of book-entry transfers, and any other documents required by the letter of transmittal will be deposited by the Eligible Institution with the exchange agent; and
- (iii) the certificates (or book-entry confirmation) representing all tendered Original Notes, in proper form for transfer, together with a properly completed and duly executed letter of transmittal with any required signature guarantees, or a properly transmitted electronic message through ATOP in the case of book-entry transfers, and any other documents required by the letter of transmittal, are received by the exchange agent within three New York Stock Exchange, Inc. trading days after the date of execution of the notice of guaranteed delivery or transmission of such electronic message through ATOP with respect to guaranteed delivery for book-entry transfers.

Determination of Validity

We will determine in our sole discretion all questions as to the validity, form, eligibility, including time of receipt, acceptance and withdrawal of tendered Original Notes. Our determination will be final and binding. We reserve the absolute right to reject any Original Notes not properly tendered or any Original Notes the acceptance of which would, in the opinion of our counsel, be unlawful. We also reserve the right to waive any defects, irregularities or conditions

of tender as to

particular Original Notes. Our interpretation of the terms and conditions of this exchange offer, including the instructions in the letter of transmittal, will be final and binding on all parties.

Unless waived, any defects or irregularities in connection with tenders of Original Notes must be cured within the time that we determine. Although we intend to notify holders of defects or irregularities with respect to tenders of Original Notes, neither we, the exchange agent nor any other person will incur any liability for failure to give notification. Tenders of Original Notes will not be deemed made until those defects or irregularities have been cured or waived. Any Original Notes received by the exchange agent that are not properly tendered and as to which the defects or irregularities have not been cured or waived will be returned by the exchange agent without cost to the tendering holder, unless otherwise provided in the letter of transmittal, as soon as practicable after withdrawal, rejection of tender or termination of this exchange offer.

Prospectus Delivery Requirement

Each broker-dealer that receives Exchange Notes for its own account in exchange for Original Notes, where such Original Notes were acquired by such broker-dealer as a result of market-making activities or other trading activities, must acknowledge that it will deliver a prospectus in connection with any resale of such Exchange Notes. See "Plan of Distribution."

Withdrawal Rights

You may withdraw your tender of Original Notes at any time before 5:00 p.m., New York City time, on the expiration date. In order for a withdrawal to be effective on or prior to that time, a written or facsimile transmission of a notice of withdrawal, or a computer-generated notice of withdrawal transmitted by DTC on behalf of the holder in accordance with the standard operating procedures of DTC, must be received by the exchange agent at its address set forth under "—Exchange Agent."

Any notice of withdrawal must:

specify the name of the person that tendered the Original Notes to be withdrawn;

identify the Original Notes to be withdrawn, including the certificate number or numbers (if in certificated form) and principal amount of such Original Notes;

include a statement that the holder is withdrawing its election to have the Original Notes exchanged;

be signed by the holder in the same manner as the original signature on the letter of transmittal by which the Original Notes were tendered or as otherwise described above, including any required signature guarantees, or be accompanied by documents of transfer sufficient to have the trustee under the indenture register the transfer of the Original Notes into the name of the person withdrawing the tender; and

specify the name in which any of the Original Notes are to be registered, if different from that of the person that tendered the Original Notes.

The exchange agent will return the properly withdrawn Original Notes promptly following receipt of a notice of withdrawal. If Original Notes have been tendered pursuant to the procedure for book-entry transfer, any notice of withdrawal must specify the name and number of the account at DTC to be credited with the withdrawn Original Notes or otherwise comply with DTC's procedures.

Any Original Notes withdrawn will not have been validly tendered for exchange for purposes of this exchange offer. Any Original Notes that have been tendered for exchange but which are not exchanged for any reason will be returned to the holder without cost to the holder as soon as practicable after withdrawal, rejection of tender or termination of this exchange offer. In the case of Original Notes tendered by book-entry transfer into the exchange agent's account at DTC pursuant to its book-entry transfer procedures, the Original Notes will be credited to an account with DTC specified by the holder, as soon as practicable after withdrawal, rejection of tender or termination of this exchange offer. Properly withdrawn Original Notes may be retendered by following one of the procedures described under "—Procedures for Tendering Original Notes" above at any time on or before the expiration date.

Acceptance of Original Notes for Exchange; Delivery of Exchange Notes

Upon satisfaction or waiver of all of the conditions to the exchange offer, we will accept, promptly after the expiration date, all Original Notes validly tendered and will issue the Exchange Notes as promptly as practicable after the expiration date. Please refer to "—Conditions to the Exchange Offer" below. For purposes of this exchange offer, we will be deemed to have accepted validly tendered Original Notes for exchange when we give notice of acceptance to the exchange agent.

For each Original Note accepted for exchange, the holder of the Original Note will receive an Exchange Note having a principal amount at maturity equal to that of the surrendered Original Note. The Exchange Notes will be delivered on the earliest practicable date following the expiration date.

In all cases, delivery of Exchange Notes in exchange for Original Notes tendered and accepted for exchange pursuant to this exchange offer will be made only after timely receipt by the exchange agent of:

Original Notes or a book-entry confirmation of a book-entry transfer of Original Notes into the exchange agent's account at DTC;

a properly completed and duly executed letter of transmittal or an electronic message agreeing to be bound by the letter of transmittal properly transmitted through ATOP with any required signature guarantees; and any other documents required by the letter of transmittal.

Conditions to the Exchange Offer

We are required to accept for exchange, and to issue Exchange Notes in exchange for, any Original Notes duly tendered and not validly withdrawn pursuant to this exchange offer and in accordance with the terms of this prospectus and the accompanying letter of transmittal.

We will not be required to accept for exchange, or to issue Exchange Notes in exchange for, any Original Notes, and we may terminate the exchange offer as provided in this prospectus before accepting any Original Notes for exchange, if:

the exchange offer, or the making of any exchange by a holder of Original Notes, would violate applicable law or any applicable interpretation of the staff of the SEC; or

any action or proceeding has been instituted or threatened in any court or by or before any governmental agency with respect to the exchange offer that, in our judgment, would reasonably be expected to impair our ability to proceed with that exchange offer.

In addition, we will not be required to accept for exchange, or to issue Exchange Notes in exchange for, any Original Notes tendered by a holder, if:

such holder's Original Notes are not tendered in accordance with the terms of this exchange offer; or such holder of Original Notes exchanged in this exchange offer has not represented that all Exchange Notes to be received by it shall be acquired in the ordinary course of its business, that it is not an affiliate of ours within the meaning of Rule 405 of the Securities Act (or if it is such an affiliate that it will comply with the registration and prospectus delivery requirements of the Securities Act to the extent applicable to it) and that at the time of the commencement and consummation of this exchange offer it shall have no arrangement or understanding with any person to participate in any distribution (within the meaning of the Securities Act) of the Exchange Notes in violation of the provisions of the Securities Act and shall not have made such other representations as may be reasonably necessary under applicable SEC rules, regulations or interpretations to render available the use of the registration statement of which this prospectus is a part.

In addition, we will not be obligated to accept for exchange the Original Notes of any holder who has not made to us the representations described under "—Resale of Exchange Notes" above and "Plan of Distribution."

In addition, we will not accept for exchange any Original Notes tendered, and no Exchange Notes will be issued in exchange for those Original Notes, if at such time any stop order is threatened or in effect with respect to the registration statement of which this prospectus constitutes a part or the qualification of the indenture under the Trust Indenture Act of 1939. In any of those events we are required to use reasonable best efforts to obtain the withdrawal of any stop order at the earliest possible time.

Exchange Agent

We have appointed U.S. Bank National Association, as the exchange agent for this exchange offer. You should direct questions and requests for assistance, in each case, with respect to exchange offer procedures, requests for additional copies of this prospectus or of the letter of transmittal, requests for the notice of guaranteed delivery with respect to the exchange of Original Notes as well as all executed letters of transmittal, to the exchange agent at the address listed below:

U.S. Bank National Association Corporate Trust Services 1350 Euclid Avenue CN OH RN11 Cleveland, OH 44115

Attention: Holly Pattison, Vice President

The Exchange Agent's telephone number is (800) 934-6802. The Exchange Agent's facsimile number is (651) 466-7372.

Delivery to an address other than as listed above, or transmissions to a facsimile number other than as listed above, will not constitute a valid delivery.

U.S. Bank National Association, is the trustee under the indenture governing the Original Notes and the Exchange Notes.

Solicitation of Tenders; Fees and Expenses

We will pay the expenses of soliciting tenders. The principal solicitation is being made by electronic delivery of the exchange materials or, if requested, by mail; however, additional solicitations may be made by facsimile, telephone or in person by officers and employees of ours and of our affiliates.

We have not retained any dealer manager in connection with this exchange offer and will not make any payments to brokers, dealers or others soliciting acceptances of this exchange offer. However, we will pay the exchange agent reasonable and customary fees for its services and will reimburse it for its reasonable out-of-pocket expenses in connection with this exchange offer.

We will pay the estimated cash expenses to be incurred in connection with this exchange offer, including the following:

fees and expenses of the exchange agent and the trustee;

SEC registration fees;

accounting and legal fees; and

printing and mailing expenses.

Transfer Taxes

We will pay all transfer taxes, if any, applicable to the exchange of Original Notes under this exchange offer. The tendering holder, however, will be required to pay any transfer taxes, whether imposed on the registered holder or any other person, if:

certificates representing Original Notes for principal amounts not tendered or accepted for exchange are to be delivered to, or are to be issued in the name of, any person other than the registered holder of Original Notes tendered; Exchange Notes are to be delivered to, or issued in the name of, any person other than the registered holder of the Original Notes;

tendered Original Notes are registered in the name of any person other than the person signing the letter of transmittal; or

n transfer tax is imposed for any reason other than the exchange of Original Notes under this exchange offer. If satisfactory evidence of payment of such transfer taxes is not submitted with the letter of transmittal, the amount of any transfer taxes will be billed to the tendering holder.

Accounting Treatment

The Exchange Notes will be recorded at the same carrying value as the Original Notes as reflected in our accounting records on the date of the exchange. Accordingly, we will recognize no gain or loss upon completion of the exchange offer. The costs of the exchange offer will be immediately expensed or amortized over the term of the Exchange Notes as appropriate under GAAP.

Consequences of Failure to Exchange

If you do not exchange your Original Notes for Exchange Notes pursuant to this exchange offer, you will continue to be subject to the restrictions on transfer of the Original Notes as described in the legend on the Original Notes. In general, the Original Notes may be offered or sold only if registered under the Securities Act, except pursuant to an exemption from, or in a transaction not subject to, the Securities Act and applicable state securities laws. Your participation in this exchange offer is voluntary, and you should carefully consider whether to participate. We wrom you to consult your financial and tox advisors in making a decision whether or not to tender your Original Notes.

urge you to consult your financial and tax advisors in making a decision whether or not to tender your Original Notes. Please refer to the section in this prospectus entitled "Certain U.S. Federal Income Tax Considerations."

As a result of the making of, and upon acceptance for exchange of all validly tendered Original Notes pursuant to the terms of, this exchange offer, we will have fulfilled a covenant contained in the registration rights agreement. If you do not tender your Original Notes in this exchange offer, you will be entitled to all of the rights and limitations applicable to the Original Notes under the indenture, except for any rights under the registration rights agreement that by their terms end or cease to have further effectiveness as a result of the making of this exchange offer, including the right to require us to register your Original Notes. To the extent that Original Notes of a series are tendered and accepted in this exchange offer, the trading market for untendered, or tendered but unaccepted, Original Notes could be adversely affected. Please refer to the section in this prospectus entitled "Risk Factors—Risk Factors Relating to this Exchange Offer and the Exchange Notes—If you do not properly tender your Original Notes for Exchange Notes, you will continue to hold unregistered notes that are subject to transfer restrictions."

We may in the future seek to acquire untendered Original Notes in open market or privately negotiated transactions through subsequent exchange offers or otherwise. However, we have no present plans to acquire any Original Notes that are not tendered in this exchange offer or to file a registration statement to permit resales of any untendered Original Notes.

Holders of each series of Original Notes that remain outstanding after consummation of this exchange offer will vote together with any issued Exchange Notes of the related series as a single series for purposes of determining whether holders of the requisite percentage thereof have taken certain actions or exercised certain rights under the indenture. RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratios of consolidated earnings to fixed charges for the periods presented on a consolidated historical basis. For purposes of calculating the ratio of earnings to fixed charges, earnings consist of pre-tax income before adjustment for income or loss from equity investees, plus fixed charges. Fixed charges consist of interest

expense and the interest portion of rental expense (estimated to equal 1/3 of such expense, which is considered a reasonable approximation of the interest factor).

Year ended December 31,

						Three
	2008	2009	2010	2011	2012	Months ended
						March 31, 2013
Ratio of earnings to fixed charges	14.6x	15.6x	27.8x	8.5x	6.5x	1.7x

USE OF PROCEEDS

We will not receive any cash proceeds from the issuance of the Exchange Notes. In consideration for issuing the Exchange Notes, we will receive a like principal amount of Original Notes. The Original Notes surrendered in exchange for the Exchange Notes will be retired and canceled and cannot be reissued. Accordingly, issuance of the Exchange Notes will not result in any change in our capitalization.

SUMMARY CONSOLIDATED HISTORICAL FINANCIAL DATA

The following table sets forth our summary consolidated financial and other data. We derived the summary historical statements of operations, balance sheet data, cash flows and other financial data as of and for each of the years ended December 31, 2008, 2009, 2010, 2011 and 2012 from our audited consolidated financial statements included in this prospectus or filed with the SEC. We derived the historical statements of operations and cash flows and other financial data for the three months ended March 31, 2013 and the balance sheet data as of March 31, 2013 from our unaudited consolidated financial statements included elsewhere in this prospectus.

Our unaudited financial statements have been prepared on the same basis as our audited financial statements and, in our opinion, reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of this data in all material respects. The results for any interim period are not necessarily indicative of the results that may be expected for a full year.

You should read the following selected financial data in conjunction with our historical financial statements and the related notes and with, or incorporated by reference into, "Management's Discussion and Analysis of Financial Condition and Results of Operations," which are included elsewhere in this prospectus.

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	Year Ended December 31,				Three Months Ended March 31,		
	2008 (Dollars in th	2009 nousands exc	2010 cept per share o	2011 lata)	2012	2012	2013
Statement of	(Donars in a	iousunus, exc	sopt per snare c	iuu)			
Operations Data: Net sales Income from	\$1,190,238	\$659,044	\$1,006,993	\$1,320,184	\$1,248,264	\$240,938	\$253,727
continuing operations (a) Basic earnings per common share:	184,157	15,708	174,660	153,184	117,641	17,529	4,210
Net income per share Weighted average	\$1.65	\$0.13	\$1.42	\$1.06	\$0.85	\$0.12	\$0.03
common shares outstanding (in thousands)	111,447	119,707	122,621	145,156	138,552	143,795	134,646
Diluted earnings per common share:	r						
Net income per share Weighted average	\$1.60	\$0.13	\$1.41	\$1.05	\$0.84	\$0.12	\$0.03
common shares outstanding (in thousands)	119,039	120,733	123,453	146,402	139,700	144,499	134,833
Balance sheet data (at period end):							
Total assets	\$943,129	\$892,608	\$1,913,183	\$2,168,366	\$2,297,915	\$2,239,701	\$2,262,148
Other long-term obligations (b)	118,272	108,267	114,728	131,300	125,005	127,113	121,587
Total long-term deb Other financial data	,	1,467	275,799	387,624	535,709	443,187	551,886
Net cash (used in) provided by operating activities	\$248,636	\$170,329	\$144,922	\$76,597	\$101,400	\$(15,374)	\$17,999
Net cash used in investing activities Net cash (used in)	(209,858)	(60,110)	(321,552)	(161,966)	(119,962)	(27,748)	(10,975)
provided by financing activities	(80,215)	(72,875)	138,240	85,461	24,112	43,409	(12,934)

⁽a) Income by period includes (items listed are pre-tax in nature unless otherwise noted):

For the Year Ended December 31, 2008:

n \$6.8 million loss on extinguishment on the repurchase of Redeemed Senior Notes,

- a \$4.1 million gain on derecognition of our former convertible Senior Debentures ("Debentures"),
- a \$9.0 million expense for the Make-Whole provision in connection with the derecognition of the Debentures,
- a \$22.1 million expense for our incentive compensation program,
- a \$2.8 million benefit to our income tax provision for tax holidays, exemptions, and credits in various jurisdictions,
- a \$34.5 million write down of our investment in a non-consolidated affiliate and our \$1.7 million share of its losses, and
- a \$32.2 million loss for the MTM Adjustment for our pension and OPEB benefit plans.

For the Year Ended December 31, 2009:

- a \$52.8 million write down of our investment in a non-consolidated affiliate and our \$2.7 million share of its losses
- a \$4.3 million gain for the derecognition of our liability for Brazil excise tax,
- a \$1.0 million gain from the sale of our Caserta, Italy facility,
- a \$0.4 million loss on extinguishment on the repurchase of the remaining Redeemed Senior Notes outstanding,
- a \$5.1 million benefit to our income tax provision for tax holidays, exemptions, and credits in various jurisdictions,
- a \$22.8 million valuation allowance expense for deferred tax assets that might not be realized, and
- a \$1.7 million loss for the MTM Adjustment for our pension and OPEB benefit plans.

For the Year Ended December 31, 2010 (Seadrift and C/G are included in our Consolidated Financial Statements beginning as of December 1, 2010):

- a \$15.2 million expense for Seadrift and C/G acquisition-related costs,
- a \$4.9 million benefit from the equity in earnings of our then non-consolidated affiliate,
- a \$9.6 million gain from the acquisition of the remaining 81.1% equity interest in our previously non-consolidated affiliate,
- a \$16.8 million expense for our incentive compensation program,
- a \$4.8 million benefit to our income tax provision for tax holidays, exemptions, and credits in various jurisdictions,
- a \$30.3 million deferred tax asset valuation allowance release as a result of the 2010 acquisitions, and
- a \$7.4 million loss for the MTM Adjustment for our pension and OPEB benefit plans.

For the Year Ended December 31, 2011 (Micron Research Corporation and Fiber Materials, Inc. are included in our Consolidated Financial Statements beginning as of February 10, 2011 and November 1, 2011, respectively):

- a \$26.5 million income tax benefit primarily attributable to the release of valuation allowance for foreign tax credits carryforwards which are expected to be utilized in future years,
- a non-cash interest charge of \$10.0 million related to the amortization of the discount on the Senior Subordinated Notes,
- a \$23.0 million charge related to the amortization of acquired intangible assets,
- a \$9.0 million charge related to stock-based compensation during 2011, and
- a \$22.3 million loss for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates.

For the Year Ended December 31, 2012:

- a \$15.1 million charge related to our incentive compensation plans,
- a non-cash interest charge of \$10.7 million related to the amortization of the discount on the Senior Subordinated Notes.
- a \$22.3 million charge related to the amortization of acquired intangible assets,
- a \$9.6 million charge related to stock-based compensation during 2012, and
- a \$8.8 million loss for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates.
- (b) Represents pension and post-retirement benefits and related costs and miscellaneous other long-term obligations.

Quarterly Data:

The following quarterly selected consolidated financial data have been derived from the Consolidated Financial Statements for the periods indicated which have not been audited. The selected quarterly consolidated financial data set forth below should be read in conjunction with our historical financial statements and the related notes and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" which are included elsewhere in, or incorporated by reference into, this prospectus.

2011	First Quarter (Dollars in th	Second Quarter nousands, except	Third Quarter per share data)	Fourth Quarter
Net sales	\$ 306,137	\$ 320,231	\$ 345,832	\$ 347,984
Gross profit	72,935	75,159	92,744	83,708
Net income (a)	27,263	28,569	40,297	57,055

Basic earnings per common share	\$ 0.19	\$ 0.20	\$ 0.28	\$ 0.39
Diluted earnings per common share	\$ 0.19	\$ 0.20	\$ 0.28	\$ 0.39

2012	First Quarter (Dollars in thous	Second Quarter sands, except p	Third Quarter per share data)	Fourth Quarter
Net sales Gross profit Net income (b) Basic earnings per common share Diluted earnings per common share 2013	\$240,938 66,931 17,529 \$0.12 \$0.12		\$320,716 79,986 29,626 \$0.22 \$0.22 First Quarter (Dollars in thousa	*
Net sales Gross profit Net income (c) Basic earnings per common share Diluted earnings per common share			\$253,727 48,550 4,210 \$0.03 \$0.03	

(a) Net income by quarter for 2011 includes the following:

First Quarter:

A loss of \$0.6 million for currency losses due to the remeasurement of intercompany loans,

Income of \$0.7 million resulting from the collection of an acquired account receivable at an amount in excess of its estimated fair value at the acquisition date, and

Amortization of acquired intangibles totaling \$5.6 million.

Second Quarter:

- Amortization of deferred major maintenance and repair costs totaling \$0.4 million, and
- Amortization of acquired intangibles totaling \$5.6 million.

Third Ouarter:

- A loss of \$1.2 million for currency losses due to the remeasurement of intercompany loans,
- Amortization of deferred major maintenance and repair costs totaling \$1.4 million, and
- Amortization of acquired intangibles totaling \$5.7 million.

Fourth Quarter:

- Amortization of deferred major maintenance and repair costs totaling \$1.4 million,
- Amortization of acquired intangibles totaling \$5.7 million,
- A \$26.5 million income tax benefit primarily attributable to the release of valuation allowance for foreign tax credits carryforwards which are expected to be utilized in future years, and
- A loss of \$22.3 million for the MTM Adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates.

(b) Net income by quarter for 2012 includes the following:

First Quarter:

- Amortization of acquired intangibles totaling \$5.6 million,
- The roll off of hedge gains related to foreign currency and commodity derivatives of \$3.5 million, and

Other income of \$4.0 million of insurance reimbursement claims related to flood damages sustained at our Clarksburg, West Virginia facility in 2011.

Second Quarter:

A \$10.5 million income tax benefit due to the release of valuation allowance, and

Amortization of acquired intangibles totaling \$5.5 million.

Third Quarter:

Amortization of acquired intangibles totaling \$5.5 million, and

The roll off of hedge gains related to foreign currency and commodity derivatives of \$5.8 million.

Fourth Quarter:

A loss of \$8.8 million for the MTM adjustment for our pension and OPEB benefit plans, driven primarily by a decrease in the discount rate due to lower interest rates,

Amortization of acquired intangibles totaling \$5.5 million.

(c) Net income by quarter for 2013 includes the following:

First Quarter:

Amortization of acquired intangibles totaling \$5.2 million; and

The roll off of hedge gains related to foreign currency and commodity derivatives of \$2.1 million.

