



Where innovation
delivers performance

FERRO DELIVERS SEVENTH CONSECUTIVE QUARTER OF ORGANIC GROWTH AND REAFFIRMS FULL-YEAR 2018 GUIDANCE

Company delivers strong revenue growth in first quarter 2018

First Quarter *

- Net Sales increased 26.5% to \$405.5 million
- Organic sales grew 4.6% on constant currency
- GAAP EPS improved 3.8% to \$0.27
- Adjusted EPS increased 16.1% to \$0.36
- Net Income increased 6.8% to \$23.4 million, with EBITDA expanding 14.5% to \$64.0 million
- Capital structure refinanced, enhancing financial flexibility and reducing interest rates.
- Full-year 2018 guidance maintained for non-GAAP Adjusted EPS, Adjusted EBITDA, and Adjusted Free Cash Flow from Operations Conversion.



Ferro delivered another quarter of robust growth, maintaining the momentum of the last several quarters. Our global team continued to press our market and technology leadership positions and to advance optimization initiatives throughout our business.

For the seventh consecutive quarter, the business generated mid-single digit organic growth, driven by a combination of sales from the organic pipeline, pricing strategies and customer optimization decisions. These and other initiatives generated greater profitability, despite headwinds from continued raw material price inflation.

We remain focused on innovation and optimization to create value for our shareholders and to achieve our Vision 2020 goals.



Peter Thomas
Chairman, President and CEO, Ferro Corporation

Key Results * (amounts in millions, except EPS)

Sales and Gross Profits

	Q1 2018	Q1 2017	% Change
Net Sales	\$ 405.5	\$ 320.6	26.5%
Net Sales (Constant Currency)	405.5	343.5	18.1%
Gross Profit (GAAP)	118.7	98.8	20.1%
Adjusted Gross Profit (Constant Currency)	119.7	108.9	9.9%

Net Income, Adjusted EBITDA and EPS

	Q1 2018	Q1 2017	% Change
Net Income ¹	\$ 23.4	\$ 21.9	6.8%
Adjusted EBITDA	64.0	55.9	14.5%
GAAP diluted EPS	\$ 0.27	\$ 0.26	3.8%
Adjusted EPS	0.36	0.31	16.1%

*Comparative information is relative to prior-year first quarter.

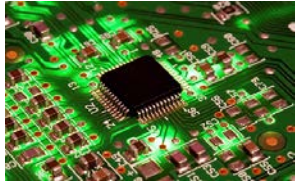
¹ Note: Net Income attributable to Ferro Corporation common shareholders.

Segment Results * (amounts in millions)



Performance Coatings

	Q1 2018	Q1 2017	% Change
Net Sales	\$ 184.6	\$ 126.6	45.8%
Net Sales (Constant Currency)	184.6	136.3	35.4%
Gross Profit (GAAP)	43.8	33.5	30.7%
Adjusted Gross Profit (Constant Currency)	43.7	36.5	19.7%



Performance Colors & Glass

	Q1 2018	Q1 2017	% Change
Net Sales	\$ 120.5	\$ 103.5	16.4%
Net Sales (Constant Currency)	120.5	111.1	8.5%
Gross Profit (GAAP)	43.3	37.4	15.8%
Adjusted Gross Profit (Constant Currency)	43.3	40.6	6.7%



Color Solutions

	Q1 2018	Q1 2017	% Change
Net Sales	\$ 100.4	\$ 90.5	10.9%
Net Sales (Constant Currency)	100.4	96.1	4.5%
Gross Profit (GAAP)	32.1	28.2	13.8%
Adjusted Gross Profit (Constant Currency)	32.7	31.9	2.5%

*Comparative information is relative to prior-year first quarter.

Full Year 2018 Guidance

	Adjusted EBITDA	Adjusted EPS	Adjusted Free Cash Flow from Operations Conversion ¹
2018 Guidance	\$270 - \$275M	\$1.55 - \$1.60	40% - 45%

The 2018 guidance assumes no acquisitions, optimization programs spend or divestitures in 2018.

Currency Exposure 2017 Weighting

EUR - Euro	35% to 40%
CNY - Yuan Renminbi	5% to 7%
MXN - Mexican Peso	4% to 6%
EGP - Egyptian Pound	2% to 5%

2018 Guidance FX sensitivity

% Change	Operating Profit
+ 1 all FX change	~ \$1.3 million to ~\$1.5 million
+ 1 Euro change	~ \$0.8 million to ~\$1.0 million

Note: Ferro is providing full-year guidance. Consistent with prior practice, 2018 guidance uses foreign exchange rates as of December 31, 2017, which includes a USD/EUR exchange rate at 1.20.

The results and guidance in this release, including in the highlights above, contain references to non-GAAP measures from continuing operations. Reconciliation of GAAP to non-GAAP results can be found at the end of this release.

¹ Note: Adjusted free cash flow from operations conversion is defined as Adjusted EBITDA from continuing operations less cash items used to operate the businesses, including cash taxes and interest, changes in working capital, capital expenditures and other cash items over net sales.

Ferro is providing adjusted diluted EPS, adjusted EBITDA and adjusted free cash flow from operations conversion guidance on a continuing operations basis. While it is likely that Ferro could incur charges for items excluded from adjusted diluted EPS, adjusted EBITDA and adjusted free cash flow from operations such as mark-to-market adjustments of pension and other postretirement benefit obligations, restructuring and impairment charges, and legal and professional expenses related to certain business development activities, it is not possible, without unreasonable effort, to identify the amount or significance of these items or the potential for other transactions that may impact future GAAP net income and cash flow from operating activities. Management does not believe these items to be representative of underlying business performance. Management is unable to reconcile, without unreasonable effort, the Company's forecasted range of these adjusted non-GAAP financial measures to their most directly comparable GAAP financial measures.

Constant Currency

Constant currency results reflect the remeasurement of 2017 reported and adjusted local currency results using 2018 exchange rates, which reproduces constant currency comparative figures to 2018 reported and adjusted results. These non-GAAP financial measures should not be considered as a substitute for the measures of financial performance prepared in accordance with GAAP.

Conference Call

Ferro will conduct an investor teleconference at 10:00 a.m. EDT Wednesday, May 2, 2018. Investors can access this conference via any of the following:

- Webcast can be accessed by clicking on the Investor Information link at the top of Ferro's website at ferro.com.
- Live telephone: Call 800-918-9482 within the U.S. or +1 212-231-2911 outside the U.S. Please join the call at least 10 minutes before the start time.
- Webcast replay: Available on Ferro's Investor website at ferro.com beginning at approximately 12:00 noon Eastern Time on May 2, 2018
- Telephone replay: Call 800-633-8284 within the U.S. or +1 402-977-9140 outside the U.S. (for both U.S. and outside the U.S. access code is 21887436).
- Presentation material & podcast: Earnings presentation material and podcasts can be accessed through the Investor Information portion of the Company's Web site at ferro.com.

About Ferro Corporation

Ferro Corporation (www.ferro.com) is a leading global supplier of technology-based functional coatings and color solutions. Ferro supplies functional coatings for glass, metal, ceramic and other substrates and color solutions in the form of specialty pigments and colorants for a broad range of industries and applications. Ferro products are sold into the building and construction, automotive, electronics, industrial products, household furnishings and appliance markets. The Company's reportable segments include: Performance Coatings (metal and ceramic coatings), Performance Colors and Glass (glass coatings), and Color Solutions. Headquartered in Mayfield Heights, Ohio, the Company has approximately 5,680 associates globally and reported 2017 sales of \$1.4 billion.