DESCRIPTION OF CERTAIN OTHER INDEBTEDNESS

Revolving Facility

On October 7, 2011, we successfully completed the refinancing of our principal Revolving Facility. Borrowers under the Revolving Facility are GrafTech Finance Inc. ("GrafTech Finance") and GrafTech Switzerland S.A. ("Swissco"), both wholly owned subsidiaries. On April 20, 2012, as permitted by Section 9.19 of the October 7, 2011 Revolving Facility, we entered into an Amended and Restated Credit Agreement pursuant to which GrafTech Luxembourg II S.à.r.l. ("Luxembourg Holdco") was added as a Borrower on August 28, 2012. After such date, the "Borrowers" under the Revolving Facility are GrafTech Finance, Luxembourg Holdco and Swissco (although after Luxembourg Holdco was designated as a Borrower on August 28, 2012, Swissco is no longer entitled to borrow Loans under the Revolving Facility but is entitled to request letters of credit thereunder only for its own use). On October 29, 2012 we further amended our credit agreement to permit issuance of the notes, among other things.

All borrowings under our Revolving Facility are guaranteed by GTI and its U.S. subsidiaries. The borrowings and these guarantees are secured, with certain exceptions, by first priority security interests in substantially all of GTI's assets and those of its U.S. subsidiaries, including the equity interests in our subsidiaries owned by us or any of our U.S. subsidiaries, except that no more than 65% of the capital stock or other equity interests in foreign subsidiaries held directly by our U.S. subsidiaries secure such obligations. GTI's foreign subsidiaries do not guarantee any of GTI's obligations or those of GTI's U.S. subsidiaries under the Revolving Facility.

In addition to the guarantees given by GTI's U.S. subsidiaries, the borrowings of Luxembourg Holdco, and any obligations of any foreign subsidiary (including Swissco), for example as the account party under a letter of credit, under the Revolving Facility are guaranteed by Luxembourg Holdco's direct parent, Luxembourg I S.à.r.l. ("Luxembourg Parent"), and by Swissco. Luxembourg Holdco also has guaranteed the obligations under the Revolving Facility of its direct and indirect subsidiaries, including Swissco. Each of Luxembourg Holdco and Luxembourg Parent have granted first priority security interests in all of their assets which principally consist of equity interests in their subsidiaries and intercompany indebtedness to secure their obligations under the Revolving Facility and their guarantees. Swissco has granted a first priority security interest in the equity interests in its direct subsidiaries, intercompany indebtedness owed to it and certain other personal property to secure its obligations under the Revolving Facility, including under its guarantee.

The interest rate applicable to the Revolving Facility is, at GrafTech's option, either LIBOR plus a margin ranging from 1.5% to 2.25% (depending on our total net leverage ratio and/or senior unsecured rating) or, in the case of dollar denominated loans, the alternate base rate plus a margin ranging from 0.50% to 1.25% (depending upon such ratio or rating). The alternate base rate is the highest of (i) the prime rate announced by JPMorgan Chase Bank, N.A., (ii) the federal fund effective rate plus one-half of 1.0% and (iii) the London interbank offering rate (as adjusted) for a one-month period plus 1.0%. GrafTech Finance, Luxembourg Holdco and Swissco pay a per annum fee ranging from 0.25% to 0.40% (depending on such ratio or rating) on the undrawn portion of the commitments under the Revolving Facility.

The Revolving Facility contains a number of significant covenants that, among other things, restrict GTI's and its subsidiaries' ability to incur additional debt, repay or refinance other debt including the notes or amend other debt instruments, create liens on or sell assets, make investments or engage in mergers or acquisitions, engage in sale-leaseback transactions, pay dividends or repurchase stock, engage in affiliate transactions or enter into agreements otherwise restrict GTI's subsidiaries from making distributions or paying dividends to a Borrower or any subsidiary of a Borrower. The Revolving Facility also restricts the repayment of indebtedness owed to GTI and dividends and distributions to GTI. Dividends and distributions are permitted to GTI in order to pay regularly scheduled payments of interest and principal and prepayment of principal if certain conditions are met so long as no default or event of default exists under the Credit Agreement.

The financial covenants require us to maintain a minimum cash interest coverage ratio of 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, subject to adjustment for certain events. As of March 31, 2013, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable.

On October 29, 2012, we amended the Revolving Facility to permit the issuance and guarantee of the notes, as well as to permit GTI to loan the proceeds of the notes to GrafTech Finance and Luxembourg Holdco so that they can repay

amounts outstanding under the Revolving Facility, and to permit those entities to repay the intercompany loans to us in order to fund payments on the notes and certain other indebtedness. In addition, we amended our Revolving Facility to permit

acquisitions (and related intercompany loans to fund such acquisitions) in the aggregate amount of \$400.0 million, in addition to those already permitted by the Revolving Facility and to increase the amount of debt we may incur to \$400.0 million under our general debt basket, to the extent we meet certain financial ratios.

Senior subordinated notes

On November 30, 2010, in connection with our acquisitions of Seadrift Coke L.P. and C/G Electrodes LLC, we issued the Senior Subordinated Notes with an aggregate face amount of \$200 million. Each Senior Subordinated Note will mature in 2015. For purposes of this discussion, unless otherwise specified, "GrafTech" or the "Company" refers only to GrafTech International Ltd. and not GrafTech International Ltd. together with its subsidiaries.

The Senior Subordinated Notes are non-interest bearing and are subordinated on a senior subordinated basis and are junior in right of payment to all senior debt of GrafTech and certain of its subsidiaries (including Seadrift and C/G). Senior debt includes: (i) indebtedness, obligations and guarantees under the Revolving Facility (including any amendments, supplements or modifications thereto or any indenture, credit facility, note, or other arrangement in replacement thereof) in an aggregate principal amount of up to \$390 million; (ii) indebtedness and obligations under foreign liquidity facilities in an aggregate principal amount of up to \$145 million; and (iii) other indebtedness for borrowed money (and related guarantees of subsidiaries) and indebtedness evidenced by notes, debentures, bonds or other similar instruments for the payment of which GrafTech or any of its subsidiaries is responsible or liable if, on the date of incurrence (or, if earlier, the date of entry into the agreement with respect to such indebtedness or guarantee) and after giving pro forma effect thereto, GrafTech's leverage ratio (its ratio of consolidated net debt for the most recent four consecutive fiscal quarters for which financial statements are publicly available to consolidated EBITDA for such period) would not exceed 4:00 to 1:00. If any indebtedness for borrowed money described in clause (iii) of the preceding sentence is incurred and after giving pro forma effect thereto GrafTech's leverage ratio would exceed 4:00 to 1:00, GrafTech and its subsidiaries will grant the holders of the Senior Subordinated Notes a security interest on a pari passu basis with any security interest granted to the holders of such indebtedness to the extent of such excess.

Upon any payment or distribution of the assets of the Company to creditors upon a partial or total liquidation or a partial or total dissolution in a bankruptcy or similar proceeding relating to the Company or its property, holders of senior debt are entitled to payment in full in cash of such senior debt (prior to the holders of the Senior Subordinated Notes receiving any payment). Additionally, until all senior debt is paid in full in cash, any payment or distribution to which the holders of the Senior Subordinated Notes would be entitled but for the subordination provisions, will be made to the senior debt holders (other than equity interests in the Company or debt securities of the Company that are subordinated to the senior debt, which holders of Senior Subordinated Notes may retain). If payment is made to a holder of a Senior Subordinated Note that should not have been made to them according to the subordination provisions in the Senior Subordinated Notes, then such holder shall hold such payment in trust for holders of senior debt and pay it over to them. Once all senior debt has been paid in full in cash and until the Senior Subordinated Notes are paid in full in cash, holders of Senior Subordinated Notes are subrogated to the rights of holders of senior debt to receive payments and distributions applicable to senior debt to the extent such payments otherwise payable to holders of the Senior Subordinated Notes would have been applied to the payment of senior debt.

The Senior Subordinated Notes also restrict the Company's ability to make payments on the Senior Subordinated Notes to the extent that any payment default under any senior debt has occurred, or any other default has occurred that accelerated such senior debt (unless, in either case, the applicable default or acceleration has been waived or rescinded or the applicable senior debt has been paid in full in cash).

During the continuance of any default under senior debt pursuant to which that senior debt can be accelerated without any further notice (other than a notice to effect such acceleration) or the expiration of applicable grace periods, commencing upon receipt by the Company of written notice of such default from a holder of any senior debt electing to effect a payment blockage period, the Company shall not pay the Senior Subordinated Notes. Such payment blockage period lasts for 179 days, but may be terminated prior to such date by written notice from the same holder delivering the initial notice if the applicable default is cured or no longer continuing or if the applicable senior debt has been paid in full in cash or otherwise discharged. Not more than one payment blockage period may exist in any consecutive 360-day period.

If there is a default under the Senior Subordinated Notes and payment of such notes is accelerated, the Company must notify holders of senior debt of such acceleration and will not pay the Senior Subordinated Notes until 5 days after the senior debt holders have received such notice.

GrafTech's significant U.S. subsidiaries ("Subsidiary Guarantors"), including Seadrift and C/G, have provided senior subordinated guarantees of the Senior Subordinated Notes, which are subordinated and secured to the same extent as GrafTech's obligations under the Senior Subordinated Notes.

GrafTech may redeem the Senior Subordinated Notes at any time, upon 30 days' notice, at 100% of the principal amount of the Senior Subordinated Notes.

The Senior Subordinated Notes may be accelerated upon the occurrence of certain events of default, and the Senior Subordinated Notes will be automatically accelerated upon an insolvency event of default with respect to GrafTech or any of the Subsidiary Guarantors. The holders of a majority in outstanding principal amount of the Senior Subordinated Notes may accelerate the Senior Subordinated Notes upon the occurrence of the following events of default: the failure of GrafTech or any of the Subsidiary Guarantors to comply with any term under the Senior Subordinated Notes for 30 days after written notice of default; the acceleration of senior debt of GrafTech, any significant subsidiary or any Subsidiary Guarantor in excess of \$50 million; or a change in control.

For purposes of the Senior Subordinated Notes, a change in control generally occurs on the date on which: any person or group becomes the beneficial owner of more than 35% of GrafTech's outstanding common stock or voting securities (not including securities held by its employee benefit plans or related trusts);

any person or group acquires the right to vote on any matter, by proxy or otherwise, with respect to more than 35% of GrafTech's outstanding common stock or voting securities (not including securities held by its employee benefit plans or related trusts);

GrafTech's stockholders approve a plan of dissolution or complete or substantially complete liquidation or its Board approves such a plan other than in connection with a reorganization, recapitalization or similar transaction following which all or a majority of the business of GrafTech and its subsidiaries (taken as a whole) are continued by GrafTech or any successor thereto;

any consummation of a merger or other business combination unless, following such business combination, the beneficial owners of the common stock and the voting securities of GrafTech prior to such business combination beneficially own more than 50% of the common equity and voting securities of the surviving entity in substantially the same proportions as prior to such business combination, no person or group (excluding its employee benefit plans or related trusts) beneficially owns more than 50% of the common equity or voting securities of the surviving entity and at least a majority of the members of the board of directors of the surviving entity were members of GrafTech's Board prior to such business combination; or

any consummation of a sale, lease or other transfer of all or substantially all of the assets of GrafTech, whether held directly or indirectly through one or more subsidiaries (excluding a grant of security interest, sale-leaseback or similar transaction in the ordinary course of business, or in connection with a credit facility or other financing, but including any foreclosure sale).

A change in control will not be deemed to have occurred for purposes of the Senior Subordinated Notes, however, to the extent that certain specified holders and their related parties initiate or participate in an event or circumstance prescribed by applicable standstill provisions, regardless of whether it would be permitted thereby.

The holders of a majority in outstanding principal amount of the Senior Subordinated Notes have the sole right to waive any default and any such waiver is binding on all holders. No holder of a Senior Subordinated Note may institute against GrafTech, or join with or assist any person in instituting against GrafTech, any bankruptcy or similar action.

DESCRIPTION OF THE NOTES

In this description of the notes, the terms "Company," "we," "us" and similar words refer only to GrafTech International, Ltd. and not to any of its subsidiaries. For purposes of this section, the term "notes" refers to the Original Notes and any Exchange Notes issued in exchange therefor. Certain other terms used in this description are defined under the subheading "—Definitions".

The Original Notes were issued and the Exchange Notes will be issued under an indenture (the "indenture") between us, the Subsidiary Guarantors party thereto and U.S. Bank National Association, as trustee. The terms of the notes include those stated in the indenture and those made part of the indenture by reference to the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act"). The following description is only a summary of the material provisions of the indenture, does not purport to be complete, and is qualified in its entirety by reference to the provisions of the indenture. We urge you to read the indenture because it, and not this description, defines your rights as holders of these notes. You may request copies of the indenture at our address as set forth under the heading "Where You Can Find More Information."

General

The notes:

are our senior unsecured obligations;

are guaranteed by each Subsidiary Guarantor on a senior unsecured basis;

will mature on November 15, 2020;

are subject to earlier redemption at our option as described under "—Optional redemption";

do not have the benefit of any sinking fund;

are not convertible into any other security;

are issued in denominations of \$2,000 and in larger denominations in integral multiples of \$1,000;

are represented by one or more registered notes in global form but in certain limited circumstances may be represented by notes in certificated form. See "Book-Entry System."

Interest on the notes:

accrues at the rate of 6.375% per annum;

accrues from the most recent interest payment date on which interest was paid;

•s payable in cash semi-annually in arrears on May 15 and November 15 of each year, commencing on May 15, 2013; is payable to the holders of record on the May 1 and November 1 immediately preceding the related interest payment date; and

is computed on the basis of a 360-day year comprised of twelve 30-day months.

If any interest payment date, redemption date, repurchase date or maturity date falls on a day that is not a business day, the required payment of principal or interest will be made on the next business day as if made on the date that payment was due, and no interest will accrue on that payment for the period from and after the interest payment date, redemption date, repurchase date or maturity date, as the case may be, to the date of the payment on the next business day.

Ranking

The notes are our senior unsecured indebtedness and rank equally with all of our other existing and future senior unsecured indebtedness of the Subsidiary Guarantors and rank equally with all of the other existing and future senior unsecured indebtedness of the Subsidiary Guarantors. The notes and the guarantees rank senior in right of payment to any future subordinated obligations of the Company and the Subsidiary Guarantors, respectively, and rank pari passu in right of payment with all existing and future senior indebtedness of the Company and the Subsidiary Guarantors, respectively. The notes and the guarantees effectively rank junior to any of our and the Subsidiary Guarantors' existing and future secured indebtedness (including all the indebtedness under the Credit Agreement) to the extent of the assets securing such indebtedness, and are structurally subordinated to any existing and future indebtedness, claims of holders of preferred stock and other liabilities of our Subsidiaries that are not guaranteeing the notes, including guarantees of indebtedness under the Credit Agreement by such of our Subsidiaries that are not Subsidiary Guarantors. The notes and the guarantees of the notes are "Senior Debt" under, and for purposes of, the Company's existing Senior Subordinated Notes.

All of our operations are conducted through our Subsidiaries. Some of our Subsidiaries are not guaranteeing the notes, and, as described below under "—Subsidiary Guarantees", Subsidiary Guarantors may be released under certain circumstances. In addition, our future Subsidiaries may not be required to guarantee the notes. Claims of creditors of such non-guarantor Subsidiaries, including trade creditors and creditors holding indebtedness or guarantees issued by such non-guarantor Subsidiaries, and claims of preferred stockholders of such non-guarantor Subsidiaries generally will have priority with respect to the assets and earnings of such non-guarantor Subsidiaries over the claims of our creditors, including holders of the notes. Accordingly, the notes will be effectively subordinated to creditors (including trade creditors) and preferred stockholders, if any, of such non-guarantor Subsidiaries.

The indenture does not limit the incurrence of indebtedness or issuance of preferred stock by our Subsidiaries. In addition, the notes will be structurally subordinated to all existing and future indebtedness and claims of holders of preferred stock and other liabilities (including guarantees of indebtedness under the Credit Agreement) of our Subsidiaries that are not Subsidiary Guarantors.

Additional issuances

We may issue additional notes, without limitation and without your consent; provided that at the time of such issuance, and after giving effect thereto, such additional notes would constitute Senior Debt under, and for purposes of, the Company's existing Senior Subordinated Notes if such Senior Subordinated Notes are then outstanding. If we issue additional notes under the indenture, they will have the same terms and conditions as the notes in all respects (except for the payment of interest accruing prior to the issue date of the additional notes) so that the additional notes may be consolidated and form a single series with the notes; provided, however, that any additional notes that are not fungible with the notes for U.S. federal income tax purposes will have a separate CUSIP or ISIN number so that they are distinguishable from the notes.

Optional redemption

On and after November 15, 2016, we may redeem the notes (which includes additional notes, if any), at our option, at any time in whole or from time to time in part, upon not less than 30 nor more than 60 days' notice, at the redemption prices (expressed in percentages of principal amount) listed below, plus accrued and unpaid interest on the notes, if any, to, but excluding, the applicable redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant interest payment date), if redeemed during the twelve-month period beginning on November 15 of the years indicated below.

Year	Percentage
2016	103.188%
2017	101.594%
2018 and thereafter.	100.000%

In addition, any time prior to November 15, 2015, we may, at our option, on one or more occasions, upon not less than 30 nor more than 60 days' notice, redeem the notes (which includes additional notes, if any) in an aggregate principal amount not to exceed 35% of the aggregate principal amount of the notes (which includes additional notes, if any) originally issued at a redemption price (expressed as a percentage of principal amount) of 106.375%, plus accrued and unpaid interest to, but excluding, the redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant interest payment date), with the net cash proceeds from one or more Qualified Equity Offerings; provided, however, that

at least 65% of such aggregate principal amount of notes (which includes additional notes, if any) remains (1) outstanding immediately after the occurrence of each such redemption (other than notes held, directly or indirectly, by the Company or its affiliates); and

(2) each such redemption occurs within 90 days after the date of the related Qualified Equity Offering. Prior to November 15, 2016, we may, upon not less than 30 nor more than 60 days' notice, at our option, redeem all or a portion of the notes at a redemption price equal to 100% of the principal amount of the notes plus the Applicable Premium as of, plus accrued and unpaid interest to, but excluding, the redemption date (subject to the right of holders of notes on the relevant record date to receive interest due on the relevant interest payment date).

"Applicable Premium" means, with respect to a note at any redemption date, the excess (if any) of (A) the present value at such redemption date of (1) the redemption price of such note on November 15, 2016 (such redemption price being described in the first paragraph in this "—Optional Redemption" section exclusive of any accrued interest) plus (2) all required remaining scheduled interest payments due on such note through November 15, 2016 (but excluding accrued and unpaid interest to, the redemption date), computed using a discount rate equal to the Adjusted Treasury Rate, over (B) the principal amount of such note on such redemption date.

"Adjusted Treasury Rate" means, with respect to any redemption date, (i) the yield, under the heading which represents the average for the immediately preceding week, appearing in the most recently published statistical release designated "H.15(519)" or any successor publication which is published weekly by the Board of Governors of the Federal Reserve System and which establishes yields on actively traded United States Treasury securities adjusted to constant maturity under the caption "Treasury Constant Maturities," for the maturity corresponding to the Comparable Treasury Issue (if no maturity is within three months before or after November 15, 2016, yields for the two published maturities most closely corresponding to the Comparable Treasury Issue shall be determined and the Adjusted Treasury Rate shall be interpolated or extrapolated from such yields on a straight line basis, rounding to the nearest month) or (ii) if such release (or any successor release) is not published during the week preceding the calculation date or does not contain such yields, the rate per year equal to the semi-annual equivalent yield to maturity of the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date, in each case calculated on the third business day immediately preceding the redemption date, plus 0.50%.

"Comparable Treasury Issue" means the United States Treasury security selected by the Quotation Agent as having a maturity comparable to the remaining term of the notes from the redemption date to November 15, 2016, that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of a maturity most nearly equal to such remaining term.

"Comparable Treasury Price" means, with respect to any redemption date, if clause (ii) of the Adjusted Treasury Rate is applicable, the average of three, or such lesser number as is obtained by the Independent Investment Banker, Reference Treasury Dealer Quotations for such redemption date.

"Independent Investment Banker" means an independent investment banking or commercial banking institution of national standing appointed by the Company.

"Quotation Agent" means the Reference Treasury Dealer selected jointly by the Independent Investment Banker and the Company.

"Reference Treasury Dealer" means each of J.P. Morgan Securities LLC and its successors and assigns and two other nationally recognized investment banking firms selected by the Company that are primary U.S. Government securities dealers.

"Reference Treasury Dealer Quotations" means, with respect to each Reference Treasury Dealer and any redemption date, the average, as determined by the Independent Investment Banker, of the bid and asked prices for the Comparable Treasury Issue, expressed in each case as a percentage of its principal amount, quoted in writing to the Trustee by such Reference Treasury Dealer as of 5:00 p.m., New York City time, on the third business day immediately preceding such redemption date.

Notices of and conditions to redemption

The notes called for redemption become due on the date fixed for redemption. Notices of redemption will be mailed by first-class mail at least 30 but not more than 60 days before the redemption date to each holder of notes to be redeemed at its registered address, except that redemption notices may be mailed more than 60 days prior to the redemption date if the notice is issued in connection with a defeasance of the notes or a satisfaction and discharge of the notes. The notice of redemption for the notes will state the amount to be redeemed. On and after the redemption date, interest will cease to accrue on any notes that are redeemed. Any inadvertent defect in the notice of redemption, including an inadvertent failure to give notice, to any holder whose note has been selected for redemption will not impair or affect the validity of the redemption of any other note redeemed in accordance with the provisions of the indenture. If less than all of the notes are redeemed at any time, the trustee will select notes on a pro rata basis or by any other method the trustee deems fair and appropriate. We will issue a new note in a principal amount equal to the unredeemed portion of the original note in the name of the holder upon cancelation of the original note.

Any redemption may, in the Company's discretion, be subject to the satisfaction of one or more conditions precedent. Change of control offer

If a Change of Control Repurchase Event occurs, unless the Company has exercised its right to redeem the notes, the Company will be required to make an offer to each holder of the notes to repurchase all or any part (in excess of \$2,000 and in larger denominations in integral multiples of \$1,000) of that holder's notes at a repurchase price in cash equal to 101% of the aggregate principal amount of the notes repurchased, plus any accrued and unpaid interest on the notes repurchased to, but excluding, the date of repurchase (subject to the right of holders of record on the relevant record date to receive interest on the relevant interest payment dates). Within 30 days following any Change of Control Repurchase Event or, at the option of the Company, prior to any Change of Control, but after the public announcement of the Change of Control, the Company will mail a notice to each holder, with a copy to the trustee, describing the transaction or transactions that constitute or may constitute the Change of Control Repurchase Event and offering to repurchase the notes on the payment date specified in the notice, which date will be no earlier than 30 days and no later than 60 days from the date such notice is mailed, and the instructions, as determined by us, consistent with the covenant described under this caption, that a holder must follow in order to have its notes repurchased. The notice shall, if mailed prior to the date of consummation of the Change of Control, state that the offer to repurchase is conditioned on a Change of Control Repurchase Event occurring on or prior to the payment date specified in the notice. The Company will comply with the requirements of Rule 14e-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any other securities laws and regulations to the extent those laws and regulations are applicable in connection with the repurchase of the notes as a result of a Change of Control Repurchase Event. To the extent that the provisions of any securities laws or regulations conflict with the Change of Control Repurchase Event provisions of the notes, the Company will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control Repurchase Event provisions of the notes by virtue of such conflict or compliance.

On the repurchase date following a Change of Control Repurchase Event, the Company will, to the extent lawful:

- (1) accept for payment all the notes or portions of the notes properly tendered (and not withdrawn) pursuant to its offer:
- (2) deposit with the paying agent an amount equal to the aggregate purchase price in respect of all the notes or portions of the notes properly tendered (and not withdrawn); and
- deliver or cause to be delivered to the trustee the notes properly accepted, together with an officers' certificate stating the aggregate principal amount of notes being repurchased by the Company.

The paying agent will promptly mail to each holder of notes properly tendered (and not withdrawn), the purchase price for the notes, and the trustee will promptly authenticate and mail (or cause to be transferred by book-entry) to

each holder a new note equal in principal amount to any unpurchased portion of any notes surrendered.

The Company will not be required to make an offer to repurchase the notes upon a Change of Control Repurchase Event if a third party makes such an offer in the manner, at the times and otherwise in compliance with the requirements for an offer made by the Company and such third party purchases all notes properly tendered (and not withdrawn).

The Change of Control Repurchase Event feature of the notes may in certain circumstances make more difficult or discourage a sale or takeover of the Company and, thus, the removal of incumbent management. The Change of Control Repurchase Event feature is a result of negotiations between the Company and the initial purchasers. The Company has no present intention to engage in a transaction involving a Change of Control, although it is possible that the Company could decide to do so at any time in the future. As contemplated by the definition of Change of Control, the Company could enter into certain transactions, including acquisitions, refinancings or other recapitalizations, that would not constitute a Change of Control under the indenture, but that could increase the amount of indebtedness outstanding at such time or otherwise affect the capital structure of the Company or credit ratings of the notes, Restrictions on the ability of the Company to incur Liens (as defined below) and enter into sale and leaseback transactions are contained in the covenants as described under the caption "—Covenants— Limitation on liens" and "—Covenants—Limitation on sale and leaseback transactions." Except for the limitations contained in such covenants and the covenant relating to repurchases upon the occurrence of a Change of Control Repurchase Event, the indenture will not contain any covenants or provisions that may afford holders of the notes protection in the event of a highly leveraged transaction. In addition, holders of the notes may not be entitled to require the Company to repurchase the notes in certain circumstances involving a significant change in the composition of the Company's board of directors, including in connection with a proxy contest, where the Company's board of directors does not endorse a dissident slate of directors but approves them for purposes of the indenture.

Under certain circumstances, the Credit Agreement may prohibit us from repurchasing any notes. In addition, each of the Credit Agreement and the Senior Subordinated Notes provides that the occurrence of certain change of control events (including a Change of Control as defined in each respective document) with respect to the Company would constitute a default thereunder. Future indebtedness that we may incur may include similar prohibitions or default provisions, or both. If a Change of Control occurs at a time when we are prohibited from purchasing the notes, we may seek the consent of our lenders to purchase the notes or may attempt to refinance the indebtedness that contain such prohibitions or default provisions. If we do not obtain such consent or repay such indebtedness, we will continue to be restricted from purchasing the notes. In such case, our failure to offer to purchase notes would constitute a default under the indenture, which would, in turn, constitute a default under one or more of the Credit Agreement, the Senior Subordinated Notes and such future indebtedness.

Future indebtedness that we may incur may require the repurchase of such indebtedness upon certain change of control events or such change of control events could constitute a default under the documentation governing such indebtedness. The definition of a change of control event under the Credit Agreement and the Senior Subordinated Notes is, and under such future indebtedness may be, different than the definition of a Change of Control Repurchase Event under the indenture. We may become obligated to repay or make an offer to repurchase other indebtedness, even though we are not required to make an offer to repurchase the notes.

The exercise by the holders of the notes of their right to require us to repurchase their notes could cause a default under the Credit Agreement, the Senior Subordinated Notes or future indebtedness that we may incur, even if the Change of Control itself does not, due to the financial effect of such repurchase on us.

Our ability to pay cash to the holders of notes following the occurrence of a Change of Control Repurchase Event may be limited by our then existing financial resources. There can be no assurance that sufficient funds will be available when necessary to make any required repurchases.

The definition of "Change of Control" includes a disposition of all or substantially all of the assets of the Company to any Person. Although there is a limited body of case law interpreting the phrase "substantially all", there is no precise established definition of the phrase under applicable law. Accordingly, in certain circumstances there may be a degree of uncertainty as to whether a particular transaction would involve a disposition of "all or substantially all" of the assets of the Company. As a result, it may be unclear as to whether a Change of Control has occurred and whether a holder of notes may require the Company to make an offer to repurchase the notes as described above.

For purposes of the foregoing discussion of a repurchase at the option of holders, the following definitions are applicable:

"Change of Control" shall occur if: (1) any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act) is or becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act, except

that, for purposes of this clause (1), such person shall be deemed to have "beneficial ownership" of all shares that any such person has the right to acquire, whether such right is exercisable immediately or only after the passage of time or the giving of notice), directly or indirectly, of more than 35% of the then outstanding shares of common stock or more than 35% of the total voting power of the Voting Stock of the Company; (2) any "person" or "group" (as such terms are used in clause (1) of this definition) acquires by proxy or otherwise (whether such right is exercisable immediately or only after the passage of time or the giving of notice), the right to vote on any matter, of more than 35% of the then outstanding shares of common stock or more than 35% of the total voting power of the Voting Stock of the Company; (3) individuals who on the Issue Date constituted the Board of Directors (together with any new directors whose election by such Board of Directors or whose nomination for election by the stockholders of the Company was approved by a vote of 66²/3% of the directors of the Company then still in office who were either directors on the Issue Date or whose election or nomination for election was previously so approved) cease for any reason to constitute a majority of the Board of Directors then in office; (4) stockholders of the Company approve a plan of dissolution or complete (or substantially complete) liquidation of the Company or the Board of Directors approves such a plan other than in connection with a reorganization, recapitalization, redomestication, reincorporation, restructuring or similar transaction following which all or a majority of the businesses of the Company and its Subsidiaries (taken as a whole) shall be continued by the Company or any successor thereto; (5) the reorganization, restructuring, recapitalization, reincorporation, merger, redomestication or consolidation of the Company (a "Business Combination") unless, following such Business Combination, (A) all or substantially all of the persons who were the beneficial owners of the common stock and the Voting Stock of the Company outstanding immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the common equity securities or more than 50% of the combined voting power of the Voting Stock of the person resulting from such Business Combination outstanding after such Business Combination (including a person, which as a result of such Business Combination, owns the Company or all or substantially all of the assets of the Company) in substantially the same proportions as their ownership immediately prior to such Business Combination of the then outstanding common stock and the combined voting power of the then outstanding Voting Stock of the Company, respectively, (B) no "person" or "group" (as such terms are used in clause (1) of this definition) (excluding (x) any person resulting from such Business Combination and (y) any employee benefit plan (or related trust) of the Company or any person resulting from such Business Combination) beneficially owns more than 50% of the common equity securities or more than 50% of the combined voting power of the Voting Stock of the person resulting from such Business Combination outstanding after such Business Combination, except to the extent that such beneficial ownership existed prior to such Business Combination with respect to the then outstanding common stock and the then outstanding Voting Stock of the Company, and (C) at least a majority of the members of the board of directors (or similar governing body) of the person resulting from such Business Combination were members of the Board of Directors of the Company at the earliest of the time of the execution of the initial agreement providing for such Business Combination or at the time of the action of the Board of Directors of the Company approving such Business Combination or at the time of action of the stockholders of the Company approving such Business Combination; or (6) the sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all the assets of the Company (determined on a consolidated basis) to another person.

"Change of Control Repurchase Event" means the occurrence of both a Change of Control and a Ratings Event. "Investment Grade" means a rating of Baa3 or better by Moody's (or its equivalent under any successor Rating Categories of Moody's), a rating of BBB- or better by S&P (or its equivalent under any successor Rating Categories of S&P) and the equivalent Investment Grade credit rating from any additional Rating Agency or Rating Agencies selected by the Company.

"Moody's" means Moody's Investors Service Inc.

"Rating Agency" means (1) each of Moody's and S&P and (2) if either of Moody's or S&P ceases to rate the notes or fails to make a rating of the notes publicly available for reasons outside of the control of the Company, a "nationally recognized statistical rating organization" within the meaning of Section 3(a)(62) under the Exchange Act, selected by the Company (as certified by a resolution of the board of directors of the Company) as a replacement agency for Moody's or S&P, or both, as the case may be.

"Rating Category" means: (i) with respect to S&P, any of the following categories: BBB, BB, B, CCC, CC, C and D (or equivalent successor categories); (ii) with respect to Moody's, any of the following categories: Baa, Ba, B, Caa, Ca, C and D (or equivalent successor categories); and (iii) the equivalent of any such category of S&P or Moody's used by another Rating Agency. In determining whether the rating of the notes has decreased by one or more gradations, gradations within Rating Categories (+ and - for S&P; 1, 2 and 3 for Moody's; or the equivalent gradations for another Rating Agency) shall be taken

into account (e.g., with respect to S&P, a decline in a rating from BB+ to BB, as well as from BB- to B+, will constitute a decrease of one gradation).

"Rating Date" means the date that is 60 days prior to the earlier of (i) a Change of Control or (ii) public notice of the occurrence of a Change of Control or of the intention by the Company to effect a Change of Control.

"Ratings Event" means the occurrence of the events described in (a) or (b) of this definition on, or within 60 days after the earlier of, (i) the occurrence of a Change of Control or (ii) public notice of the occurrence of a Change of Control or the intention by the Company to effect a Change of Control (which period shall be extended so long as the rating of the notes is under publicly announced consideration for a possible downgrade by any of the Rating Agencies): (a) if the notes are rated by both Rating Agencies on the Rating Date as Investment Grade, the rating of the notes shall be reduced so that the notes are rated below Investment Grade by both Rating Agencies, or (b) if the notes are rated below Investment Grade by at least one Rating Agency, the ratings of the notes by both Rating Agencies shall be decreased by one or more gradations (including gradations within Rating Categories, as well as between Rating Categories) and the notes are then rated below Investment Grade by both Rating Agencies.

"S&P" means Standard & Poor's, a division of The McGraw-Hill Companies, Inc.

"Voting Stock" of any specified "person" (as that term is used in Section 13(d)(3) of the Exchange Act) as of any date means the capital stock of such person that is at the time entitled to vote generally in the election of the board of directors or other governing body of such person.

Subsidiary Guarantees

The Subsidiary Guarantors jointly and severally guarantee, on a senior unsecured basis, our obligations under the notes. The obligations of each Subsidiary Guarantor under its Subsidiary Guarantee are designed to be limited as necessary to prevent that Subsidiary Guarantee from constituting a fraudulent conveyance under applicable law, and, therefore, such Subsidiary Guarantee is specifically limited to an amount that such Subsidiary Guarantor could guarantee without such Subsidiary Guarantee constituting a fraudulent conveyance. This limitation, however, may not be effective to prevent such Subsidiary Guarantee from constituting a fraudulent conveyance. If a Subsidiary Guarantee were rendered voidable, it could be subordinated by a court to all other indebtedness (including guarantees and other contingent liabilities) of the applicable Subsidiary Guarantor, and, depending on the amount of such indebtedness, a Subsidiary Guarantor's liability on its Subsidiary Guarantee could be reduced to zero. See "Risk Factors—Federal and state statutes could allow a court to void the notes or any of our subsidiaries' guarantees of the notes under fraudulent transfer laws and require noteholders to return payments received by us or the subsidiary guarantors to us or the subsidiary guarantors or to a fund for the benefit of their respective creditors or subordinate the notes or the guarantees to other claims of us or the subsidiary guarantors." As of the date hereof, the Subsidiary Guarantors are GrafTech Finance Inc., GrafTech Holdings Inc., GrafTech USA LLC, Seadrift Coke L.P., Fiber Materials Inc., GrafTech Global Enterprises Inc., GrafTech International Holdings Inc., GrafTech DE LLC, GrafTech Seadrift Holding Corp., GrafTech International Trading Inc., GrafTech Technology LLC, GrafTech NY Inc., Graphite Electrode Network LLC and Intermat.

Each Subsidiary Guarantor that makes a payment under its Subsidiary Guarantee will be entitled upon payment in full of all guaranteed obligations under the indenture to a contribution from each other Subsidiary Guarantor in an amount equal to such other Subsidiary Guarantor's pro rata portion of such payment based on the respective net assets of all the Subsidiary Guarantors at the time of such payment determined in accordance with GAAP.

Pursuant to the indenture, a Subsidiary Guarantor may consolidate with, merge with or into, or transfer all or substantially all its assets to any other Person to the extent described under "—Covenants—Merger, consolidation or sale of assets"; provided, however, that, in the case of the consolidation, merger or transfer of all or substantially all the assets of such Subsidiary Guarantor, if such other Person is not the Company or a Subsidiary Guarantor, such Subsidiary Guarantor's obligations under its Subsidiary Guarantee must be expressly assumed by such other Person, except that such assumption will not be required in the case of the consolidation or merger of a Subsidiary Guarantor or the sale or other transfer of Capital Stock of a Subsidiary Guarantor, following which such Subsidiary Guarantor is no longer, or the entity resulting from such consolidation or merger is not, a Domestic Subsidiary, or in the case of a sale or other transfer of all or substantially all of its assets to a person who is not following such sale or transfer, a Domestic Subsidiary. Upon any such sale or disposition, the obligor on the related Subsidiary Guarantee will be released from

its obligations thereunder.

The Subsidiary Guarantee of a Subsidiary Guarantor also will be released:

upon the unconditional release or discharge of all guarantees or indebtedness that would have required such

- (1) Subsidiary Guarantor to enter into a Guarantee Agreement pursuant to the covenant described under "—Covenants—Future Subsidiary Guarantors"; or
- (2) if we exercise our legal defeasance option or our covenant defeasance option as described under "— Defeasance" or if our obligations under the indenture are discharged in accordance with the terms of the indenture.

Covenants

Except as described under "-Limitation on liens" and "-Limitation on sale and leaseback transactions," neither the Company nor any of its Subsidiaries will be restricted by the indenture from:

incurring any indebtedness or other obligation;

paying dividends or making distributions on any Capital Stock; or

purchasing or redeeming any Capital Stock.

In addition, the Company is not required to maintain any financial ratios or specified levels of net worth or liquidity or to repurchase, redeem or modify the terms of any of the notes upon a change of control or other events involving us or any of our Subsidiaries which may adversely affect the creditworthiness of the notes, except to the limited extent described under "-Change of control offer." Among other things, the indenture does not contain covenants designed to afford holders of the notes any protections in the event of a highly leveraged or other transaction involving the Company that may adversely affect holders of the notes, except to the limited extent described under "—Change of control offer."

The indenture contains the following principal covenants:

Limitation on liens

The Company will not incur, and will not permit any of its Subsidiaries to incur, any Indebtedness secured by a mortgage, security interest, pledge, lien, charge or other similar encumbrance (collectively, "Liens") upon (a) any Principal Property of the Company or any Principal Property of a Subsidiary or (b) any shares of stock or other equity interests or Indebtedness of any Subsidiary that owns a Principal Property (whether such Principal Property, shares of stock or other equity interests or Indebtedness is now existing or owned or hereafter created or acquired), in each case, unless prior to or at the same time, the notes (together with (i) if required by the terms thereof existing on the Issue Date, the Senior Subordinated Notes and (ii) at the option of the Company, any other Indebtedness of the Company or any Subsidiary ranking equally in right of payment with the notes) are equally and ratably secured with or, at the option of the Company, prior to, such Indebtedness.

Any Lien created for the benefit of the holders of the notes pursuant to the preceding sentence shall provide by its terms that such Lien shall be automatically and unconditionally released and discharged upon the unconditional release and discharge of such Lien in respect of such other Indebtedness.

The foregoing restriction does not apply, with respect to any Person, to any of the following:

- deposits to secure public, statutory or regulatory obligations of such Person or deposits to secure surety, performance or appeal bonds to which such Person is a party, or deposits to secure the performance of bids, trade contracts (other than for Indebtedness) or leases (other than Capital Lease Obligations), or deposits as security for
- contested taxes or import duties or for the payment of rent, in each case Incurred in the ordinary course of business, and deposits to secure obligations in respect of Interest/Exchange Rate Protection Agreements or Commodity Rate Protection Agreements:
 - Liens imposed by law, such as carriers', warehousemen's, mechanics', materialmen's, repairmen's, service provider's
- Liens or other like Liens arising in the ordinary course of business, in each case for sums not yet overdue by more than 30 days or being contested in good faith by appropriate proceedings, or Liens arising out of judgments or awards against such Person with respect to which such Person shall then be proceeding with an appeal or other

proceedings for review, or Liens arising solely by virtue of any statutory or common law provision or standard form of account agreement relating to banker's Liens, rights of set-off or similar rights and remedies as to deposit accounts or other funds maintained with a creditor depository institution; provided, however, that (A) such deposit account is not a dedicated cash collateral account and is not subject to restrictions against access by the Company in excess of those set forth by regulations promulgated by the Federal Reserve Board and (B) such deposit account is not intended by the Company to provide collateral to The Depository Trust Company, or DTC;

- Liens for taxes, assessments or other governmental charges, levies or claims not yet delinquent, or which are for
- (3) less than \$7.5 million in the aggregate, or which are being contested in good faith by appropriate proceedings, or for property taxes that the Company or the affected Subsidiary has determined to abandon if the sole recourse for such tax, assessment, charge levy or claim is to such property;
 - minor survey exceptions, minor encumbrances, easements, trackage rights or reservations of, or rights of others for, licenses, special assessments, rights-of-way, sewers, electric lines, telegraph and telephone lines and other similar
- (4) purposes, or zoning or other restrictions as to the use of real property or Liens incurred in the ordinary course of business and which do not in the aggregate materially adversely affect the value of the relevant properties or materially impair their use in the operation of the business of such Person;
 - Liens securing indebtedness incurred to finance the construction, purchase or lease of, or repairs, improvements or additions to, property, plant or equipment of such Person; provided, however, that no such Lien may extend to any other property owned by such Person at the time such Lien is Incurred (other than assets and property affixed or
- (5) appurtenant thereto, including improvements and accessions), and the indebtedness (other than any interest thereon) secured by such Lien may not be incurred more than 270 days after the later of the acquisition, completion of construction, repair, improvement, addition or commencement of full operation of the property subject to such Lien:
- (6) Liens existing on the Issue Date:
 - Liens on property or shares of Capital Stock of another Person at the time such other Person becomes a subsidiary
- (7) of such Person; provided, however, that such Liens may not extend to any other property owned by such Person (other than assets and property affixed or appurtenant thereto), the Company or any other Subsidiary;
- (8) Liens securing industrial revenue or pollution control bonds issued for the benefit of the Company or any Subsidiary;
 - Liens on property at the time such Person or any of its subsidiaries acquires the property, including any acquisition
- by means of a merger or consolidation with or into such Person or a subsidiary of such Person; provided, however, that such Liens may not extend to any other property owned by such Person (other than assets and property affixed or appurtenant thereto, including improvements and accessions), the Company or any other Subsidiary;
- (10) Liens securing indebtedness or other obligations of a subsidiary of such Person owing to such Person or a wholly-owned subsidiary of such Person;
 - Liens to secure any Refinancing (or successive Refinancings) as a whole, or in part, of any indebtedness secured by any Lien referred to in clauses (5), (6), (7), (8), (9), (14), (20) or (24); provided, however, that: (A) such new Lien shall be limited to all or part of the same property and assets that secured or, under the written agreements pursuant to which the original Lien arose, could secure the original Lien (plus assets and property affixed or
- appurtenant thereto, including improvements and accessions to, such property or proceeds or distributions thereof); and (B) the indebtedness secured by such Lien at such time is not increased to any amount greater than the sum of (x) the outstanding principal amount or, if greater, committed amount of the indebtedness described in clauses (5), (6), (7), (8), (9), (14), (20) or (24) at the time the original Lien became a Lien permitted under the indenture and (y) an amount necessary to pay any fees and expenses, including premiums, related to such refinancing, refunding, extension, renewal or replacement; pledges and deposits made in the ordinary course of business in compliance with the Federal Employers Liability
- Act or any other worker's compensation, unemployment insurance and other social security laws or regulations or (12). in respect of health, welfare, disability, retirement or other employee benefits and deposits securing liability to insurance carriers under insurance or self-insurance arrangements in respect of such obligations;

- Liens securing reimbursement obligations in respect of trade-related letters of credit and covering the goods (or the documents of title in respect of such goods) financed by such letters of credit;
- (14) Liens consisting of interests of lessors under capital leases;
 Liens arising by operation of law pursuant to Section 107(1) of CERCLA or pursuant to analogous state or foreign law, for costs or damages which are not yet due (by virtue of a written demand for payment by a Governmental Authority) or which are being contested in good faith, or on property that the Company or a
- (15) Subsidiary has determined to abandon if the sole recourse for such costs or damages is to such property; provided, however, that the aggregate liability of the Company and its Subsidiaries, with respect to the matters giving rise to all such Liens shall not, in the reasonable estimate of the Company (in light of all attendant circumstances, including the likelihood of contribution by third parties), exceed \$40.0 million;
- Liens with respect to property and assets for any of the obligations securing cash management arrangements between or among the Company and the Subsidiaries, or any combination thereof, as contemplated by the Credit Agreement (including guarantees, letters of credit and bank guarantees in respect thereof permitted thereunder) entered into in the ordinary course of business;
- the sale of (and Liens that may arise relating to) (a) accounts receivable in connection with collection in the (17) ordinary course of business and Liens which might arise as a result of the sale or other disposition of accounts receivable or (b) accounts receivable factoring as and to the extent permitted by the Credit Agreement; licenses of intellectual property (a) in the ordinary course of business that do not constitute dispositions of
- (18) intellectual property or (b) that constitute dispositions of such intellectual property made in accordance with the covenant described following the caption "—Covenants—Merger, consolidation or sale of assets"; Liens on machinery, equipment and construction in progress of Subsidiaries organized under the laws of Brazil
- (19) securing obligations not constituting Indebtedness in an aggregate amount for all such obligations at any time not to exceed \$5.0 million;
 - Liens arising out of capitalized or operating lease transactions permitted to be incurred as described under "—Covenants—Limitation on sale and leaseback transactions", so long as such Liens (A) attach only to the property sold
- (20) in such transaction and any asset or property affixed or appurtenant thereto, including improvements and accessions and (B) do not interfere with the business of the Company or any of its Subsidiaries in any material respect;
- (21) any leases or subleases to other Persons of properties or assets owned or leased by the Company or a Subsidiary; Liens (a) consisting of rights of first refusal, put/sale options and other customary arrangements with respect to, and restrictions on, the sale, pledge or other transfer of Capital Stock in Persons in which not all the Capital Stock
- (22) is owned by the Company and the other Subsidiaries, in each case to the extent such Liens do not secure indebtedness and (b) on any cash earnest money deposits in connection with any letter of intent or purchase agreement in connection with a transaction permitted under the indenture governing the notes;
- Liens on assets subject to a sale and leaseback transaction securing Attributable Debt permitted to be incurred as described following the caption "—Covenants—Limitation on sale and leaseback transactions;" and
- (24)Liens on property and assets secured pursuant to, and in accordance with, the Credit Agreement. Notwithstanding the foregoing restrictions, the Company and its Subsidiaries are permitted to incur Indebtedness secured by a Lien which would otherwise be subject to the foregoing restrictions without equally and ratably securing the notes, if any; provided that, after giving effect to such Indebtedness, the aggregate amount of all Indebtedness secured by Liens (not including Liens permitted under clauses (1) through (22) above), together with all Attributable Debt outstanding pursuant to the second paragraph under "—Limitation on sale and leaseback transactions" does not exceed 15% of the Consolidated Net Tangible Assets of the Company calculated as of the date of the creation or incurrence of such Lien. The Company and its Subsidiaries also may, without equally and ratably securing the notes, create or incur Liens that extend, renew, substitute or

replace (including successive extensions, renewals, substitutions or replacements), in whole or in part, any Lien permitted pursuant to the preceding sentence.