Cautionary Note on Forward-Looking Statements

Certain statements in this press release may constitute “forward-looking statements” within the meaning of federal securities laws. These statements are subject to a variety of uncertainties, unknown risks, and other factors concerning the Company’s operations and business environment. Important factors that could cause actual results to differ materially from those suggested by these forward-looking statements and that could adversely affect the Company’s future financial performance include the following:

- demand in the industries into which Ferro sells its products may be unpredictable, cyclical, or heavily influenced by consumer spending;
- Ferro’s ability to successfully implement and/or administer its optimization initiatives, including its investment and restructuring programs, and to produce the desired results;
- currency conversion rates and economic, social, political, and regulatory conditions in the U.S. and around the world;
- challenges associated with a multi-national company such as Ferro competing lawfully with local competitors in certain regions of the world;
- our ability to implement and/or administer optimization initiatives to rationalize our operations and improve operating performance;
- Ferro’s ability to identify suitable acquisition candidates, complete acquisitions, effectively integrate the acquired businesses and achieve the expected synergies, as well as the acquisitions being accretive and Ferro achieving the expected returns on invested capital;
- the effectiveness of the Company’s efforts to improve operating margins through sales growth, price increases, productivity gains, and improved purchasing techniques;
- the impact of damage to, or the interruption, failure or compromise of the Company’s information systems;
- the implementation and operations of business information systems and processes;
- compliance costs associated with domestic and international laws, rules, policies and other obligations regarding data protection;
- restrictive covenants in the Company’s credit facilities could affect its strategic initiatives and liquidity;
- Ferro’s ability to access capital markets, borrowings, or financial transactions;
- the availability of reliable sources of energy and raw materials at a reasonable cost;
- increasingly aggressive domestic and foreign governmental regulation of hazardous and other materials and regulations affecting health, safety and the environment;
- sale of products and materials into highly regulated industries;
- our ability to address safety, human health, product liability and environmental risks associated with our current and historical products, product life cycle and production processes;
- competitive factors, including intense price competition;
- Ferro’s ability to protect its intellectual property, including trade secrets, or to successfully resolve claims of infringement brought against it;
- limited or no redundancy for certain of the Company’s manufacturing facilities and possible interruption of operations at those facilities;
- management of Ferro’s general and administrative expenses;
- Ferro’s multi-jurisdictional tax structure and its ability to reduce its effective tax rate, including the impact of the Company’s performance on its ability to utilize significant deferred tax assets;
- the effectiveness of strategies to increase Ferro’s return on invested capital, and the short-term impact that acquisitions may have on return on invested capital;
- stringent labor and employment laws and relationships with the Company’s employees;
- the impact of requirements to fund employee benefit costs, especially post-retirement costs;
- implementation of business processes and information systems, including the outsourcing of functions to third parties;
- risks associated with the manufacture and sale of material into industries making products for sensitive applications;
- exposure to lawsuits, governmental investigations and proceedings relating to current and historical operations and products;

Cautionary Note on Forward-Looking Statements (continued)

- risks and uncertainties associated with intangible assets;
- Ferro's borrowing costs could be affected adversely by interest rate increases;
- liens on the Company's assets by its lenders affect its ability to dispose of property and businesses;
- amount and timing of any repurchase of Ferro's common stock; and
- other factors affecting the Company's business that are beyond its control, including disasters, accidents and governmental actions.

The risks and uncertainties identified above are not the only risks the Company faces. Additional risks and uncertainties not presently known to the Company or that it currently believes to be immaterial also may adversely affect the Company. Should any known or unknown risks and uncertainties develop into actual events, these developments could have material adverse effects on our business, financial condition and results of operations.

This release contains time-sensitive information that reflects management's best analysis only as of the date of this release. The Company does not undertake any obligation to publicly update or revise any forward-looking statements to reflect future events, information, or circumstances that arise after the date of this release.

Additional information regarding these risks can be found in our Annual Report on Form 10-K for the year ended December 31, 2017.