Notwithstanding anything herein to the contrary, in no event shall the Company or any Subsidiary grant a security interest for the benefit of the holders of the Senior Subordinated Notes unless, prior to or at the same time, the notes are equally and ratably secured with the Senior Subordinated Notes; provided, however, that any security interest created for the benefit of the holders of the notes pursuant to this provision shall provide by its terms that such security interest shall be automatically and unconditionally released and discharged upon the unconditional release and discharge of the security interest for the benefit of the Senior Subordinated Notes.

Limitation on sale and leaseback transactions

The Company will not directly or indirectly, and will not permit any of its Subsidiaries that owns a Principal Property to, directly or indirectly, enter into any sale and leaseback transaction for the sale and leasing back of any Principal Property, whether now owned or hereafter acquired, unless:

- (1) such transaction was entered into prior to the Issue Date;
 - such transaction was for the sale and leasing back to the Company or one of its Subsidiaries of any property by the
- (2) Company or one of its Subsidiaries and the direct or indirect proceeds of the sale of such Principal Property to be leased are at least equal to their fair value, as determined by our board of directors;
- (3) the Company would be entitled to incur indebtedness secured by a Lien with respect to such sale and leaseback transaction without equally and ratably securing the notes pursuant to the last paragraph under "—Limitation on liens";
- (4) such transaction is for the sale of any property to, and leasing back to the Company or one of its Subsidiaries from, an industrial development authority or municipal equivalent thereof; or the Company applies an amount equal to the net proceeds from the sale of such property (which shall be at least equal to their fair value, as determined by our board of directors) to the purchase of other property or assets used or
- (5) useful in the business of the Company or its Subsidiaries or to the retirement of long-term indebtedness within 365 days before or after the effective date of any such sale and leaseback transaction; provided that, in lieu of applying such amount to the retirement of long-term indebtedness, the Company may deliver notes (including additional notes, if any) to the trustee for cancellation, such notes to be credited at the cost thereof to it.

Notwithstanding the restrictions set forth in the preceding paragraph, the Company and its Subsidiaries may enter into any sale and leaseback transaction which would otherwise be subject to the foregoing restrictions, if after giving effect thereto the aggregate amount of all Attributable Debt with respect to such transactions, together with all Indebtedness outstanding pursuant to the last paragraph under "—Limitation on liens," does not exceed 15% of the Consolidated Net Tangible Assets of the Company calculated as of the closing date of the sale and leaseback transaction.

Merger, consolidation or sale of assets

The Company will not, in a single transaction or through a series of related transactions, consolidate or merge with or into any other Person, or, directly or indirectly, sell or convey substantially all of its assets to another Person or group of affiliated Persons, except that the Company may consolidate or merge with, or sell or convey substantially all of its assets to another Person if (i) the Company is the continuing Person or the successor Person (if other than the Company) is organized and existing under the laws of the United States of America, any State thereof or the District of Columbia and such Person expressly assumes, by an indenture supplemental thereto in a form reasonably satisfactory to the trustee, all obligations of the Company under the indenture, including payment of the principal and interest on the notes, and the performance and observance of all of the covenants and conditions of the indenture to be performed by the Company and (ii) there is no default under the indenture. Upon such a succession, the Company will be relieved from any further obligations under the indenture. For purposes of this paragraph, "substantially all of its assets" means, at any date, a portion of the non-current assets reflected in the Company's consolidated balance sheet as of the end of the most recent quarterly period that represents at least 66% of the total reported value of such assets.

Each of the Subsidiary Guarantors will not, and the Company will not permit any Subsidiary Guarantor to, in a single transaction or through a series of related transactions, consolidate or merge with or into, or directly or indirectly sell or convey substantially all of its assets to another Person or group of affiliated Persons, except (a) in the case of a Subsidiary Guarantor that has been disposed of in its entirety to another Person (other than to the Company or an affiliate of the Company), whether through a merger, consolidation or sale of Capital Stock or assets (in which case such Subsidiary Guarantor will be relieved from any further obligations under the indenture or a Guarantee Agreement) or (b) where (i) a Subsidiary Guarantor that is the continuing Person or the successor Person (if other than the Subsidiary Guarantor) is organized and existing under the laws of the United States of America, any State thereof or the District of Columbia and such Person expressly assumes, by a Guarantee Agreement in a form reasonably satisfactory to the trustee, all obligations of such Subsidiary Guarantor, if any, under the indenture, and (ii) there is no default under the indenture

Future subsidiary guarantors

The Company will not cause or permit (a) any of its Subsidiaries (other than a Foreign Subsidiary), directly or indirectly, to guarantee any Indebtedness of the Company or any other Subsidiary or (b) any Foreign Subsidiary, directly or indirectly, to guarantee any Indebtedness of the Company or any Subsidiary Guarantor unless such Subsidiary is a Subsidiary Guarantor or contemporaneously executes and delivers to the trustee a Guarantee Agreement pursuant to which such Subsidiary will guarantee payment of the notes on the same terms and conditions as those set forth in the indenture and applicable to the other Subsidiary Guarantors and delivers to the trustee an Opinion of Counsel (which may contain customary exceptions) that such Guarantee Agreement has been duly authorized, executed and delivered by such Subsidiary and constitutes a legal, valid, binding and enforceable obligation of such Subsidiary. For the avoidance of doubt, any Subsidiary of the Company that guarantees the Senior Subordinated Notes will be a Subsidiary Guarantor and will guarantee payment of the notes on the terms and conditions set forth in the indenture.

SEC reports

Whether or not the Company is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, the Company will file with the SEC subject to the next sentence and provide the trustee and noteholders with such annual and other reports as are specified in Sections 13 and 15(d) of the Exchange Act and applicable to a U.S. corporation subject to such Sections, such reports to be so filed and provided at the times specified for the filings of such reports under such Sections and containing all the information, audit reports and exhibits required for such reports. If, at any time, the Company is not subject to the periodic reporting requirements of the Exchange Act for any reason, the Company will nevertheless continue filing the reports specified in the preceding sentence with the SEC within the time periods within which they would be required to be filed unless the SEC will not accept such a filing. The Company agrees that it will not take any action for the purpose of causing the SEC not to accept such filings. If, notwithstanding the foregoing, the SEC will not accept such filings for any reason, the Company will post the reports specified in the preceding sentence on its website within such time periods. For purposes of this paragraph, filing of reports on the website of the SEC or the Company's website shall be deemed to satisfy the delivery requirements with respect to the trustee and noteholders.

In addition, at any time when the Company is not subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act and the notes are not freely tradable under the U.S. Securities Act of 1933, as amended (the "Securities Act"), the Company will furnish to the holders of the notes and to prospective investors, upon the requests of such holders, any information required to be delivered pursuant to Rule 144A(d) under the Securities Act.

Events of default

Each of the following is an Event of Default:

- (1) a default in paying interest on the notes when due, and such default continues for 30 days;
- (2) a default in paying principal of or premium, if any, on any of the notes when due at its maturity, upon optional redemption, upon required purchase, upon declaration of acceleration or otherwise;
- (3) the failure by the Company to comply with its obligations under "—Covenants—Merger, consolidation or sale of assets";

- (4) the failure by the Company to repurchase notes tendered for repurchase following the occurrence of a Change of Control Repurchase Event in conformity with the covenant described under "—Change of control offer"; a default in the performance, or breach, of any other covenant or warranty in the indenture by the Company or any
- (5) Subsidiary Guarantor and such default continues for a period of 60 days after notice of such failure has been given to the Company as provided in the indenture;
 - Indebtedness of the Company, any Subsidiary Guarantor or any Significant Subsidiary is not paid within any
- (6) applicable grace period after final maturity or is accelerated by the holders thereof because of a default and the total amount of such Indebtedness unpaid or accelerated exceeds \$50.0 million (the "cross acceleration provision");
- (7) certain events of bankruptcy, insolvency, or reorganization occur (the "bankruptcy provision"); any judgment or decree for the payment of money in excess of \$50.0 million is entered against the Company, any
- (8) Subsidiary Guarantor or any Significant Subsidiary, remains outstanding for a period of 60 consecutive days following such judgment and is not discharged, waived or stayed (the "judgment default provision"); any Subsidiary Guarantee ceases to be in full force and effect (other than in accordance with the terms of such
- (9) Subsidiary Guarantee) or any Subsidiary Guarantor denies or disaffirms its obligations under its Subsidiary Guarantee; or
- (10) a default under the Senior Subordinated Notes.

A default under clause (5) will not constitute an Event of Default until the trustee or the holders of not less than 25% in principal amount of the outstanding notes notify the Company of the default and the Company does not cure such default within the time specified (not less than 60 days after such notice has been given to the Company) after receipt of such notice. Any default for the failure to deliver any report within the time periods prescribed in the covenant described under "—Covenants—SEC reports" or to deliver any notice or certificate pursuant to any other provision of the indenture shall be deemed to be cured upon the subsequent delivery of any such report, notice or certificate, even though such delivery is not within the prescribed time period specified.

If an Event of Default occurs and is continuing (other than an Event of Default described in clause (7) above), either the trustee or the holders of not less than 25% in principal amount of the outstanding notes may declare the principal of and accrued and unpaid interest on all the notes to be due and payable. Upon such a declaration, such principal and interest shall be due and payable immediately. If an Event of Default relating to certain events of bankruptcy, insolvency or reorganization of the Company occurs and is continuing, the principal of and interest on all the notes will ipso facto become and be immediately due and payable without any declaration or other act on the part of the trustee or any holders of the notes. Under certain circumstances, the holders of a majority in principal amount of the outstanding notes may rescind any such acceleration with respect to all of the notes and its consequences. Subject to the provisions of the indenture relating to the duties of the trustee, in case an Event of Default occurs and is continuing, the trustee will be under no obligation to exercise any of the rights or powers under the indenture at the request or direction of any of the holders of the notes unless such holders have offered to the trustee reasonable indemnity or security against any loss, liability or expense. If an Event of Default occurs and is continuing, the trustee may use any sums that it holds under the indenture for its own reasonable compensation and expenses incurred prior to paying any sums to the holders of notes.

Before any holder of notes may institute action for any remedy, except to enforce the right to receive payment of principal, premium (if any) or interest when due, the holders of not less than 25% in principal amount of the outstanding notes must request the trustee to take action.

Subject to certain restrictions, the holders of a majority in principal amount of the outstanding notes are given the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or of exercising any trust or power conferred on the trustee. The trustee, however, may refuse to follow any direction that conflicts with law or the

indenture or that the trustee determines is unduly prejudicial to the rights of any other holder of a note or that would involve the trustee in personal liability.

If a default occurs, is continuing and is known to the trustee, the trustee must mail to each holder of the notes notice of the default within 90 days after it occurs. Except in the case of a default in the payment of principal of or interest on any note, the trustee may withhold notice if and so long as a committee of its trust officers in good faith determines that withholding notice is not opposed to the interest of the holders of the notes. In addition, we are required to deliver to the trustee, within 120 days after the end of each fiscal year, a certificate indicating whether the signers thereof know of any default that occurred during the previous year. We are required to deliver to the trustee, within 30 days after the occurrence thereof, written notice of any event which would constitute certain defaults, their status and what action we are taking or propose to take in respect thereof.

Amendments and waivers

Subject to certain exceptions, the indenture may be amended with the consent of the holders of a majority in principal amount of the notes then outstanding (including consents obtained in connection with a tender offer or exchange offer for the notes) and any past default or compliance with any provisions may also be waived with the consent of the holders of a majority in principal amount of the notes then outstanding. However, without the consent of each holder of an outstanding note affected thereby, an amendment or waiver may not:

- change the fixed maturity of any notes or extend the time for payment of any installment of interest or premium on any notes, or reduce the principal amount of any notes, or reduce the rate of interest on any notes, or reduce the premium payable upon redemption of any notes, or reduce the amount of principal of an original issue discount
- (1) note that would be due and payable upon a declaration of acceleration of the maturity thereof, or change the currency in which the notes are payable or impair the right to institute suit for the enforcement of any payment after the maturity or the redemption date, if applicable, of any notes, or adversely affect any right of the holder of any notes to require the Company to repurchase or redeem that note;
- reduce the percentage in principal amount of outstanding notes, the consent of the holders of which is required for any waiver or amendment;
- modify the provisions of the indenture relating to the waiver of past defaults or the waiver provisions or make any change in the amendment provisions which requires each holder's consent;
- (4) make any change in the ranking or priority of any notes that would adversely affect the noteholders:
- (5) make any change in, or release other than in accordance with the indenture, any Subsidiary Guarantee that would adversely affect the noteholders; or
- (6) impair the right of any holder of notes to receive payment of principal of and interest on such holder's notes on or after the due dates therefor.

Notwithstanding the foregoing, without the consent of any holder of notes, the Company, the Subsidiary Guarantors and the trustee may amend the indenture:

- to evidence the succession of another corporation to the obligations of the Company or any Subsidiary Guarantor under the indenture, the notes or a Subsidiary Guarantee, as applicable;
 - to add to the covenants of the Company or any Subsidiary Guarantor further covenants for the benefit or protection
- (2) of the holders of notes or to surrender any right or power conferred upon the Company or any Subsidiary Guarantor;
- (3)to add any additional events of default with respect to the notes;
- to make any change that would provide additional rights or benefits to the holders of notes or does not adversely affect the rights of any holder of notes;

- (5) to comply with any requirement of the SEC in connection with the qualification of the indenture under the Trust Indenture Act;
 - to conform the text of the indenture to any provision of this "Description of the Notes" to the extent that such
- (6) provision in this "Description of the notes" was intended to be a verbatim recitation of a provision in the indenture, the notes or a Subsidiary Guarantee;
- (7) to secure the notes;
- (8) to evidence the appointment of a successor trustee and to add to or change provisions of the indenture necessary to provide for or facilitate the administration of the trusts under the indenture by more than one trustee; to make any amendment to the provisions of the indenture relating to the transfer and legending of the notes;
- (9) provided, however, that (a) compliance with the indenture as so amended would not result in notes being transferred in violation of the Securities Act or any other applicable securities laws and (b) such amendment does not materially and adversely affect the rights of holders to transfer notes;
- (10) to add guarantees with respect to the notes, including any Subsidiary Guarantee;
 - to cure any ambiguity or omission, to correct or supplement any provision of the indenture which may be
- (11)defective or inconsistent with another provision of the indenture or to make other amendments that do not adversely affect the interests of the holders of notes; or
- to provide for uncertificated notes in addition to or in place of certificated notes (provided that the uncertificated (12) notes are issued in registered form for purposes of Section 163(f) of the Code, or in a manner such that the uncertificated notes are described in Section 163(f)(2)(B) of the Code).

The consent of the holders of notes is not necessary under the indenture to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment. After an amendment under the indenture becomes effective, we are required to mail to holders of notes a notice briefly describing such amendment. However, the failure to give such notice to all holders of notes, or any defect therein, will not impair or affect the validity of the amendment.

Neither the Company nor any affiliate of the Company may, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any holder for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the indenture or the notes unless such consideration is offered to all holders and is paid to all holders that so consent, waive or agree to amend in the time frame set forth in solicitation documents relating to such consent, waiver or agreement.

Satisfaction and discharge

The indenture shall be satisfied and discharged when (1) the Company delivers to the trustee all notes then outstanding for cancellation or (2) all outstanding notes not delivered to the trustee for cancellation shall have become due and payable, are to become due and payable within one year or are to be called for redemption within one year and the Company shall irrevocably deposit with the trustee an amount sufficient to pay the principal of, and premium, if any, and interest to the date of maturity, or redemption (or to the date of deposit, in the case of notes that have become due and payable) on, all notes then outstanding, provided that in either case the Company shall have paid all other sums payable under the indenture.

Defeasance

At any time, we may terminate all our obligations under the notes, the Subsidiary Guarantees and the indenture ("legal defeasance"), except for certain obligations, including those respecting the defeasance trust and obligations (except for the obligations to register the transfer or exchange of notes, to replace temporary or mutilated, destroyed, lost or stolen notes, to maintain an office or agency in respect of the notes and to hold moneys for payment in trust).

In addition, at any time, we may terminate our obligations under "—Change of control offer" and under the covenants described under "—Covenants", the operation of the cross acceleration provision, the bankruptcy provisions with respect to Significant Subsidiaries and Subsidiary Guarantors and the judgment default provision described under "—Events of default" ("covenant defeasance").

We may exercise our legal defeasance option notwithstanding our prior exercise of our covenant defeasance option. If we exercise our legal defeasance option, payment of the notes may not be accelerated because of an Event of Default with respect thereto. If we exercise our covenant defeasance option, payment of the notes may not be accelerated because of an Event of Default specified in clause (5), (6), (7) (with respect only to Significant Subsidiaries and Subsidiary Guarantors) or (8) described under "—Events of default." If we exercise our legal defeasance option or our covenant defeasance option, each Subsidiary Guarantor will be released from all of its obligations with respect to its Subsidiary Guarantee.

In order to exercise either of our defeasance options, we must irrevocably deposit in trust (the "defeasance trust") with the trustee money, and/or certain U.S. government obligations and/or certain state and local government obligations which through the payment of principal and interest in accordance with their terms will provide money, in an amount sufficient to pay the principal of, and premium, if any, and interest on the outstanding notes, on the scheduled due dates. In the case of defeasance, the holders of such notes are entitled to receive payments in respect of such notes solely from such trust. Such a trust may only be established if, among other things, the Company has delivered to the trustee an Opinion of Counsel to the effect that the holders of the notes affected thereby will not recognize income, gain or loss for Federal income tax purposes as a result of such legal defeasance or covenant defeasance and will be subject to Federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such legal defeasance or covenant defeasance had not occurred. Such Opinion of Counsel, in the case of legal defeasance, must refer to and be based upon a ruling of the Internal Revenue Service or a change in applicable Federal income tax law occurring after the date of the indenture.

Trustee

U.S. Bank National Association is the trustee, registrar, paying agent and transfer agent for the notes. U.S. Bank National Association, in each of its capacities, including without limitation as trustee, registrar, paying agent and transfer agent, assumes no responsibility for and makes no representations regarding the accuracy or completeness of the information concerning the exchange offer, the notes, us or our affiliates or any other party contained in this document or the related documents or for any failure by us or any other party to disclose events that may have occurred and may affect the significance or accuracy of such information.

Governing law

The indenture provides that it and the notes are governed by, and construed in accordance with, the laws of the State of New York.

Exchange and transfer

You may exchange or transfer the notes in accordance with the indenture. The notes will be issued in registered form and will be transferable only upon the surrender of the notes being transferred for registration of transfer. You will not be required to pay a service charge to exchange or transfer the notes, but you may be required to pay for any tax or other governmental charge associated with certain exchanges or transfers.

Paying agents

U.S. Bank National Association acts as our paying agent for the notes. We may choose to pay interest by mailing checks or making wire transfers. Regardless of who acts as the paying agent, all money paid by us to a paying agent that remains unclaimed at the end of two years after the amount is due to noteholders will be repaid to us. After that two-year period, you may look only to us for payment and not to the trustee, any other paying agent or anyone else. We may also arrange for additional payment offices, and may cancel or change these offices, including any use of the trustee's corporate trust office. We must notify you of changes in identities of the paying agents for the notes. Definitions

The indenture contains the following defined terms:

"Attributable Debt" means, with respect to any sale and leaseback transaction, at the time of determination, the lesser of (1) the sale price of the property so leased multiplied by a fraction, the numerator of which is the remaining portion of the base term of the lease included in such transaction and the denominator of which is the base term of such lease, and (2) the total obligation (discounted to the present value at the implicit interest factor, determined in accordance with GAAP, included in the rental payments) of the lessee for rental payments (other than amounts required to be paid on account of property taxes as well as maintenance, repairs, insurance, water rates and other items which do not constitute payments for property rights) during the remaining portion of the base term of the lease included in such transaction.

"Capital Lease Obligation" means an obligation that is required to be classified and accounted for as a capital lease for financial reporting purposes in accordance with GAAP. The amount of Indebtedness represented by such obligation shall be the capitalized amount of such obligation determined in accordance with GAAP; and the stated maturity thereof shall be the date of the last payment of rent or any other amount due under such lease prior to the first date upon which such lease may be terminated by the lessee without payment of a penalty. For purposes of the covenant described under "—Covenants—Limitation on liens", a Capital Lease Obligation will be deemed to be secured by a Lien on the property being leased.

"Capital Stock" of any Person means any and all shares, interests, rights to purchase, warrants, options, participations or other equivalents of or interests in (however designated) equity of such Person, including any preferred stock, any limited or general partnership interest and any limited liability company membership interest, but excluding any debt securities convertible into such equity.

"CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended. "Code" means the Internal Revenue Code of 1986, as amended.

"Commodity Rate Protection Agreement" means any commodity hedging agreement or arrangement entered into by the Company or any Subsidiary of the Company and designed to protect against fluctuations in prices of commodities (including oil, petroleum coke, natural gas and electricity).

"Consolidated Net Tangible Assets" means, as of the time of determination, the aggregate amount of the consolidated assets of the Company and its consolidated Subsidiaries after deducting (1) all goodwill, trade names, trademarks, service marks, patents, unamortized debt discount and expense and other intangible assets and (2) all current liabilities, in each case as reflected on the most recent consolidated balance sheet prepared by the Company in accordance with GAAP contained in an annual report on Form 10-K or a quarterly report on Form 10-Q timely filed or any amendment thereto (and not subsequently disclaimed as not being reliable by the Company) pursuant to the Exchange Act by the Company prior to the time as of which "Consolidated Net Tangible Assets" is being determined. "Credit Agreement" means that certain Amended and Restated Credit Agreement dated as of October 7, 2011, as amended and further restated pursuant to the First Amendment dated March 26, 2012 and as amended as of October 29, 2012, among the Company, GrafTech Finance Inc., the other borrowers party thereto, the LC Subsidiaries party thereto, the lenders party thereto, and JPMorgan Chase Bank, N.A., as administrative agent, including any related notes, guarantees and collateral documents, in each case as amended from time to time.

"Domestic Subsidiary" means a Subsidiary incorporated or organized under the laws of the United States of America, any state thereof or the District of Columbia.

"Foreign Subsidiary" means any Subsidiary that is not a Domestic Subsidiary.

"GAAP" means generally accepted accounting principles in the United States of America as in effect as of the Issue Date, including those set forth in the opinions and pronouncements of the Public Company Accounting Oversight Board and, to the extent not inconsistent therewith, Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as may be approved by a significant segment of the accounting profession in the United States of America.

"Governmental Authority" means the government of the United States of America, any other nation or any political subdivision of any of them, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government.

"guarantee" means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any indebtedness of any other Person and any obligation, direct or indirect, contingent or otherwise, of such Person (1) to purchase or pay (or advance or supply funds for the purchase or payment of) such indebtedness (whether arising by virtue of partnership arrangements, or by agreement to keep well, to purchase assets, goods, securities or services, to take or pay or to maintain financial statement conditions or otherwise) or (2) entered into for purposes of assuring in any other manner the obligee of such indebtedness of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part); provided, however, that the term "guarantee" will not include endorsements for collection or deposit in the ordinary course of business. The term "guarantee," when used as a verb, has a correlative meaning.

"Guarantee Agreement" means a supplemental indenture to the indenture, in a form reasonably satisfactory to the trustee, pursuant to which a Subsidiary Guarantor guarantees the Company's obligations with respect to the notes on the terms provided for in the indenture.

- "holder" means the Person in whose name a note is registered on the registry books for the notes.
- "Incur" means issue, assume, guarantee or otherwise become liable for Indebtedness.
- "Indebtedness" means, with respect to any Person, obligations of such Person for borrowed money (including without limitation, indebtedness for borrowed money evidenced by notes, bonds, debentures or similar instruments).
- "Interest/Exchange Rate Protection Agreement" means any interest rate or currency hedging agreement or arrangement designed to protect against fluctuations in interest rates or currency exchange rates or to take advantage of reduced interest rates by converting fixed rate obligations to floating rate obligations.
- "Issue Date" means November 20, 2012.
- "Opinion of Counsel" means a written opinion from legal counsel who is reasonably acceptable to the trustee, and who may be an employee of or counsel to the Company or the trustee.
- "Person" means any individual, corporation, partnership, limited liability company, joint venture, association, joint-stock company, trust, unincorporated organization, or any agency or government or political subdivision thereof or any other entity.
- "Principal Property" means, at the time of determination, any manufacturing plant or manufacturing facility, in each case located in the United States and having a net book value in excess of 1% of Consolidated Net Tangible Assets.
- "Qualified Equity Offering" means any public issuance and sale of the Company's common stock by the Company. Notwithstanding the foregoing, the term "Qualified Equity Offering" shall not include:
- (1) any issuance and sale with respect to common stock registered on Form S-4 or Form S-8; or
- (2) any issuance and sale to any Subsidiary of the Company.
- "Refinance" means, in respect of any indebtedness, to (i) refinance, extend, renew, refund, repay, prepay, redeem, defease or retire such indebtedness, or (ii) issue or Incur other indebtedness in exchange or replacement for such indebtedness, in each case. "Refinanced" and "Refinancing" shall have correlative meanings.
- "SEC" means the United States Securities and Exchange Commission.
- "Senior Subordinated Notes" means the Company's senior subordinated promissory notes due 2015 issued on November 30, 2010, for an aggregate total face amount of \$200.0 million.
- "significant subsidiary" has the meaning set forth in Rule 1-02 of Regulation S-X under the Securities Act and the Exchange Act.
- "Significant Subsidiary" means a significant subsidiary of the Company.

"subsidiary" of any Person (the "parent") at any date, means any corporation, limited liability company, partnership, association or other entity, a majority of the shares or other interests having ordinary voting power for the election of directors or another governing body (other than shares or interests having such power only by reason of the happening of a contingency) are at the time beneficially owned ,directly or indirectly, through one or more intermediaries, or both, by the parent.

"Subsidiary" means a subsidiary of the Company.

"Subsidiary Guarantee" means a guarantee by a Subsidiary Guarantor of the Company's obligations with respect to the notes in accordance with the indenture.

"Subsidiary Guarantor" means a Domestic Subsidiary that executes the indenture as a guarantor on the Issue Date and each other Domestic Subsidiary that thereafter guarantees the notes pursuant to the terms of the indenture.

BOOK-ENTRY SYSTEM

DTC will act as securities depository for the Exchange Notes. The Exchange Notes will be issued as fully registered securities in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC in the aggregate principal amount of the Exchange Notes, and will be deposited with DTC or its custodian.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments from over 100 countries that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has Standard & Poor's highest rating: AAA. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.. The information on this website is not a part of this prospectus. Purchases of Exchange Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the Exchange Notes on the records of DTC. The ownership interest of each actual purchaser of each Exchange Note ("Beneficial Owner") is in turn to be recorded on the records of the Direct and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Exchange Notes are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Exchange Notes, except in the event that use of the book-entry system for the Exchange Notes is discontinued.

To facilitate subsequent transfers, all Exchange Notes deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Exchange Notes with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Exchange Notes; the records of DTC reflect only the identity of the Direct Participants to whose accounts such Exchange Notes are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Exchange Notes may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Exchange Notes, such as redemptions, defaults and proposed amendments to the documents establishing the Exchange Notes. For example, Beneficial Owners of Exchange Notes may wish to ascertain that the nominee holding the Exchange Notes for their benefit has agreed to obtain and to transmit notices to Beneficial Owners or, in the alternative, Beneficial Owners may wish to provide their names and addresses to the transfer agent and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all the Exchange Notes within an issue are being redeemed, the practice of DTC is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the Exchange Notes unless authorized by a Direct Participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Exchange Notes are credited on the record date, identified in a listing attached to the omnibus proxy.

Redemption proceeds and distribution and interest payments on the Exchange Notes will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. The practice of DTC is to credit the accounts of Direct Participants, upon the receipt by DTC of funds and corresponding detail information from us, on the payable date in accordance with their respective holdings shown on the records of DTC. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practice, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC or its nominee, the initial purchaser or us, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and distribution and interest payments to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC is our responsibility, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants. A Beneficial Owner shall give notice to elect to have its Exchange Notes purchased or tendered, through its Participant, to the tender or remarketing agent and shall effect delivery of such Exchange Notes by causing the Direct Participant to transfer the interest of the Participant in the Exchange Notes, on the records of DTC, to the tender or remarketing agent. The requirement for physical delivery of Exchange Notes in connection with an optional tender or a mandatory purchase will be deemed satisfied when the ownership rights in the Exchange Notes are transferred by Direct Participants on the records of DTC and followed by a book-entry credit of tendered Exchange Notes to the DTC account of the tender or remarketing agent.

DTC may discontinue providing its services as securities depository with respect to the Exchange Notes at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depository is not obtained, Exchange Note certificates are required to be printed and delivered.

We may decide to discontinue use of the system of book-entry transfers through DTC or a successor securities depository. In that event, Exchange Note certificates will be printed and delivered.

The information in this section concerning DTC and its book-entry system has been obtained from sources that we believe to be reliable, but we take no responsibility for the accuracy thereof.

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a summary of certain U.S. federal income tax consequences of the disposition of the Original Notes in the exchange offer and the ownership and disposition of Exchange Notes acquired therein. Except where noted, this summary deals only with Original Notes and Exchange Notes held as capital assets. This summary is based upon the provisions of the Code, the Treasury Regulations promulgated thereunder and judicial and administrative rulings and decisions now in effect, all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary does not purport to address all aspects of U.S. federal income taxation that may affect particular investors in light of their individual circumstances, or certain types of investors subject to special treatment under the U.S. federal income tax laws, such as persons that mark to market their securities, financial institutions, regulated investment companies, real estate investment trusts, corporations subject to the accumulated earnings tax, holders subject to the alternative minimum tax, individual retirement and other tax-deferred accounts, tax-exempt organizations, brokers, dealers in securities and commodities, certain former U.S. citizens or long-term residents, life insurance companies, persons that hold Original Notes or Exchange Notes as part of a hedge against currency or interest rate risks or that hold Original Notes or Exchange Notes as part of a position in a constructive sale, straddle, conversion transaction or other integrated transaction for U.S. federal income tax purposes, controlled foreign corporations, passive foreign investment companies, persons that acquire their Original Notes or Exchange Notes in connection with employment or other performance of personal services, partnerships or other pass-through entities and investors in such entities, subsequent purchasers of the Exchange Notes and U.S. holders (as defined below) whose "functional currency" is not the U.S. dollar. This summary does not address any aspect of state, local or foreign

taxation or any U.S. federal tax other than the income tax. In addition, this discussion does not address the tax consequences to persons who acquired Original Notes other than pursuant to their original issuance and distribution.

For purposes of this summary, a "U.S. holder" is a beneficial owner of an Original Note or Exchange Note that, for U.S. federal income tax purposes, is:

an individual citizen or resident of the United States;

a corporation, or other entity treated as a corporation, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or a trust, if (a) a court within the United States is able to exercise primary jurisdiction over administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust or (b) it has a valid election in effect to be treated as a U.S. person.

As used herein, the term "non-U.S. holder" means a beneficial owner of an Original Note or Exchange Note who is not a U.S. holder. If a partnership or other entity or arrangement taxable as a partnership holds an Original Note or Exchange Note, the Tax treatment of such partnership and its partners will generally depend on the status of the partner and on the activities of the partnership. If you are a partnership or a partner in a partnership holding an Original Note or Exchange Note, you should consult your own tax advisors regarding the Tax consequences to you of purchasing, holding and disposing of the Original Note or Exchange Note.

We have not requested, and do not intend to request, a ruling from the U.S. Internal Revenue Service (the "IRS"), with respect to any of the U.S. federal income tax consequences described below. There can be no assurance that the IRS will not disagree with or challenge any of the conclusions set forth herein.

Persons considering a tender of an Original Note for an Exchange Note are urged to consult with their tax advisors as to the U.S. federal income tax consequences of the disposition of their Original Notes in the exchange offer and the ownership and disposition of Exchange Notes acquired therein, in light of their particular circumstances, as well as the effect of any state, local or other tax laws.

Exchange Offer

The exchange of Original Notes for Exchange Notes pursuant to this exchange offer will not be a taxable event to a holder for United States federal income tax purposes. Accordingly, a holder will not recognize gain or loss upon receipt of an Exchange Note for an Original Note, and the holder will have the same basis and holding period in an Exchange Note as it had in the tendered Original Note immediately before the exchange.

Effect of Certain Additional Payments

We may be required to make payments of additional amounts if we call all or a portion of the Exchange Notes for redemption or if we repurchase all or a portion of the Exchange Notes at the option of the holders upon the occurrence of a "Change of Control," each as described under "Description of the Notes—Optional redemption" and "Description of the Notes—Change of control offer." It is uncertain whether the possibility of such payments of additional amounts or additional interest causes the Exchange Notes to be treated as contingent payment debt instruments under the applicable Treasury Regulations. However, we intend to take the position that the possibility of such payments does not result in the Exchange Notes being treated as such contingent payment debt instruments. Assuming such position is respected, a U.S. holder would be required to include in income the amount of any such payments at the time such payments are received or accrued in accordance with such U.S. holder's method of accounting for Tax purposes. Our position is binding on a U.S. holder unless such U.S. holder discloses a contrary position in the manner that is required by applicable Treasury Regulations.

Our position is not binding on the IRS, however. It is possible that the IRS may take a different position regarding the possibility of such additional payments. If the IRS were to successfully challenge our position, a U.S. holder may, among other things, be required to accrue interest income at higher rates than the stated interest rates on the notes and to treat any gain recognized on the sale or other disposition of an Exchange Note as ordinary income rather than as capital gain.

The remainder of this discussion assumes that the possibility of such additional payments will be disregarded. Holders should consult their own tax advisors as to the tax considerations that relate to the possibility of additional payments. U.S. Holders

Payments of interest

Stated interest on Exchange Notes will generally be taxable to a U.S. holder as ordinary interest income at the time it accrues or is received in accordance with the U.S. holder's regular method of accounting for U.S. federal income tax purposes.

Sale, exchange or other taxable disposition of Exchange Notes

Upon the sale, exchange, redemption or other taxable disposition of an Exchange Note, a U.S. holder will recognize taxable gain or loss equal to the difference between the amount realized on the sale, exchange, redemption or other taxable disposition and the holder's adjusted tax basis in the Exchange Note. For these purposes, the amount realized does not include any amount attributable to accrued interest. Amounts attributable to accrued interest are treated as interest as described under "—Payments of interest" above. A U.S. holder's adjusted tax basis in an Exchange Note will generally be such holder's cost for the Original Note exchanged for the Exchange Note. Gain or loss realized on the sale, exchange, redemption or other taxable disposition of an Exchange Note will generally be capital gain or loss and will be long-term capital gain or loss if at the time of the sale, exchange, redemption or other taxable disposition the Note has been held by the holder for more than one year. Long-term capital gains of individual holders are eligible for preferential rates of United States federal income taxation. The deductibility of capital losses is subject to limitations under the Code.

Information reporting and backup withholding

Information returns will be filed with the IRS in connection with payments on the Exchange Notes and the proceeds from a sale or other disposition of the Exchange Notes, unless the U.S. holder is an exempt recipient such as a corporation and, if requested, demonstrates this fact. A U.S. holder will be subject to U.S. backup withholding on these payments if the U.S. holder fails to provide its taxpayer identification number to the payor and comply with certain certification procedures or otherwise establish an exemption from backup withholding. Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a credit against the U.S. holder's U.S. federal income tax liability and may entitle the U.S. holder to a refund, provided that the required information is timely furnished to the IRS.

New legislation regarding Medicare Tax

For taxable years beginning after December 31, 2012, certain U.S. holders that are individuals, estates or trusts will be subject to a 3.8% tax on all or a portion of their "net investment income," which may include all or a portion of their interest and net gains from the disposition of Exchange Notes. If you are a U.S. holder that is an individual, estate or trust, you should consult your tax advisors regarding the applicability of the Medicare tax to your income and gains in respect of your investment in the Exchange Notes.

Non-U.S. Holders

Payments of interest

Subject to the discussion below concerning backup withholding, payments of interest on an Exchange Note received or accrued by a non-U.S. holder generally will not be subject to U.S. federal income or withholding tax, as long as the non-U.S. holder:

does not conduct a trade or business in the United States with respect to which the interest is effectively connected; does not actually, indirectly or constructively own 10% or more of the total combined voting power of all classes of our stock entitled to vote, within the meaning of Section 871(h)(3) of the Code;

is not a "controlled foreign corporation" with respect to which we are a "related person" within the meaning of Section 881(c)(3)(C) of the Code;

•s not a bank whose receipt of the interest is described in Section 881(c)(3)(A) of the Code; and satisfies the certification requirements described below.

To satisfy the certification requirements (a) the beneficial owner of the Exchange Note must timely certify, under penalties of perjury, to us or to the person who otherwise would be required to withhold U.S. tax that such owner is a non-U.S. holder and must provide its name and address and meet certain other requirements or (b) the beneficial owner of the Exchange Note must hold the Exchange Note through certain intermediaries or certain foreign partnerships, and certain certification requirements of the applicable Treasury Regulations must be satisfied. A non-U.S. holder that is not exempt from tax under the foregoing rules generally will be subject to U.S. federal income tax withholding on payments of interest at a rate of 30% unless:

the interest is effectively connected with a U.S. trade or business conducted by such holder (and, if an applicable income tax treaty so provides, is attributable to a permanent establishment maintained in the United States by the non-U.S. holder), in which case the non-U.S. holder will be subject to U.S. federal income tax on a net income basis at the rate applicable to U.S. holders generally; or

an applicable income tax treaty provides for a lower rate of, or exemption from, withholding tax.

A non-U.S. holder that is treated as a corporation for U.S. federal income tax purposes and has effectively connected interest income (as described in the first bullet point above) may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate, unless the rate is reduced or eliminated by an applicable income tax treaty. To claim the benefit of a reduced rate or exemption from withholding under an income tax treaty or to claim exemption from withholding because income is effectively connected with a U.S. trade or business, the non-U.S. holder must timely provide the appropriate, properly executed IRS forms. Certification to claim that income is effectively connected with a U.S. trade or business is generally made on IRS Form W-8ECI. Certification to claim the benefit of a reduced rate or exemption from withholding under an income tax treaty is generally made on IRS Form W-8BEN. These forms may be required to be periodically updated.

Sale, exchange or other taxable disposition of Exchange Notes

A non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized on the sale, exchange, retirement or other taxable disposition of an Exchange Note unless (a) such gain is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business (and, if an applicable income tax treaty so provides, is attributable to a permanent establishment maintained in the United States by the non-U.S. holder) or (b) except to the extent that an applicable income tax treaty otherwise provides, in the case of a non-U.S. holder who is an individual, the holder is present in the United States for 183 days or more during the taxable year in which such gain is realized and certain other conditions exist.

Except to the extent that an applicable income tax treaty otherwise provides, in the case of a non-U.S. holder that is described under clause (a), gain will be subject to U.S. federal income tax on a net income basis and, in addition, if the non-U.S. holder is treated as a corporation for U.S. federal income tax purposes, such holder may be subject to the branch profits tax as described above. An individual non-U.S. holder who is described under clause (b) above will be subject to a flat 30% tax on gain derived from the sale, which may be offset by certain U.S. capital losses (notwithstanding the fact that he or she is not considered a U.S. resident for U.S. federal income tax purposes). Information reporting and backup withholding

Payments of interest on Exchange Notes to a non-U.S. holder generally will be reported to the IRS and to the non-U.S. holder. Copies of applicable IRS information returns may be made available under the provisions of a specific tax treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides. Non-U.S. holders are generally exempt from backup withholding and additional information reporting on payments of principal, or interest, provided that the

non-U.S. holder (a) certifies its nonresident status on the appropriate IRS Form (or a suitable substitute form) and certain other conditions are met or (b) otherwise establishes an exemption.

Payments of the proceeds from a sale of Exchange Notes by a non-U.S. holder made to or through a foreign office of a broker generally will not be subject to information reporting or backup withholding. Information reporting may apply to such payments, however, if the broker is a U.S. person, a controlled foreign corporation for U.S. tax purposes, the U.S. branch of a foreign bank or a foreign insurance company, a foreign partnership controlled by U.S. persons or engaged in a U.S. trade or business, or a foreign person 50% or more of whose gross income is effectively connected with a U.S. trade or business for a specified three-year period. Payments of the proceeds from the sale of Exchange Notes through the U.S. office of a broker is subject to information reporting and backup withholding unless the non-U.S. holder certifies as to its non-U.S. status or otherwise establishes an exemption from information reporting and backup withholding.

Backup withholding is not an additional tax. Any backup withholding generally will be allowed as a credit or refund against the non-U.S. holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules in their particular situations, the availability of an exemption therefrom and the procedure for obtaining such an exemption, if available.

Recently Enacted Legislation

Recently enacted legislation regarding foreign account tax compliance, effective for payments made after December 31, 2013, imposes a withholding tax of 30% on interest and gross proceeds from the disposition of certain debt instruments paid to certain foreign entities unless various information reporting and certain other requirements are satisfied. However, the withholding tax will not be imposed on payments pursuant to obligations outstanding as of December 31, 2013. Nevertheless, certain account information with respect to U.S. holders who hold Exchange Notes through certain foreign financial institutions may be reportable to the IRS. Investors should consult with their own tax advisors regarding the possible implications of this recently enacted legislation on their participation in this exchange offer.

THE PRECEDING DISCUSSION IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. ACCORDINGLY, EACH PROSPECTIVE HOLDER OF AN EXCHANGE NOTE SHOULD CONSULT ITS OWN TAX ADVISOR AS TO THE PARTICULAR TAX CONSEQUENCES TO IT OF PURCHASING, OWNING AND DISPOSING OF EXCHANGE NOTES, INCLUDING THE APPLICABILITY AND EFFECT OF ANY STATE, LOCAL OR FOREIGN TAX LAWS, AND OF ANY PROPOSED CHANGES IN APPLICABLE LAW.

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PLAN OF DISTRIBUTION

If you wish to exchange your Original Notes for Exchange Notes in the exchange offer, you will be required to make representations to us as described in "The Exchange Offer—Resale of Exchange Notes" and in the letter of transmittal. In addition, each broker-dealer that receives Exchange Notes for its own account pursuant to the exchange offer must acknowledge that it will deliver a prospectus in connection with any resale of such Exchange Notes. This prospectus, as it may be amended or supplemented from time to time, may be used by a broker-dealer in connection with resales of Exchange Notes received in exchange for Original Notes if the Original Notes were acquired as a result of market-making activities or other trading activities. We have agreed that, for a period of at least 180 days after the expiration of the exchange offer, subject to certain "black-out" periods, we will make this prospectus, as amended or supplemented, available to any broker-dealer for use in connection with any such resale. In addition, until 180 days after the date of this prospectus, all broker-dealers effecting transactions in the Exchange Notes may be required to deliver a prospectus.

We will not receive any proceeds from any sale of Exchange Notes by broker-dealers. Exchange Notes received by broker-dealers for their own account pursuant to the exchange offer may be sold from time to time in one or more transactions in the over-the-counter market, in negotiated transactions, through the writing of options on the Exchange Notes or a combination of such methods of resale, at market prices prevailing at the time of resale, at prices related to such prevailing market prices, or at negotiated prices. Any such resale may be made directly to purchasers or to or through brokers or dealers who may receive compensation in the form of commissions or concessions from any such broker-dealer or the purchasers of any such Exchange Notes. Any broker-dealer that resells Exchange Notes that were received by it for its own account pursuant to the exchange offer and any broker or dealer that participates in a distribution of such Exchange Notes may be deemed to be an "underwriter" within the meaning of the Securities Act, and any profit on any such resale of Exchange Notes and any commissions or concessions received by any such persons may be deemed to be underwriting compensation under the Securities Act.

For a period of not less than 180 days after the expiration of the exchange offer, we will promptly send additional copies of this prospectus and any amendment or supplement to this prospectus to any broker-dealer that requests such documents in the letter of transmittal. We have agreed to pay all expenses incident to the exchange offer (including the expenses of one counsel for the holders of the Original Notes) other than commissions or concessions of any brokers or dealers, until 180 days after the date of this prospectus, and will indemnify the holders of the Original Notes (including any broker-dealers) against certain liabilities, including liabilities under the Securities Act. Based on existing interpretations of the Securities Act by the staff of the SEC as set forth in several no-action letters to third parties, and subject to the immediately following sentence, we believe that the Exchange Notes issued pursuant to this exchange offer may be offered for resale, resold and transferred by the holders thereof without further compliance with the registration and prospectus delivery requirements of the Securities Act. However, any holder of Original Notes who is an "affiliate" of ours (within the meaning of Rule 405 under the Securities Act or who intends to participate in this exchange offer for the purpose of distributing the Exchange Notes, or any participating broker-dealer who purchased Original Notes from us or one of our affiliates to resell pursuant to Rule 144A or any other available exemption under the Securities Act:

will not be able to rely on the interpretations of the staff of the SEC set forth in the above-mentioned no-action letters; will not be able to tender its Original Notes in this exchange offer; and

must comply with the registration and prospectus delivery requirements of the Securities Act in connection with any sale or transfer of the Exchange Notes, unless such sale or transfer is made pursuant to an exemption from such requirements.