Ferro Corporation

Investor Contact:

Kevin Cornelius Grant, 216.875.5451
Head of Investor Relations
kevincornelius.grant@ferro.com

or

Media Contact:

Mary Abood, 216.875.5401
Director, Corporate Communications
mary.abood@ferro.com

Table 1
Ferro Corporation and Subsidiaries
Condensed Consolidated Statements of Operations (unaudited)

(In thousands, except per share amounts)

	Three Months Ended	
	March 31,	
	2018	2017
Net sales	\$ 405,532	\$ 320,555
Cost of sales	286,846	221,761
Gross profit	118,686	98,794
Selling, general and administrative expenses	73,092	59,446
Restructuring and impairment charges	4,106	3,018
Other expense (income):		
Interest expense	7,962	6,224
Interest earned	(201)	(180)
Foreign currency loss (gain), net	1,840	(314)
Loss on extinguishment of debt	-	3,905
Miscellaneous expense (income), net	775	(2,564)
Income before income taxes	31,112	29,259
Income tax expense	7,514	7,138
Net income	23,598	22,121
Less: Net income attributable to noncontrolling interests	207	223
Net income attributable to Ferro Corporation common shareholders	\$ 23,391	\$ 21,898
Earnings per share attributable to Ferro Corporation common shareholders:		
Basic earnings per share	\$ 0.28	\$ 0.26
Diluted earnings per share	\$ 0.27	\$ 0.26
Shares outstanding:		
Weighted-average basic shares	84,228	83,530
Weighted-average diluted shares	85,510	84,888
End-of-period basic shares	84,396	83,634

Table 2
Ferro Corporation and Subsidiaries
Segment Net Sales and Gross Profit and SG&A (unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31,	
	2018	2017
Segment Net Sales		
Performance Coatings	\$ 184,648	\$ 126,565
Performance Colors and Glass	120,505	103,518
Color Solutions	100,379	90,472
Total segment net sales	\$ 405,532	\$ 320,555
Segment Gross Profit		
Performance Coatings	\$ 43,765	\$ 33,489
Performance Colors and Glass	43,328	37,418
Color Solutions	32,149	28,182
Other costs of sales	(556)	(295)
Total gross profit	\$ 118,686	\$ 98,794
Selling, general and administrative expenses		
Strategic services	\$ 41,178	\$ 31,693
Functional services	26,518	23,200
Incentive compensation	2,966	1,830
Stock-based compensation	2,430	2,723
Total selling, general and administrative expenses	\$ 73,092	\$ 59,446

Table 3
Ferro Corporation and Subsidiaries
Condensed Consolidated Balance Sheets (unaudited)

(Dollars in thousands)

	March 31, 2018	December 31, 2017
ASSETS		
Current assets		
Cash and cash equivalents	\$ 53,296	\$ 63,551
Accounts receivable, net	393,236	354,416
Inventories	358,083	324,180
Other receivables	66,117	67,137
Other current assets	16,154	16,448
Total current assets	886,886	825,732
Other assets		
Property, plant and equipment, net	325,740	321,742
Goodwill	198,538	195,369
Intangible assets, net	187,693	187,616
Deferred income taxes	117,425	108,025
Other non-current assets	45,495	43,718
Total assets	<u>\$ 1,761,777</u>	<u>\$ 1,682,202</u>
LIABILITIES AND EQUITY		
Current liabilities		
Loans payable and current portion of long-term debt	\$ 35,549	\$ 25,136
Accounts payable	204,262	211,711
Accrued payrolls	38,975	48,201
Accrued expenses and other current liabilities	75,026	70,151
Total current liabilities	353,812	355,199
Other liabilities		
Long-term debt, less current portion	773,218	726,491
Postretirement and pension liabilities	167,672	166,680
Other non-current liabilities	75,764	77,152
Total liabilities	1,370,466	1,325,522
Equity		
Total Ferro Corporation shareholders' equity	381,338	344,814
Noncontrolling interests	9,973	11,866
Total liabilities and equity	<u>\$ 1,761,777</u>	<u>\$ 1,682,202</u>