We do not intend to seek our own no-action letter and there is no assurance that the staff of the SEC would make a similar determination with respect to the Exchange Notes as it has in such no-action letters to third parties. The information described above concerning interpretations of and positions taken by the staff of the SEC is not intended to constitute legal advice, and holders should consult their own legal advisors with respect to these matters.

LEGAL MATTERS

Certain legal matters relating to the exchange offer will be passed upon for us by Kelley Drye & Warren LLP and Jennifer C. Beedy, Corporate Counsel of Intermat, counsel to the Company.

EXPERTS

The financial statements as of December 31, 2012 and 2011 and for each of the years in the three-year period ended December 31, 2012 (including schedules appearing therein) and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) as of December 31, 2012 included in this Registration Statement on Form S-4 have been so included in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process, designed by, or under the supervision of, the chief executive officer and chief financial officer and effected by the board of directors, management and other personnel of a company, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets of the company;

provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures of the company are being made only in accordance with authorizations of management and the board of directors; and

• provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets of the company that could have a material effect on its financial statements.

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

Management has conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2012 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on that assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2012. The effectiveness of the Company's internal control over financial reporting has been audited by PricewaterhouseCoopers LLP, our independent registered public accounting firm, as stated in their report which is presented in this Annual Report on Form 10-K.

Date: February 26, 2013
/S/ CRAIG S. SHULAR
Craig S. Shular,
Chief Executive Officer, President and
Chairman of the Board
/S/ LINDON G. ROBERTSON
Lindon G. Robertson,
Vice President and Chief Financial
Officer

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of GrafTech International Ltd.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income and comprehensive income, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of GrafTech International Ltd. and its subsidiaries as of December 31, 2012 and 2011, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2012 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP Cleveland, Ohio

February 26, 2013, except with respect to our opinion on the consolidated financial statements insofar as it relates to Note 18: Guarantor Information, as to which the date is June 20, 2013

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

(Dollars in thousands, except share data)

(2 onus in the tourist, choops shall cana)	As of December 31, 2011	As of December 31, 2012	ber
ASSETS			
Current Assets:			
Cash and cash equivalents	\$12,429	\$17,317	
Accounts and notes receivable, net of allowance for doubtful accounts of \$4,153 at December 31, 2011 and \$7,573 at December 31, 2012	220,752	236,429	
Inventories	444,062	513,065	
Prepaid expenses and other current assets	54,707	56,190	
Total current assets	731,950	823,001	
Property, plant and equipment	1,431,432	1,532,359	
Less: accumulated depreciation	654,548	698,452	
Net property, plant and equipment	776,884	833,907	
Deferred income taxes	7,931	6,157	
Goodwill	498,681	498,261	
Other assets	152,920	136,589	
Total assets	\$2,168,366	\$2,297,915	
LIABILITIES AND STOCKHOLDERS' EQUITY	, , ,	. , ,	
Current liabilities:			
Accounts payable	\$148,655	\$128,120	
Short-term debt	14,168	8,426	
Accrued income and other taxes	44,330	30,923	
Supply chain financing liability	29,930	26,962	
Other accrued liabilities	40,170	50,953	
Total current liabilities	277,253	245,384	
Long-term debt	387,624	535,709	
Other long-term obligations	131,300	125,005	
Deferred income taxes	32,245	41,966	
Contingencies – Note 14	•	,	
Stockholders' equity:			
Preferred stock, par value \$.01, 10,000,000 shares authorized, none issued	_		
Common stock, par value \$.01, 225,000,000 shares authorized, 149,861,081 shares	1 400	1.500	
issued at December 31, 2011 and 150,869,227 shares issued at December 31, 2012	1,499	1,509	
Additional paid – in capital	1,798,161	1,812,592	
Accumulated other comprehensive loss	(261,937)	(280,678)
(Accumulated deficit) retained earnings	(50,757)	66,884	
Less: cost of common stock held in treasury, 6,265,114 shares at December 31, 2011 and 16,418,710 at December 31, 2012	(146,041)	(249,487)
Less: common stock held in employee benefit and compensation trusts, 75,807	(981)	(969)
shares at December 31, 2011 and 76,095 shares at December 31, 2012	`	`	,
Total stockholders' equity	1,339,944	1,349,851	
Total liabilities and stockholders' equity	\$2,168,366	\$2,297,915	
See accompanying Notes to the Consolidated Financial Statements			

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME (Dollars in thousands, except per share data)

	For the year ended December 31,					
	2010		2011		2012	
Net sales	\$1,006,993		\$1,320,184		\$1,248,264	
Cost of sales	717,742		995,638		932,460	
Gross profit	289,251		324,546		315,804	
Research and development	12,202		13,976		13,796	
Selling and administrative expenses	119,009		144,561		145,540	
Operating income	158,040		166,009		156,468	
Equity in earnings of, and gain recorded on acquisition of, non-consolidated affiliate	(14,500)	_		_	
Other (income) expense, net	(4,768)	4,835		(1,005)
Interest expense	5,076		18,307		23,247	
Interest income	(1,333)	(424)	(261)
Income before income taxes	173,565		143,291		134,487	
(Benefit) provision for income taxes	(1,095)	(9,893)	16,846	
Net income	\$174,660		\$153,184		\$117,641	
Basic income per common share:						
Net income per share	\$1.42		\$1.06		\$0.85	
Weighted average common shares outstanding	122,621		145,156		138,552	
Diluted income per common share:						
Net income per share	\$1.41		\$1.05		\$0.84	
Weighted average common shares outstanding	123,453		146,402		139,700	
STATEMENTS OF COMPREHENSIVE INCOME						
Net income	\$174,660		\$153,184		\$117,641	
Other comprehensive income:						
Foreign currency translation adjustments	(5,866)	(32,202)	(9,929)
Commodities and foreign currency derivatives, net of tax of \$292, \$1,714 and \$2,327, respectively	2,353		6,023		(8,812)
Other comprehensive loss, net of tax: Comprehensive income	(3,513 \$171,147)	(26,179 \$127,005)	(18,741 \$98,900)

See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in thousands)

	For the year ended December 31,				
	2010	2011	2012		
Cash flow from operating activities:					
Net income	\$174,660	\$153,184	\$117,641		
Adjustments to reconcile net income to cash provided by					
operations:					
Depreciation and amortization	42,664	81,953	81,660		
Deferred income tax benefit	(29,028) (45,053) 8,130		
Equity in earnings of and gain recorded on acquisition of	(14.500	`			
non-consolidated affiliate	(14,500) —	_		
Post-retirement and pension plan changes	11,088	27,184	13,349		
Currency gains	(7,153) (1,463) (3,509)	
Stock-based compensation, including incentive compensation paid in	7,355	8,910	9,601		
company stock	1,333	0,910	9,001		
Interest expense	2,620	11,607	12,500		
Insurance recoveries		_	4,007		
Other charges, net	4,299	(11,201) (16,492)	
Increase in working capital*	(41,790) (142,587) (106,220)	
Increase in long-term assets and liabilities	(5,293) (5,937)	
Net cash provided by operating activities	144,922	76,597	101,400		
Cash flow from investing activities:					
Capital expenditures	(86,049) (156,616) (127,728))	
Loan repayment from non-consolidated affiliate	6,000	_	_		
(Payments) proceeds from derivative instruments	(1,109) 14,412	7,572		
Cash paid for acquisitions, net of cash acquired of \$8,240 in 2010 and \$	30	•	,		
in 2011	(241,204) (20,510) —		
Other	810	748	194		
Net cash used in investing activities	(321,552) (161,966) (119,962)	
Cash flow from financing activities:					
Short-term debt (reductions) borrowings, net	(850) 14,016	(5,738))	
Revolving Facility borrowings	165,000	584,000	425,000		
Revolving Facility reductions	(35,000) (482,000) (587,500)	
Proceeds from long-term debt	_	_	300,000		
Principal payments on long-term debt	(56) (222) (225)	
Supply chain financing	10,555	4,970	(2,967))	
Proceeds from exercise of stock options	3,901	2,028	157		
Purchase of treasury shares	(1,431) (30,940) (103,445)	
Refinancing fees and debt issuance costs	(4,595) (4,988) (6,385)	
Other	716	(1,403) 5,215		
Net cash provided by financing activities	138,240	85,461	24,112		
Net (decrease) increase in cash and cash equivalents	(38,390) 92	5,550		
Effect of exchange rate changes on cash and cash equivalents	1,305	(759) (662)	
Cash and cash equivalents at beginning of period	50,181	13,096	12,429		
Cash and cash equivalents at end of period	\$13,096	\$12,429	\$17,317		
	,	,	,		

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued) (Dollars in thousands)

	For the year ended December 31,				
	2010	2011	2012		
Supplemental disclosures of cash flow information:					
Net cash paid during the periods for:					
Interest	\$2,294	\$6,609	\$9,279		
Income taxes	31,385	26,224	26,209		
Non-cash operating, investing and financing activities:					
Common stock issued to savings and pension plan trusts	2,572	4,414	4,593		
* Net change in working capital due to the following components:					
Decrease (increase) in current assets:					
Accounts and notes receivable, net	\$(39,780)	\$(68,462)	\$(5,563)		
Inventories	(13,641)	(111,395)	(67,314)		
Prepaid expenses and other current assets	(1,719)	(2,082)	(2,281)		
Increase (decrease) in accounts payables and accruals	13,105	39,097	(32,759)		
Increase in interest payable	245	255	1,697		
Increase in working capital	\$(41,790)	\$(142,587)	\$(106,220)		

See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(Dollars in thousands, except share data)

	Issued Shares of Common Stock	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensi Loss	Retained Earnings Accumulate Deficit)	Treasury Stock	Common Stock Hel Employee Benefit & Compensa Trust	Total Stockholders' Equity
Balance at January 1, 2010 Comprehensive	124,027	\$1,240	\$1,300,051	\$ (232,245)	\$ (378,601)	\$(112,511)	\$ (875)	\$577,059
income (loss): Net income Other comprehensive income:	_	_	_	_	174,660	_	_	174,660
Unrealized losses on securities, net of tax o \$292	f—	_		2,353	_	_	_	2,353
Foreign currency translation adjustments Total comprehensive income	_	_	_	(5,866)	_	_	_	(5,866)
Treasury stock			_	_	_	_	_	
Stock-based compensation Shares issued in lieu	408	4	9,199	_	_	(1,431)	_	7,772
of cash for incentive compensation	_	_	_	_	_	_	_	_
Common stock issued to savings and pension plan trusts	n181	2	2,678	_	_	_	(108)	2,572
Sale of common stock under stock options Shares issued in	447	5	3,892	_	_	_	_	3,897
connection with our	24,000	240	467,039	_	_	_	\$ <i>—</i>	467,279
Balance at December 31, 2010 Comprehensive	149,063	\$1,491	\$1,782,859	\$ (235,758)	\$ (203,941)	\$(113,942)	\$ (983)	\$1,229,726
income (loss): Net income Other comprehensive income:	_	_	_	_	153,184	_	_	153,184
meonic.			_	6,023	_	_	_	6,023

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_	_	(32,202)	_	_	_	(32,202)
				(29,930) —	(29,930)
3	7,996			(1,082) —	6,917	
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See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)

(Dollars in thousands, except share data)

	Issued Shares of Common Stock	Common Stock	Additional Paid-in Capital	Accumulate Other Comprehen Loss	siv	Earnings	Treasury te St ock		Common Stock Hel Employee Benefit & Compense Trust	Total Stockholde Equity	ers'
Balance at December 31, 2011	149,861	1,499	1,798,161	(261,937)	(50,757)	(146,041)	(981)	1,339,944	
Comprehensive income (loss): Net income Other comprehensive income:	_	_	_	_		117,641	_		_	117,641	
Unrealized losses on securities, net of tax of \$2,327	f—	_	(11	(8,812)	_	_		_	(8,823)
Foreign currency translation adjustment Total comprehensive	s	_	_	(9,929)	_	_		_	(9,929)
income Treasury stock							(101,697	`		(101,697)
Stock-based compensation	554	6	9,720	_		_	(1,762)	_	7,964	,
Common stock issued to savings and pensior plan trusts		4	4,565	_		_	13		12	4,594	
Sale of common stock under stock options	21	_	157	_		_	_			157	
Balance at December 31, 2012	150,869	\$1,509	\$1,812,592	\$ (280,678)	\$ 66,884	\$(249,487)	\$ (969)	\$1,349,85	1

See accompanying Notes to the Consolidated Financial Statements

GRAFTECH INTERNATIONAL LTD. AND SUBSIDIARIES NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in thousands, except as otherwise noted)

(1) Business and Summary of Significant Accounting Policies

Discussion of Business and Structure

GrafTech International Ltd. is one of the world's largest manufacturers and providers of high quality synthetic and natural graphite and carbon based products. References herein to "GTI," "we," "our," or "us" refer collectively to GrafTech International Ltd. and its subsidiaries. We have seven major product categories: graphite electrodes, refractory products, needle coke products, advanced graphite materials, advanced composite materials, advanced electronics technology, and advanced materials, which are reported in the following segments:

Industrial Materials includes graphite electrodes, refractory products and needle coke products, and primarily serves the steel industry.

Engineered Solutions includes advanced graphite materials, advanced composite materials, advanced electronics technology, and advanced materials and provides primary and specialty products to the advanced electronics, industrial, energy, transportation and defense markets.

Summary of Significant Accounting Policies

The Consolidated Financial Statements include the financial statements of GrafTech International Ltd. and its wholly-owned subsidiaries. All significant intercompany transactions have been eliminated in consolidation. Cash Equivalents

We consider all highly liquid financial instruments with original maturities of three months or less to be cash equivalents. Cash equivalents consist of certificates of deposit, money market funds and commercial paper. Revenue Recognition

Revenue from sales of our commercial products is recognized when they meet four basic criteria (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the amount is determinable and (4) collection is reasonably assured. Sales are recognized when both title and the risks and rewards of ownership are transferred to the customer or services have been rendered and fees have been earned in accordance with the contract.

Revenue from sales of non-commercial products manufactured to customer specifications are recognized using the units-of-delivery measure under the percentage-of-completion accounting method as units are delivered and accepted by the customer. Sales using this measure of progress are recognized at the contractually agreed upon unit price. Volume discounts and rebates are recorded as a reduction of revenue in conjunction with the sale of the related products. Changes to estimates are recorded when they become probable. Shipping and handling revenues billed to our customers are included in net sales and the related shipping and handling costs are included as an increase to cost of sales.

Earnings per Share

The calculation of basic earnings per share is based on the weighted-average number of our common shares outstanding during the applicable period. We use the two-class method of computing earnings per share for our instruments granted in share-based payment transactions that are determined to be participating securities prior to vesting.

Diluted earnings per share recognizes the dilution that would occur if outstanding stock options and restricted stock awards were exercised or converted into common shares. We use the treasury stock method to compute the dilutive effect of our stock options and restricted stock awards (using the average market price for the period).

Inventories

Inventories are stated at the lower of cost or market. Cost is principally determined using the "first-in first-out" ("FIFO") and average cost, which approximates FIFO, methods. Elements of cost in inventory include raw materials, direct labor and manufacturing overhead.

Property, Plant and Equipment

Expenditures for property, plant and equipment are recorded at cost. Maintenance and repairs of property and equipment are expensed as incurred. Expenditures for replacements and betterments are capitalized and the replaced assets are retired. Gains and losses from the sale of property are included in cost of goods sold or other (income) expense, net. We depreciate our assets using the straight-line method over the estimated useful lives of the assets. The ranges of estimated useful lives are as follows:

	Years
Buildings	25-40
Land improvements	20
Machinery and equipment	5-20
Furniture and fixtures	5-10

The carrying value of fixed assets is assessed when events and circumstances indicating impairment are present. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed are reported at the lower of the carrying amount or fair value less costs to sell.

Depreciation expense was \$40.1 million for 2010, \$58.3 million for 2011, and \$59.6 million for 2012.

Accounts Receivable

Trade accounts receivable primarily arise from sales of goods to customers and distributors in the normal course of business.

Sales of trade accounts receivable

We have in the past sold certain trade accounts receivable to a bank under a factoring arrangement. The receivables were sold at a discount on a nonrecourse basis and we did not retain interests in the receivables sold. We also acted as a servicer of the sold receivables for a fee. The servicing duties included collecting payments on receivables and remitting them to the bank. While servicing the receivables, we applied the same servicing policies and procedures that are applied to our owned accounts receivable.

Allowance for Doubtful Accounts

Considerable judgment is required in assessing the realizability of receivables, including the current creditworthiness of each customer, related aging of the past due balances and the facts and circumstances surrounding any non-payment. We evaluate specific accounts when we become aware of a situation where a customer may not be able to meet its financial obligations. The reserve requirements are based on the best facts available to us and are reevaluated and adjusted as additional information is received. Receivables are charged off when amounts are determined to be uncollectible.

Capitalized Bank Fees

We capitalize bank fees upon the incurrence of debt. As of December 31, 2011 and December 31, 2012, capitalized bank fees amounted to \$6.9 million and \$12.1 million, respectively. We amortize such amounts over the life of the respective debt instrument using the effective interest method. The estimated life may be adjusted upon the occurrence of a triggering event. Amortization of capitalized bank fees amounted to \$1.8 million in 2010, \$1.4 million in 2011, and \$1.7 million in 2012, respectively, and is included in interest expense.

Derivative Financial Instruments

We do not use derivative financial instruments for trading purposes. They are used to manage well-defined commercial risks associated with commodity contracts and currency exchange rate risks.

Foreign Currency Derivatives

We enter into foreign currency derivatives from time to time to manage exposure to changes in currency exchange rates. These instruments, which include, but are not limited to, forward exchange contracts and purchased currency options, attempt to hedge global currency exposures, relating to non-dollar denominated debt and identifiable foreign currency receivables, payables and commitments held by our foreign and domestic subsidiaries. Forward exchange contracts are agreements to exchange different currencies at a specified future date and at a specified rate. Purchased foreign currency options are instruments which give the holder the right, but not the obligation, to exchange different currencies at a specified rate at a specified date or over a range of specified dates. The result is the creation of a range in which a best and worst price is defined, while minimizing option cost. Forward exchange contracts and purchased currency options are carried at fair value. These contracts are treated as hedges to the extent they are effective. Changes in fair values related to these contracts are recognized in other comprehensive income in the Consolidated Balance Sheets until settlement. At the time of settlement, realized gains and losses are recognized in revenue or cost of goods sold on the Consolidated Statements of Income. For derivatives that are not designated as a hedge, any gain or loss is immediately recognized in Cost of Goods Sold or Other (Income) Expense on the the Consolidated Statements of Income. Derivatives used in this manner relate to risks resulting from assets or liabilities denominated in a foreign currency.

Commodity Derivative Contracts

We periodically enter into derivative contracts for natural gas and certain refined oil products. These contracts are entered into to protect against the risk that eventual cash flows related to these products will be adversely affected by future changes in prices. All commodity contracts are carried at fair value and are treated as hedges to the extent they are effective. Changes in their fair values are included in other comprehensive income in the Consolidated Balance Sheets until settlement. At the time of settlement of these hedge contracts, realized gains and losses are recognized as part of cost of goods sold on the Consolidated Statements of Income.

Investments in Non-Consolidated Affiliates

We use the equity method to account for investments in entities that we do not control, but where we have the ability to exercise significant influence. Equity method investments are recorded at original cost and adjusted periodically to recognize (1) our proportionate share of the investees' net income or losses after the date of investment, (2) additional contributions made and dividends or distributions received, and (3) impairment losses resulting from adjustments to net realizable value.

We assess the potential impairment of our equity method investments when indicators such as a history of operating losses, a negative earnings and cash flow outlook, and the financial condition and prospects for the investee's business segment might indicate a loss in value. We determine fair value based on valuation methodologies, as appropriate, including the present value of our estimated future cash flows. If the fair value is less than our carrying amount, the investment is determined to be impaired. If the decline in value is other than temporary, we record an appropriate write-down.

Research and Development

Expenditures relating to the development of new products and processes, including significant improvements to existing products, are expensed as incurred.

Income Taxes

We file a consolidated United States ("U.S.") federal income tax return for GTI and its eligible domestic subsidiaries. Our non-U.S. subsidiaries file income tax returns in their respective local jurisdictions. We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax benefit carry forwards. Deferred tax assets and liabilities at the end of each period are determined using enacted tax rates. A valuation allowance is established or maintained, when, based on currently available information and other factors, it is more likely than not that all or a portion of a deferred tax asset will not be realized.

Under the guidance on accounting for uncertainty in income taxes, we recognize the benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also provides guidance on derecognition, classification, interest and penalties on income taxes, and accounting in interim periods. Stock-Based Compensation Plans

We have various plans that provide for the granting of stock-based compensation to employees and, in certain instances, to non-employee directors, which are described more fully in Note 13, "Management Compensation and Incentive Plans." Shares are issued upon vesting or option exercise from authorized, unissued shares.

We account for those plans under the applicable standards on accounting for share-based payment. For transactions in which we obtain employee services in exchange for an award of equity instruments, we measure the cost of the services based on the grant date fair value of the award. We recognize the cost over the period during which an employee is required to provide services in exchange for the award, known as the requisite service period (usually the vesting period). Costs related to plans with graded vesting are generally recognized using a straight-line method. Cash flows resulting from tax benefits for deductions in excess of compensation cost recognized are included in financing cash flows.

Retirement Plans and Postretirement Benefits

We use actuarial methods and assumptions to account for our defined benefit pension plans and our postretirement benefits. We immediately recognize the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each year (MTM Adjustment) and whenever a plan is remeasured (e.g. due to a significant curtailment, settlement, etc.). Pension and postretirement benefits expense includes the MTM adjustment, actuarially computed cost of benefits earned during the current service period, the interest cost on accrued obligations, the expected return on plan assets based on fair market values, and adjustments due to plan settlements and curtailments. Contributions to the qualified U.S. retirement plan are made in accordance with the requirements of the Employee Retirement Income Security Act of 1974.

Postretirement benefits and benefits under the non-qualified retirement plan have been accrued, but not funded. The estimated cost of future postretirement life insurance benefits is determined by the Company with assistance from independent actuarial firms using the "projected unit credit" actuarial cost method. Such costs are recognized as employees render the service necessary to earn the postretirement benefits. We record our balance sheet position based on the funded status of the plan.

We exclude the inactive participant portion of our pension and other postretirement benefit costs as a component of inventoriable costs. Additional information with respect to benefits plans is set forth in Note 12, "Retirement Plans and Postretirement Benefits."

Environmental, Health and Safety Matters

Our operations are governed by laws addressing protection of the environment and worker safety and health. These laws provide for civil and criminal penalties and fines, as well as injunctive and remedial relief, for noncompliance and require remediation at sites where hazardous substances have been released into the environment.

We have been in the past, and may become in the future, the subject of formal or informal enforcement actions or proceedings regarding noncompliance with these laws or the remediation of company-related substances released into the environment. Historically, such matters have been resolved by negotiation with regulatory authorities resulting in commitments to compliance, abatement or remediation programs and in some cases payment of penalties. Historically, neither the commitments undertaken nor the penalties imposed on us have been material. Environmental considerations are part of all significant capital expenditure decisions. Environmental remediation, compliance and management expenses were approximately \$12.5 million in 2010, \$15.7 million in 2011, and \$15.8

compliance and management expenses were approximately \$12.5 million in 2010, \$15.7 million in 2011, and \$15.8 million in 2012. The accrued liability relating to environmental remediation was \$8.2 million as of December 31, 2011 and \$8.3 million as of December 31, 2012. A charge to income is recorded when it is probable that a liability has been incurred and the cost can be reasonably estimated. When payments are fixed or determinable, the liability is discounted using a rate at which the payments could be effectively settled.

Our environmental liabilities do not take into consideration possible recoveries of insurance proceeds. Because of the uncertainties associated with environmental remediation activities at sites where we may be potentially liable, future expenses to remediate sites could be considerably higher than the accrued liability.

Foreign Currency Translation

We translate the financial statements of foreign subsidiaries, whose local currency is their functional currency, to U.S. dollars using period-end exchange rates for assets and liabilities and weighted average exchange rates for each period for revenues, expenses, gains and losses. Differences arising from exchange rate changes are included in accumulated other comprehensive loss on the Consolidated Balance Sheets until such time as the operations of such non-U.S. subsidiaries are sold or substantially or completely liquidated.

For our Mexican, Swiss and Russian subsidiaries, whose functional currency is the U.S. dollar, we remeasure non-monetary balance sheet accounts and the related income statement accounts at historical exchange rates. Resulting gains and losses arising from the fluctuations in currency for monetary accounts are recognized in other (income) expense, net, in the Consolidated Statements of Income. Gains and losses arising from fluctuations in currency exchange rates on transactions denominated in currencies other than the functional currency are recognized in earnings as incurred.

We have had non-dollar denominated intercompany loans between some of our foreign subsidiaries. These loans are subject to remeasurement gains and losses due to changes in currency exchange rates. Certain of these loans had been deemed to be essentially permanent prior to settlement and, as a result, remeasurement gains and losses on these loans were recorded as a component of accumulated other comprehensive loss in the stockholders' equity section of the Consolidated Balance Sheets. The remaining loans are deemed to be temporary and, as a result, remeasurement gains and losses on these loans are recorded as currency (gains/losses) in other (income) expense, net, on the Consolidated Statements of Income.

Software Development Costs

In connection with our development and implementation of global enterprise resource planning systems with advanced manufacturing, planning and scheduling software, we capitalize certain computer software costs after technological feasibility is established. These costs are capitalized within property, plant and equipment and are amortized utilizing the straight-line method over the economic lives of the related products. Total costs capitalized as of December 31, 2011 and 2012 amounted to \$16.4 million and \$18.1 million, respectively. Amortization expense was \$1.6 million for 2010 and 2011, and \$1.4 million for 2012.

Restructuring

We recognize an accrual for costs associated with exit or disposal activities when the liability is incurred. Goodwill and Other Intangible Assets

Goodwill is the excess of the acquisition cost of businesses over the fair value of the identifiable net assets acquired. We do not recognize deferred income taxes for the difference between the assigned value and the tax basis related to nondeductible goodwill. Goodwill is not amortized; however, impairment testing is performed annually or more frequently if circumstances indicate that impairment may have occurred. We perform the goodwill impairment test annually at December 31.

The impairment test for goodwill uses a two-step approach, which is performed at the reporting unit level. Step one compares the fair value of the reporting unit (using a discounted cash flow method) to its carrying value. The fair value for each reporting unit with goodwill is determined in accordance with accounting guidance on determining fair value, which requires consideration of the income, market, and cost approaches as applicable. If the carrying value exceeds the fair value, there is potential impairment and step two must be performed. Step two compares the carrying value of the reporting unit's goodwill to implied fair value (i.e., fair value of the reporting unit less the fair value of the unit's assets and liabilities, including identifiable intangible assets). If the fair value of goodwill is less than the carrying amount of goodwill, an impairment is recognized.

Other amortizable intangible assets, which consist primarily of patents, trademarks and trade names, customer-related intangibles, and technological know-how, are amortized over their estimated useful lives using the straight line or sum-of-the-years digits method. The estimated useful lives for each major category of amortizable intangible assets are:

	Years
Patents	20
Trade name	5-10
Technology and know-how	5-9
Customer related intangible	5-14

Additional information about goodwill and other intangibles is set forth in Note 5 "Goodwill and Other Intangible Assets."

Major Maintenance and Repair Costs

We perform scheduled major maintenance of the storage and processing units at our Seadrift plant (referred to as "overhaul"). Time periods between overhauls vary by unit. We also perform an annual scheduled significant maintenance and repair shutdown of the plant (referred to as "turnaround").

Costs of overhauls and turnarounds include plant personnel, contract services, materials, and rental equipment. We defer these costs when incurred and use the straight-line method to amortize them over the period of time estimated to lapse until the next scheduled overhaul of the applicable storage or processing unit or over one year for our turnaround. Under this policy in 2011, costs deferred were \$6.4 million and costs amortized were \$3.4 million. Costs deferred in 2012 were \$9.3 million and costs amortized were \$7.4 million.

Our turnaround, normally scheduled during the spring or early summer of each year, was completed during the three months ended June 30, 2012.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenue and expenses. Significant estimates and assumptions are used for, but are not limited to, pension and other post-retirement benefits, allowance for doubtful accounts, accruals and valuation allowances, asset impairment, and environmental-related accruals. Actual results could differ from our estimates.

Subsequent Events

We evaluate events that occur after the balance sheet date but before financial statements are issued to determine if a material event requires our amending the financial statements or disclosing the event.

Reclassification

Certain amounts previously reported have been reclassified to conform to the current year presentation.

Recently Adopted Accounting Standards

Testing of Goodwill for Impairment

As of January 1, 2012, we adopted new guidance on the testing of goodwill impairment that allows the option to assess qualitative factors to determine whether performing the two step goodwill impairment assessment is necessary. Under the option, the calculation of the reporting unit's fair value is not required to be performed unless, as a result of the qualitative assessment, it is more likely than not that the fair value of the reporting unit is less than the unit's carrying amount. The adoption of this guidance impacts testing steps only. We test goodwill annually as of December 31, and when triggering events occur.

Presentation of Other Comprehensive Income

As of January 1, 2012, we adopted new guidance on the presentation of comprehensive income. The guidance allows an entity to present components of net income and other comprehensive income in one continuous statement, referred to as the statement of comprehensive income, or in two separate but consecutive statements. The guidance eliminates the option to report other comprehensive income and its components in the statement of changes in equity. While the guidance changes the presentation of comprehensive income, there are no changes to the components that are recognized in net income or other comprehensive income under current accounting guidance. We elected to adopt the two separate but consecutive statements presentation, and the adoption did not have a material impact on our consolidated financial statements.

Fair Value Measurements

As of January 1, 2012, we adopted new guidance regarding disclosures about fair value measurements. The guidance requires new disclosures related to activity in Level 3 fair value measurements. This guidance requires purchases, sales, issuances, and settlements to be presented separately in the rollforward of activity in Level 3 fair value measurements. The adoption of this guidance did not have a significant impact on our disclosures.

Offsetting (Netting) Financial Instruments and Derivative Instruments

In December 2011, the FASB issued Accounting Standards Update No. 2011-11, Balance Sheet Disclosures about Offsetting Assets and Liabilities ("ASU 2011-11") which requires disclosure of the effect or potential effect of netting, known as offsetting, our derivative assets and liabilities in the balance sheet if permitted by the arrangements. ASU 2011-11 becomes effective for annual and interim financial statements beginning after December 31, 2012. The new guidance is required to be adopted retrospectively. We do not anticipate a material effect on our Consolidated Financial Statements.

Recently Issued Accounting Standards

There are no new accounting standards that we anticipate will have a material impact on our consolidated financial statements.

(2) Acquisitions

Seadrift and C/G

On November 30, 2010, we acquired from the equity holders of Seadrift Coke L.P. ("Seadrift") the 81.1% of the equity interests of Seadrift that we did not already own and from the equity holders of C/G Electrodes LLC ("C/G") 100% of the equity interests of C/G. Because Seadrift and C/G meet the SEC definition of common control, we have treated the transactions as the acquisition of one business and they are referred to collectively as the "Acquisitions." Seadrift and C/G are included in our Consolidated Financial Statements beginning as of December 1, 2010.

Seadrift is one of the largest producers of petroleum-based needle coke in the world and owns the world's only known stand-alone petroleum-based needle coke plant. Needle coke is the key raw material used to make graphite electrodes, including premium UHP graphite electrodes, which are critical consumables in electric arc furnace ("EAF") steel production. The acquisition of Seadrift helps to assure us of a stable supply for a majority of the primary

raw material in the production of graphite electrodes and should allow us to reduce the relative cost of a significant portion of our supply of needle coke.

C/G is a U.S.-based producer of large diameter premium UHP graphite electrodes used in the EAF steel making process. C/G also sells various other graphite-related products, including specialty graphite blocks, granular graphite and partially processed electrodes. The acquisition of C/G provides us with a large diameter graphite electrode manufacturing facility in the U.S. which will allow us to respond to customer orders more quickly and reduce freight cost and transit time for North American shipments.

Consideration transferred: The consideration paid to the equity holders of Seadrift consisted of \$90.0 million in cash (including working capital adjustments), approximately 12 million shares of GTI common stock and \$100 million in aggregate face amount of Senior Subordinated Notes of GTI due in 2015. The consideration paid to the equity holders of C/G consisted of \$159.5 million in cash (including working capital adjustments), approximately 12 million shares of GTI common stock and \$100 million in aggregate face amount of Senior Subordinated Notes of GTI due in 2015. The computation of the fair value of the total consideration at the date of acquisition follows (in thousands, except share price):

GTI common shares issued	24,000
Price per share of GTI common stock	\$19.47
Fair value of consideration attributable to common stock	\$467,280
Fair value of Senior Subordinated Notes	142,597
Cash	249,444
Total consideration paid to equity holders	859,321
Fair value of our previously held 18.9% equity interest in Seadrift	77,342
Total consideration	\$936,663

The volume weighted average price of a share of GTI common stock on November 30, 2010 was used to determine the fair value of the stock issued as consideration in connection with the Acquisitions. The fair value of the non-interest bearing senior subordinated notes was determined using an interest rate of 7%.

Recording of assets acquired and liabilities assumed: The Acquisitions are accounted for using the acquisition method of accounting in accordance with FASB ASC 805, Business Combinations ("ASC 805"). Under the acquisition method the identifiable assets acquired and the liabilities assumed are assigned a new basis of accounting reflecting their estimated fair values. The information included herein has been prepared based on the allocation of purchase price using estimates of the fair values and useful lives of assets acquired and liabilities assumed based on the best available information determined with the assistance of independent valuations, quoted market prices and management estimates.

The following table summarizes the fair values of the identifiable assets acquired and liabilities assumed at the acquisition date (in thousands):

Cash	\$8,240
Accounts receivable	23,079
Inventories	82,665
Property, plant and equipment	280,710
Intangible assets	158,200
Other assets	988
Accounts payable	14,130
Other accrued liabilities	6,830
Debt obligations	1,197
Other long-term liabilities	1,000
Deferred tax liability	83,306
Net identifiable assets acquired	447,419
Goodwill	489,244
Net assets acquired	\$936,663

Intangible assets: The following table is a summary of the fair values of the identifiable intangible assets and their estimated useful lives (dollars in thousands):

	Fair Value	weighted	Average
	Tan value	Amortiza	tion Period
Customer relationships	\$107,500	13.4	years
Technology and know-how	42,800	8.1	years
Trade names	7,900	7.7	years
Total intangible assets	\$158,200	11.6	years

Goodwill: Goodwill of approximately \$489.2 million was recognized for the Acquisitions and is calculated as the excess of the consideration transferred over the net assets acquired and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Specifically, the goodwill recorded as part of the Acquisitions includes:

the expected synergies and other benefits that we believe will result from combining the operations of Seadrift and C/G with the operations of GrafTech;

any intangible assets that do not qualify for separate recognition such as the assembled workforce; and the value of the going-concern element of Seadrift's and C/G's existing businesses (the higher rate of return on the assembled collection of net assets versus acquiring all of the net assets separately).

We have assigned the goodwill to our Industrial Materials segment. Approximately \$168.2 million of the goodwill is deductible for federal income tax purposes.

Debt: We repaid \$80.6 million of debt and interest rate swaps and assumed an additional \$1.2 million of debt. The recorded amount of the debt assumed approximated its fair value. The following is a summary of the third-party debt assumed and not repaid in connection with the close of the Acquisitions (dollars in thousands):

Pennsylvania Industrial Development Authority mortgage note due 2018, interest rate of 3%	\$1,020
Secured promissory note due 2014, interest rate of 6.25%	177
Total debt assumed	\$1,197

Pro-forma impact of the Acquisitions: The unaudited pro-forma results presented below include the effects

of the Acquisitions as if they had been consummated as of January 1, 2009. The pro forma results include the amortization associated with the acquired intangible assets and interest expense associated with debt used to fund the Acquisitions, as well as fair value adjustments for property, plant and equipment and the elimination of related party transactions. To better reflect the combined operating results, material non-recurring charges directly attributable to the Acquisitions have been excluded. In addition, the pro forma results do not include any anticipated synergies or other expected benefits of the Acquisitions. Accordingly, the unaudited pro forma financial information below is not necessarily indicative of either future results of operations or results that might have been achieved had the Acquisitions been consummated as of January 1, 2009 (dollars in thousands, except per share):

Year Ended December 31

	Tear Ended I	Tear Ended December 31,	
	2009	2010	
Revenue	\$802,770	\$1,228,935	
Net income	58,158	141,909	

Material non-recurring pro forma adjustments directly attributable to the Acquisitions include: reversal of LIFO impact, \$1.9 million expense in 2009 and \$21.0 million benefit in 2010; reversal of equity in (income) losses of non-consolidated affiliate, \$55.5 million expense in 2009 and \$14.5 million income in 2010; and \$25.9 million of transaction expenses in 2010.

Previously held 18.9% equity interest in Seadrift: On June 30, 2008, we acquired 100% of Falcon-Seadrift Holding Corp., now named GrafTech Seadrift Holding Corp. ("GTSD"), which held approximately 18.9% of the equity interests in Seadrift. The substance of the transaction was the acquisition of an asset, the limited partnership units, rather than a business combination. Because the amount we paid for the limited partnerships interests exceeded their tax basis accounting guidance required us to recognize a deferred tax liability for this difference and increase our purchase price. We also had a deferred tax asset valuation allowance at the time we acquired the limited partnership units. Accounting guidance required us to reduce the valuation allowance and decrease the purchase price because the deferred tax liability recorded for the purchase was expected to reverse during the same period that our deferred tax assets were expected to reverse.

We accounted for our investment in Seadrift using the equity method of accounting because we had the ability to exercise significant influence, but not exercise control. In 2009 we determined that the fair value of our investment was less than our carrying amount and that the losses in value were other than temporary. We recorded a non-cash impairment of \$52.8 million in 2009 to recognize this other than temporary loss in value.

The following table summarizes the carrying amount (book value) of our investment in Seadrift from January 1, 2010 to November 30, 2010, the date we acquired the remaining 81.1% equity interests (dollars in thousands):

Balance at January 1, 2010	\$63,315	
Equity in earnings (losses)	4,941	
Distributions	(473)
Gain from remeasuring book value to acquisition date fair value	9,559	
Balance at November 30, 2010	\$77,342	

ASC 805 required us to remeasure the book value of our previously held 18.9% equity interest in Seadrift at November 30, 2010 to its fair value and recognize the resulting gain in our 2010 earnings.

Loan to Seadrift: In July 2009, Seadrift entered into agreements to borrow \$12.0 million from certain of its shareholders, which included up to \$6.0 million from us. Each loan was evidenced by a demand note with an interest rate of 10.0%. We recorded our \$6.0 million loan at its face amount, which reasonably approximated its present value. Seadrift repaid the total borrowing of \$12.0 million on March 31, 2010.

Micron Research Corporation

On February 9, 2011, we purchased substantially all of the assets and assumed certain trade liabilities of Micron Research Corporation ("Micron Research"), a subsidiary of E. Holdings, Inc., for \$6.5 million of cash. Micron Research manufactures super fine grain graphite materials and primarily services Electrical Discharge Machining customers. We intend to utilize their technology and capability to service other applications including solar, electronics and medical. The substance of the transaction is the acquisition of a business and we accounted for the transaction following the guidance in ASC 805. Tangible assets acquired and liabilities assumed were recorded at their estimated fair values of \$5.0 million and \$0.2 million, respectively. The estimated fair values of finite-lived intangible assets acquired of \$1.3 million related to technology and know-how and customer relationships are being amortized over their estimated useful lives ranging from 5 to 15 years. Goodwill of \$0.4 million represents the excess of the consideration transferred over the net assets acquired and has been assigned to our Engineered Solutions segment. These values have been prepared based on the allocation of purchase price using estimates of the fair values and useful lives of assets acquired and liabilities assumed based on best available information determined with the assistance of independent valuations, quoted market prices and management estimates. Fiber Materials, Inc.

On October 31, 2011, we purchased substantially all of the assets and assumed certain trade liabilities of Fiber Materials, Inc. ("FMI") for \$14.0 million of cash. FMI is manufacturer of highly engineered advanced carbon composite materials serving the aerospace and defense industries and high temperature insulation for use in industrial applications. FMI has been assigned to our Engineered Solutions ("ES") business segment. The substance of the transaction was the acquisition of a business and we accounted for the transaction following the guidance in ASC 805. Tangible assets acquired and liabilities assumed were recorded at their fair values of \$13.3 million and \$1.4 million, respectively. The fair value of finite-lived intangible assets acquired of \$2.5 million relating to customer relationships is being amortized over its estimated useful life of 5 years. These values have been prepared based on the allocation of purchase price using estimates of the fair values and useful lives of assets acquired and liabilities assumed based on best available information determined with the assistance of independent valuations, quoted market prices and management estimates.

(3) Segment Reporting

We operate in two reportable segments: Industrial Materials and Engineered Solutions.

Industrial Materials. Our industrial materials segment manufactures and delivers high quality graphite electrodes, refractory products and needle coke products. Electrodes are key components of the conductive power systems used to produce steel and other non-ferrous metals. Refractory products are used in blast furnaces and submerged arc furnaces due to their high thermal conductivity and the ease with which they can be machined to large or complex shapes. Needle coke, a crystalline form of carbon derived from decant oil, is the key ingredient in, and is used primarily in, the production of graphite electrodes.

Engineered Solutions. The Engineered Solutions segment includes advanced electronics technologies, advanced graphite materials, advanced composite materials and advanced materials. Advanced electronics technology products consist of electronic thermal management solutions, fuel cell components, and sealing materials. Advanced graphite materials are highly engineered synthetic graphite products used in many areas due to their unique properties and the ability to tailor them to specific solutions. These products are used in transportation, alternative energy, metallurgical, chemical, oil and gas exploration and various other industries. Advanced composite materials are highly engineered carbon products that are woven into various shapes to primarily support the aerospace and defense industries. Advanced materials use carbon and graphite powders as components or additives in a variety of industries, including metallurgical processing, battery and fuel cell components, and polymer additives.

We continue to evaluate the performance of our segments based on segment operating income. Intersegment sales and transfers are not material and the accounting policies of the reportable segments are the same as those for our Consolidated Financial Statements as a whole. Corporate expenses are allocated to segments based on each segment's percentage of consolidated sales.

The following tables summarize financial information concerning our reportable segments:

	For the year Ended		
	December 31,		
	2010	2011	2012
	(Dollars in tho	usands)	-
Net sales to external customers:	(2011410 111 4110		
Industrial Materials	\$833,892	\$1,132,194	\$1,025,571
Engineered Solutions	173,101	187,990	222,693
Total net sales	\$1,006,993	\$1,320,184	\$1,248,264
	\$1,000,993	\$1,320,164	\$1,240,204
Segment operating income:	Φ140 2 17	ф 1 5 Q 5 4 П	Φ142. 2 60
Industrial Materials	\$140,217	\$158,547	\$143,268
Engineered Solutions	17,823	7,462	13,200
Total segment operating income	\$158,040	\$166,009	\$156,468
Reconciliation of segment operating income to income from			
continuing operations before provision for income taxes			
Equity in earnings of and gain recorded on acquisition of			
non-consolidated affiliate	(14,500) —	
Other (income) expense, net	(4,768	4,835	(1,005)
Interest expense	5,076	18,307	23,247
Interest income	*	,	•
		·	(261)
Income before provision for income taxes	\$173,565	\$143,291	\$134,487
Assets are managed based on geographic location because certain reportable segments share certain facilities. Assets			
by reportable segment are estimated based on the value of long-lived assets at each location and the sales mix to third			
party customers at that location.			

	At December	At December 31,	
	2011	2012	
	(Dollars in the	(Dollars in thousands)	
Long-lived assets (a):			
Industrial Materials.	\$649,389	\$685,243	
Engineered Solutions	127,495	148,664	
Total long-lived assets	\$776,884	\$833,907	

The following tables summarize information as to our operations in different geographic areas.

	For the year Ended December 31,		
	2010	2011	2012
	(Dollars in thousands)		
Net sales:			
U.S.	\$203,438	\$353,416	\$372,014
Americas	177,396	252,316	195,748
Asia Pacific	193,061	240,220	235,658
Europe, Middle East, Africa	433,098	474,232	444,844
Total	\$1,006,993	\$1,320,184	\$1,248,264

	At December 31,	
	2011	2012
	(Dollars in th	ousands)
Long-lived assets (a):		
U.S. and Canada	\$470,196	\$523,818
Mexico	75,145	79,279
Brazil	54,466	47,593
France	52,337	55,792
Spain	76,510	78,392
South Africa	35,559	36,937
Switzerland	5,032	4,829
Other countries	7,639	7,267
Total	\$776,884	\$833,907

(a) Long-lived assets represent fixed assets, net of accumulated depreciation.