Table 4
Ferro Corporation and Subsidiaries
Condensed Consolidated Statements of Cash Flows (unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31,	
	2018	2017
Cash flows from operating activities		
Net income	\$ 23,598	\$ 22,121
Loss on sale of assets	229	419
Depreciation and amortization	13,392	11,375
Interest amortization	870	479
Restructuring and impairment	2,429	2,828
Loss on extinguishment of debt	-	3,905
Accounts receivable	(32,657)	(26,619)
Inventories	(28,820)	(17,114)
Accounts payable	(7,139)	8,188
Other current assets and liabilities, net	(6,735)	(3,265)
Other adjustments, net	548	(687)
Net cash (used in) provided by operating activities	(34,285)	1,630
Cash flows from investing activities		
Capital expenditures for property, plant and equipment and other long lived assets	(20,682)	(6,766)
Business acquisitions, net of cash acquired	(2,352)	-
Other investing	22	2
Net cash used in investing activities	(23,012)	(6,764)
Cash flows from financing activities		
Net borrowings (repayments) under loans payable	9,742	(3,985)
Proceeds from revolving credit facility, maturing 2019	-	15,628
Principal payments on revolving credit facility, maturing 2019	-	(327,183)
Principal payments on term loan facility, maturing 2021	-	(243,250)
Proceeds from term loan facility, maturing 2024	-	623,827
Principal payments on term loan facility, maturing 2024	(1,664)	-
Proceeds from revolving credit facility, maturing 2022	119,550	-
Principal payments on revolving credit facility, maturing 2022	(79,367)	-
Payment of debt issuance costs	-	(12,712)
Acquisition related contingent consideration payment	(348)	-
Other financing activities	(2,133)	(390)
Net cash provided by financing activities	45,780	51,935
Effect of exchange rate changes on cash and cash equivalents	1,262	446
(Decrease) increase in cash and cash equivalents	(10,255)	47,247
Cash and cash equivalents at beginning of period	63,551	45,582
Cash and cash equivalents at end of period	\$ 53,296	\$ 92,829
Cash paid during the period for:		
Interest	\$ 7,314	\$ 6,535
Income taxes	\$ 4,575	\$ 4,097

Table 5
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Reported Income to Adjusted Income
For the Three Months Ended March 31 (unaudited)

(Dollars in thousands, except per share amounts)	Cost of sales	Selling general and administrative expenses	Restructuring and impairment charges	Other expense, net	Income tax expense ³	Net income attributable to common shareholders	Diluted earnings per share
2018							
As reported	\$ 286,846	\$ 73,092	\$ 4,106	\$ 10,376	\$ 7,514	\$ 23,391	\$ 0.27
Special items:							
Restructuring	-	-	(4,106)	-	1,073	3,033	0.04
Other ¹	(979)	(4,059)	-	(804)	1,320	4,522	0.05
Total special items ⁴	(979)	(4,059)	(4,106)	(804)	2,393	7,555	0.09
As adjusted	\$ 285,867	\$ 69,033	\$ -	\$ 9,572	\$ 9,907	\$ 30,946	\$ 0.36
2017							
As reported	\$ 221,761	\$ 59,446	\$ 3,018	\$ 7,071	\$ 7,138	\$ 21,898	\$ 0.26
Special items:							
Restructuring	-	-	(3,018)	-	1,012	2,006	0.02
Other ²	(2,637)	(2,550)	-	(1,174)	3,675	2,686	0.03
Total special items ⁴	(2,637)	(2,550)	(3,018)	(1,174)	4,687	4,692	0.05
As adjusted	\$ 219,124	\$ 56,896	\$ -	\$ 5,897	\$ 11,825	\$ 26,590	\$ 0.31