(4) Supply Chain Financing

We have a supply chain financing arrangement with a financing party. Under this arrangement, we essentially assign our rights to purchase needle coke from a supplier to the financing party. The financing party purchases the product from a supplier under the standard payment terms and then immediately resells it to us under longer payment terms. The financing party pays the supplier the purchase price for the product and then we pay the financing party. Our payment to the financing party for this needle coke includes a mark-up (the "Mark-Up"). The Mark-Up is a premium expressed as a percentage of the purchase price. The Mark-Up is subject to quarterly reviews. This arrangement helps us to maintain a balanced cash conversion cycle between inventory payments and the collection of receivables. Based on the terms of the arrangement, the total amount that we owe to the financing party may not exceed \$49.3 million at any point in time.

We record the inventory once title and risk of loss transfers from the supplier to the financing party. We record our liability to the financing party as an accrued liability. Our purchases of inventory under this arrangement were \$169.1 million in 2011 and \$189.5 million in 2012. We recognized Mark-Up of \$1.0 million in 2011 and \$0.6 million in 2012 as interest expense.

(5) Goodwill and Other Intangible Assets

The Company is required to review goodwill and indefinite-lived intangible assets annually for impairment. Goodwill impairment is tested at the reporting unit level on an annual basis and between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value.

Our annual impairment test of goodwill was performed as of December 31, 2012. The estimated fair values of our reporting units were based on discounted cash flow models derived from internal earnings forecasts and assumptions. The assumptions and estimates used in these valuations incorporated the current and expected economic environment. Our model was based on our internally developed forecast and based on these valuations, the fair value substantially exceeded our net asset value. In addition, to the quantitative analysis, we have qualitatively assessed our reporting units and we believe that the quantitative analysis supporting the fair value in excess of the carrying value is appropriate. However, a further deterioration in the global economic environment or in any of the input assumptions in our calculation could adversely affect the fair value of our reporting units and result in an impairment of some or all of the goodwill on the balance sheet.

The changes in the Company's carrying value of goodwill during the years ended December 31, 2011 and 2012 are as follows:

	Total	
	(Dollars in Thousands)	
Balance as of December 31, 2010	\$499,238	
Translation effect	(1,741)
Business Acquisitions	1,184	
Balance as of December 31, 2011	498,681	
Translation effect	(420)
Balance as of December 31, 2012	\$498,261	

The following table summarizes intangible assets with determinable useful lives by major category as of December 31, 2011 and 2012:

	2011 Gross Carrying Amount (Dollars in T	Accumulated Amortization	('arryıng	2012 Gross Carrying Amount (Dollars in T	Accumulated Amortization	Net Carrying Amount
Patents	\$3,520	\$(1,393) \$2,127	\$3,520	\$(1,617	\$1,903
Trade name	7,900	(1,598) 6,302	7,900	(2,870) 5,030
Technology and know-how	43,349	(6,526) 36,823	43,349	(12,554) 30,795
Customer related intangible	110,798	(16,481) 94,317	110,798	(31,233	79,565
Total finite-lived intangible assets	\$165,567	\$(25,998) \$139,569	\$165,567	\$(48,274) \$117,293

Amortization expense of intangible assets in 2010, 2011 and 2012 was \$2.1 million, \$23.0 million and \$22.3 million, respectively. Estimated annual amortization expense for the next five years will approximate \$22.0 million in 2013, \$20.5 million in 2014, \$18.8 million in 2015, \$14.7 million in 2016 and \$15.9 million in 2017.

(6) Long-Term Debt and Liquidity

The following table presents our long-term debt:

	At December 31,	
	2011 2012	
	(Dollars in thou	ısands)
Revolving Facility	\$232,000	\$69,500
Senior Notes	_	300,000
Senior Subordinated Notes	153,442	164,183
Other debt	2,182	2,026
Total	\$387,624	\$535,709

Revolving Facility

On October 7, 2011, we successfully completed the refinancing of our principal revolving credit facility ("Revolving Facility"). Borrowers under the Revolving Facility were GrafTech Finance Inc. ("GrafTech Finance") and GrafTech Switzerland S.A. ("Swissco"), both wholly-owned subsidiaries. On April 20, 2012, as permitted by Section 9.19 of the October 7, 2011 Credit Agreement, we entered into an Amended and Restated Credit Agreement pursuant to which, on August 28, 2012, GrafTech Luxembourg II S.à.r.l. ("Luxembourg Holdco") replaced Swissco as a Borrower. Swissco is no longer entitled to borrow Loans under the Revolving Facility although it is entitled to request letters of credit thereunder only for its own use.

The interest rate applicable to the Revolving Facility is, at GrafTech's option, either LIBOR plus a margin ranging from 1.5% to 2.25% (depending on our total net leverage ratio and/or senior unsecured rating) or, in the case of dollar denominated loans, the alternate base rate plus a margin ranging from 0.50% to 1.25% (depending upon such

ratio or rating). The alternate base rate is the highest of (i) the prime rate announced by JPMorgan Chase Bank, N.A., (ii) the federal fund effective rate plus one-half of 1.0% and (iii) the London interbank offering rate (as adjusted) for a one-month period plus 1.0%. The borrowers pay a per annum fee ranging from 0.25% to 0.40% (depending on such ratio or rating) on the undrawn portion of the commitments under the Revolving Facility.

The financial covenants require us to maintain a minimum cash interest coverage ratio of 3.00 to 1.00 and a maximum senior secured leverage ratio of 2.25 to 1.00, subject to adjustment for certain events. As of December 31, 2012, we were in compliance with all financial and other covenants contained in the Revolving Facility, as applicable. Senior Notes

On November 20, 2012, GrafTech International Ltd. entered into an indenture dated November 20, 2012 (the "Indenture") among the Company, certain domestic subsidiaries of the Company party thereto and U.S. Bank National Association, as trustee (the "Trustee"). The Company issued \$300 million principal amount of 6.375% Senior Notes due 2020. These Senior Notes are the Company's senior unsecured obligations and rank pari passu with all of the Company's existing and future senior unsecured indebtedness. The Senior Notes are guaranteed on a senior unsecured basis by each of the Company's existing and future subsidiaries that guarantee certain other indebtedness of the Company or another guarantor.

The Senior Notes bear interest at a rate of 6.375% per year, payable semi-annually in arrears on May 15 and November 15 of each year, commencing on May 15, 2013. Interest will accrue from November 20, 2012. The Senior Notes mature on November 15, 2020.

The Company is entitled to redeem some or all of the Senior Notes at any time on or after November 15, 2016, at the redemption prices set forth in the Indenture. In addition, prior to November 15, 2016, the Company may redeem some or all of the Senior Notes at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, plus a "make whole" premium determined as set forth in the Indenture. The Company is also entitled to redeem up to 35% of the aggregate principal amount of the Senior Notes before November 15, 2015 with the net proceeds from certain equity offerings at a redemption price of 106.375% of the principal amount plus accrued and unpaid interest, if any.

If, prior to maturity, a change in control (as defined in the Indenture) of the Company occurs and thereafter certain downgrades of the ratings of the Senior Notes as specified in the Indenture occur, the Company will be required to offer to repurchase any or all of the Senior Notes at a repurchase price equal to 101% of the aggregate principal amount of the Senior Notes, plus any accrued and unpaid interest.

The Indenture also contains covenants that, among other things, limit the ability of the Company and certain of its subsidiaries to: (i) create liens or use assets as security in other transactions; (ii) engage in certain sale/leaseback transactions; and (iii) merge, consolidate or sell, transfer, lease or dispose of substantially all of their assets.

The Indenture also contains customary events of default, including (i) failure to pay principal or interest on the Senior Notes when due and payable, (ii) failure to comply with covenants or agreements in the Indenture or the Senior Notes which failures are not cured or waived as provided in the Indenture, (iii) failure to pay indebtedness of the Company, any Subsidiary Guarantor or Significant Subsidiary (as defined in the Indenture) within any applicable grace period after maturity or acceleration and the total amount of such indebtedness unpaid or accelerated exceeds \$50.0 million, (iv) certain events of bankruptcy, insolvency, or reorganization, (v) failure to pay any judgment or decree for an amount in excess of \$50.0 million against the Company, any Subsidiary Guarantor or any Significant Subsidiary that is not discharged, waived or stayed as provided in the Indenture, (vi) cessation of any subsidiary guarantee to be in full force and effect or denial or disaffirmance by any Subsidiary Guarantor of its obligations under its subsidiary guarantee, and (vii) a default under the Company's Senior Subordinated Notes. In the case of an event of default, the principal amount of the Senior Notes plus accrued and unpaid interest may be accelerated.

The offering of the Notes was not registered under the Securities Act of 1933, as amended (the "Securities Act") or any state securities laws or blue sky laws but the Company has agreed to file a registration statement under the Securities Act to permit the exchange of the Notes for new registered notes of the Company having terms substantially identical to the Senior Notes. Under certain circumstances, the Company may also be required to file

a shelf registration statement under the Securities Act to register the resale of the Senior Notes by certain holders thereof. If the Company fails to comply with certain of their obligations, the Company will be required to pay additional interest to the holders of the Senior Notes until it does comply.

Senior Subordinated Notes

On November 30, 2010, in connection with the Acquisitions, we issued Senior Subordinated Notes for an aggregate total face amount of \$200 million. These Senior Subordinated Notes are non-interest bearing and mature in 2015, see Note 2 "Acquisitions". Because the promissory notes are non-interest bearing, we were required to record them at their present value (determined using an interest rate of 7%). The difference between the face amount of the promissory notes and their present value is recorded as debt discount. The debt discount will be amortized to income using the interest method, over the life of the promissory notes. The loan balance, net of unamortized discount, was \$164.2 million at December 31, 2012.

(7) Fair Value Measurements and Derivative Instruments

Fair Market Value Measurements

Depending on the inputs, we classify each fair value measurement as follows:

Level 1 – based upon quoted prices for identical instruments in active markets,

Level 2 – based upon quoted prices for similar instruments, prices for identical or similar instruments in markets that are not active, or model-derived valuations of all of whose significant inputs are observable, and

Level 3 – based upon one or more significant unobservable inputs.

The following section describes key inputs and assumptions used in valuation methodologies of our assets and liabilities measured at fair value on a recurring basis:

Cash and cash equivalents, short-term notes and accounts receivable, accounts payable and other current payables – The carrying amount approximates fair value because of the short maturity of these instruments.

Long-term debt – Fair value of long-term debt, which was determined using Level 2 inputs, as of December 31, 2011 was \$387.6 million and approximated fair value. As of December 31, 2012 the fair value was \$546.3 million, versus a book value of \$535.7 million.

Foreign currency derivatives – Foreign currency derivatives are carried at market value using Level 2 inputs. The outstanding contracts at December 31, 2011 and 2012 represented unrealized gains of \$2.4 million and unrealized losses of \$1.3 million, respectively.

Commodity derivative contracts – Commodity derivative contracts are carried at fair value. We determine the fair value using observable, quoted natural gas and refined oil product prices that are determined by active markets and therefore classify the commodity derivative contracts as Level 2. The outstanding commodity derivative contracts as of December 31, 2011 represented unrealized losses of \$0.5 million and no gain or loss as of December 31, 2012. Derivative Instruments

We use derivative instruments as part of our overall foreign currency and commodity risk management strategies to manage the risk of exchange rate movements that would reduce the value of our foreign cash flows and to minimize commodity price volatility. Foreign currency exchange rate movements create a degree of risk by affecting the value of sales made and costs incurred in currencies other than the US Dollar.

Certain of our derivative contracts contain provisions that require us to provide collateral. Since the counterparties to these financial instruments are large commercial banks and similar financial institutions, we do not believe that we are exposed to material counterparty credit risk. We do not anticipate nonperformance by any of the counter-parties to our instruments.

Foreign currency derivatives

We enter into foreign currency derivatives from time to time to attempt to manage exposure to changes in currency exchange rates. These foreign currency instruments, which include, but are not limited to, forward exchange contracts and purchased currency options, attempt to hedge global currency exposures such as foreign

currency denominated debt, sales, receivables, payables, and purchases. Forward exchange contracts are agreements to exchange different currencies at a specified future date and at a specified rate. There was no ineffectiveness on these contracts during the twelve months ended December 31, 2011 or 2012.

In 2011 and 2012, we entered into foreign forward currency derivatives as hedges of anticipated cash flows denominated in the Mexican peso, Brazilian real, South African rand, euro and Japanese yen. These derivatives were entered into to protect the risk that the eventual cash flows resulting from such transactions will be adversely affected by changes in exchange rates between the US dollar and the Mexican peso, Brazilian real, South African rand, euro and Japanese yen. As of December 31, 2011, we had outstanding Brazilian real, euro, and Japanese yen currency contracts, with aggregate notional amounts of \$131.9 million. As of December 31, 2012, we had outstanding Mexican peso, Brazilian real, South African rand, euro, and Japanese yen currency contracts, with aggregate notional amounts of \$183.7 million. The foreign currency derivatives outstanding as of December 31, 2012 have several maturity dates ranging from January 2013 to December 2013.

Commodity derivative contracts

We periodically enter into derivative contracts for natural gas and certain refined oil products. These contracts are entered into to protect against the risk that eventual cash flows related to these products will be adversely affected by future changes in prices. There was no ineffectiveness on these contracts during the twelve months ended December 31, 2011 or 2012. As of December 31, 2012, we had outstanding derivative swap contracts for refined oil products with aggregate notional amounts of \$31.9 million. These contracts have maturity dates ranging from January 2013 to March 2013.

The fair value of all derivatives is recorded as assets or liabilities on a gross basis in our Consolidated Balance Sheets. At December 31, 2011 and 2012, the fair values of our derivatives and their respective balance sheet locations are presented in the following table:

	Asset Derivatives		Liability Derivatives	
	Location	Fair Value	Location	Fair Value
As of December 31, 2011	(Dollars in Thousands)			
Derivatives designated as cash flow hedges: Foreign currency derivatives	Other receivables	\$4,412	Other payables	\$1,834
Commodity derivative contracts	Other current assets	1,104	Other current liabilities	1,557
Total fair value		\$5,516		\$3,391
As of December 31, 2012				
Derivatives designated as cash flow hedges:				
Foreign currency derivatives	Other receivables	\$1,062	Other payables	\$2,374
Commodity derivative contracts Total fair value	Other current assets	<u> </u>	Other current liabilities	31 \$2,405
10th Inn Thine		Ψ1,002		Ψ2,103

As of December 31, 2011 Derivatives designated as fair value hedges:	Asset Derivatives Location (Dollars in Thousands)	Fair Value	Liability Derivatives Location	Fair Value
Foreign currency derivatives Total fair value	Other receivables	\$— \$—	Other payables	\$195 \$195
As of December 31, 2012 Derivatives designated as fair value hedges: Foreign currency derivatives Total fair value	Other receivables	\$— \$—	Other payables	\$— \$—
	Asset Derivatives Location	Fair Value	Liability Derivatives Location	Fair Value
As of December 31, 2011 Derivatives not designated as hedges:	(Dollars in Thousands)			
Foreign currency derivatives Total fair value	Other receivables	\$— \$—	Other payables	\$— \$—
As of December 31, 2012 Derivatives not designated as hedges:				
Foreign currency derivatives Total fair value The leasting and amount of realized (cains).	Other receivables	\$242 \$242	Other payables	\$— \$—

The location and amount of realized (gains) losses on derivatives are recognized in the Statements of Income when the hedged item impacts earnings and are as follows for the years ended 2011 and 2012:

		Amount of Recognized Portion)	(Gain)/Loss I (Effective
	Location of (Gain)/Loss Reclassified from Other Comprehensive Income (Effective Portion)	2011 (Dollars in	2012 Thousands)
Derivatives designated as cash flow hedges:	(Effective Fortion)		
Foreign currency derivatives	Cost of goods sold/Other expense / (income) / Revenue	\$368	\$(5,226)
Commodity forward derivatives	Cost of goods sold / Revenue	\$(7,287) \$(9,430)
	Location of (Gain)/Loss Recognized in the Consolidated Statement of Income	(Gain)/Loss (Effective F 2011 (Dollars in	2012
Derivatives designated as fair value hedges:			•
Foreign currency derivatives	Cost of goods sold/Other expense (income)	\$(1,491) \$209

		Amount of (Recognized	Gain)/Loss
	Location of (Gain)/Loss Recognized in	2011	2012
	the Consolidated Statement of Income	(Dollars in th	nousands)
Derivatives not designated as hedges:			
Foreign currency derivatives	Cost of goods sold/Other expense (income)	\$ —	\$346

Our foreign currency and commodity derivatives are treated as hedges and are required to be measured at fair value on a recurring basis. With respect to the inputs used to determine the fair value, we use observable, quoted rates that are determined by active markets and, therefore, classify the contracts as "Level 2".

(8) Interest Expense

The following table presents an analysis of interest expense:

	For the year	Ended	
	December 3	51,	
	2010	2011	2012
	(Dollars in	thousands)	
Interest incurred on debt	\$985	\$5,745	\$10,172
Amortization of discount on Senior Subordinated Notes	806	10,039	10,742
Amortization of debt issuance costs	1,761	1,521	1,712
Supply Chain Financing mark-up	1,524	1,002	621
Total interest expense	\$5,076	\$18,307	\$23,247
Interest rates			

Interest rates

The Revolving Facility had an effective interest rate of 2.05% and 2.21% as of December 31, 2011 and 2012, respectively. The Senior Notes carry an interest rate of 6.375%. The Senior Subordinated Notes have an implied rate of 7.00%.

(9) Other (Income) Expense, Net

As part of our cash management, we have intercompany loans between our subsidiaries. These loans are deemed to be temporary and, as a result, remeasurement gains/losses are recorded in other (income) expense, net, on the Consolidated Statements of Income. We had a net currency loss in 2011 of \$2.6 million and a net currency gain of of \$0.6 million in 2012, mainly due to the remeasurement of intercompany loans and the effect of transaction gains and losses on intercompany activities.

In addition, other (income) expense in 2012, includes \$4.0 million of insurance reimbursements for claims made related to flood damages incurred at our Clarksburg, West Virginia facility during 2011.

(10) Supplementary Balance Sheet Detail

The following tables present supplementary balance sheet details:

		At December 3 2011 (Dollars in thou	2012	
Accounts and notes receivable, net:				
Trade		\$224,905	\$244,000	
Allowance for doubtful accounts		(4,153	(7,571)
		\$220,752	\$236,429	
Inventories:				
Raw materials and supplies		\$168,982	\$230,057	
Work in process		205,968	213,948	
Finished goods		73,821	73,293	
		448,771	517,298	
Reserves		•	(4,233)
		\$444,062	\$513,065	,
Property, plant and equipment:		, ,	. ,	
Land and improvements		\$34,896	\$36,744	
Buildings		175,588	182,838	
Machinery and equipment and other		1,105,440	1,172,045	
Construction in progress		115,508	140,732	
		\$1,431,432	\$1,532,359	
Other accrued liabilities:		+ -,,	+ -,,	
Payrolls (including incentive programs)		\$7,624	7,461	
Customer prepayments		8,478	7,594	
Employee compensation and benefits		11,680	10,335	
Other		12,393	25,563	
		\$40,175	\$50,953	
Other long term obligations:		Ψ 10,170	Ψοσ,>οο	
Postretirement benefits		\$29,630	\$30,465	
Pension and related benefits		75,840	73,202	
Other		25,830	21,338	
Other		\$131,300	\$125,005	
The following table presents an analysis of the allowance for doubtf	ful accounts:	Ψ131,300	Ψ123,003	
The following tuble presents all analysis of the allowance for doubti	At December 3	1		
	2010	2011	2012	
	(Dollars in tho		2012	
Balance at beginning of year	\$4,545	\$3,892	\$4,153	
Additions	1,004	1,438	5,159	
Deductions	,	·) (1,741)
Balance at end of year	\$3,892	\$4,153	\$7,571	,
Datance at one of your	Ψ3,072	ψ^{-1} ,133	Ψ1,5/1	

Inventories

We allocate fixed production overheads to the costs of conversion based on normal capacity of the production facilities. It also requires that we recognize abnormal amounts of idle facility expense, freight, handling costs, and wasted materials (spoilage) as current period charges. As of December 31, 2011 we had no costs in excess of normal absorption. Costs in excess of normal absorption as of December 31, 2012 were \$3.5 million. The following table presents an analysis of our inventory reserves:

	At December 31,			
	2010	2011	2012	
	(Dollars in	thousands)		
Balance at beginning of year	\$2,518	\$2,716	\$4,709	
Additions	2,844	4,154	4,052	
Deductions	(2,646) (2,161) (4,528)
Balance at end of year	\$2,716	\$4,709	\$4,233	

(11)Commitments

Lease commitments under non-cancelable operating leases extending for one year or more will require the following future payments:

	(Dollars in thousands)
2013	\$2,808
2014	1,916
2015	585
2016	547
2017	231
After 2017	_

Total lease and rental expenses under non-cancelable operating leases extending one year or more approximated \$2.6 million in 2010, \$2.4 million in 2011 and \$3.2 million in 2012.

We are parties to contracts with ConocoPhillips through December 2013 for the supply of petroleum needle coke, our primary raw material used in the manufacture of graphite electrodes. The agreements provide for quantities of needle coke which we believe, together with needle coke that we source from Seadrift and other sources, are sufficient for our requirements as currently forecast. These supply agreements also contain customary terms and conditions including annual price negotiations, dispute resolution and termination provisions.

We have supply agreements that require us to purchase electricity and natural gas from January 1, 2013 through December 31, 2013. The total obligation under these contracts is \$5.4 million.

(12) Retirement Plans and Postretirement

Benefits

Retirement Plans

On February 26, 1991, we formed our own retirement plan covering substantially all our U.S. employees. Under our plan, covered employees earned benefit payments based primarily on their service credits and wages subsequent to February 26, 1991.

Prior to that date, substantially all our U.S. employees were participants in the U.S. retirement plan of Union Carbide Corporation ("Union Carbide"). While service credit was frozen, covered employees continued to earn benefits under the Union Carbide plan based on their final average wages through February 26, 1991, adjusted for salary increases (not to exceed six percent per annum) through January 26, 1995, the date Union Carbide ceased to own a minimum 50% of the equity of GTI. The Union Carbide plan is responsible for paying retirement and death benefits earned as of February 26, 1991.

Effective January 1, 2002, we established a defined contribution plan for U.S. employees. Certain employees had the option to remain in our defined benefit plan for an additional period of up to five years. Employees not covered by this option had their benefits under our defined benefit plan frozen as of December 31, 2001, and began participating in the defined contribution plan.

Effective March 31, 2003, we curtailed our qualified benefit plan and the benefits were frozen as of that date for the U.S. employees who had the option to remain in our defined benefit plan. We also closed our non-qualified U.S. defined benefit plan for the participating salaried workforce. The employees began participating in the defined contribution plan as of April 1, 2003.

We make quarterly contributions equal to 1% of each employee's total eligible pay. The expense recorded for contributions to this plan was \$0.5 million in 2010, \$0.8 million in 2011 and \$1.0 million in 2012. All such contributions were made using company stock.

Pension coverage for employees of foreign subsidiaries is provided, to the extent deemed appropriate, through separate plans. Obligations under such plans are systematically provided for by depositing funds with trustees, under insurance policies or by book reserves.

The components of our consolidated net pension costs are set forth in the following table.