- (1) The adjustments to "Cost of Sales" primarily include costs associated with an acquisition. The adjustments to "Selling, general and administrative expenses" primarily include legal, professional and other expenses related to certain business development activities, as well as fees associated with certain reorganization projects and other legal fees. The adjustments to "Other expense, net" primarily relate to earn out adjustments for acquisitions and other acquisition costs.
- (2) The adjustments to "Cost of Sales" primarily include the amortization of purchase accounting adjustments related to our recent acquisitions. The adjustments to "Selling, general and administrative expenses" primarily include legal, professional and other expenses related to certain business development activities. The adjustments to "Other expense, net" primarily relate to debt extinguishment costs and a reduction of a contingent liability in Argentina.
- (3) The tax rate reflects the reported tax rate, adjusted for special items being tax effected at the respective statutory rate where the item originated.
- (4) Due to rounding, total earnings per share related to special items does not always add to the total adjusted earnings per share.

It should be noted that adjusted income, earnings per share and other adjusted items referred to above are financial measures not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). These non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, the financial measures prepared in accordance with U.S. GAAP, and a reconciliation of these financial measures to the most comparable U.S. GAAP financial measures is presented. We believe this data provides investors with additional information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 6
Ferro Corporation and Subsidiaries
Supplemental Information
Constant Currency Schedule of Adjusted Operating Profit (unaudited)

(Dollars in thousands)

	Three Months Ended March 31,			
	2017	Adjusted 2017 ¹	2018	2018 vs Adjusted 2017
Segment net sales				
Performance Coatings	\$ 126,565	\$ 136,288	\$ 184,648	\$ 48,360
Performance Colors and Glass	103,518	111,106	120,505	9,399
Color Solutions	90,472	96,106	100,379	4,273
Total segment net sales	<u>\$ 320,555</u>	<u>\$ 343,500</u>	<u>\$ 405,532</u>	<u>\$ 62,032</u>
Segment adjusted gross profit				
Performance Coatings	\$ 33,489	\$ 36,542	\$ 43,724	\$ 7,182
Performance Colors and Glass	37,885	40,599	43,328	2,729
Color Solutions	30,300	31,884	32,739	855
Other costs of sales	(243)	(175)	(126)	49
Total adjusted gross profit ²	<u>\$ 101,431</u>	<u>\$ 108,850</u>	<u>\$ 119,665</u>	<u>\$ 10,815</u>
Adjusted selling, general and administrative expenses				
Strategic services	\$ 31,616	\$ 34,371	\$ 41,099	\$ 6,728
Functional services	20,727	21,402	22,545	1,143
Incentive compensation	1,830	2,007	2,959	952
Stock-based compensation	2,723	2,723	2,430	(293)
Total adjusted selling, general and administrative expenses ³	<u>\$ 56,896</u>	<u>\$ 60,503</u>	<u>\$ 69,033</u>	<u>\$ 8,530</u>
Adjusted operating profit	\$ 44,535	\$ 48,347	\$ 50,632	\$ 2,285
Adjusted operating profit as a % of net sales	13.9%	14.1%	12.5%	

(1) Reflects the remeasurement of 2017 reported and adjusted local currency results using 2018 exchange rates, resulting in constant currency comparative figures to 2018 reported and adjusted results. See Table 5 for non-GAAP adjustments applicable to the three month period.

(2) Refer to Table 5 for the reconciliation of adjusted gross profit for the three months ended March 31, 2018 and 2017, respectively.

(3) Refer to Table 5 for the reconciliation of SG&A expenses to adjusted SG&A expenses for the three months ended March 31, 2018 and 2017, respectively.

It should be noted that adjusted 2017 results is a financial measure not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). This non-GAAP financial measure should be considered as a supplement to, and not as a substitute for, the financial measures prepared in accordance with U.S. GAAP and a reconciliation of this financial measure to the most comparable U.S. GAAP financial measures is presented. We believe this data provides investors with additional information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 7
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Net income attributable to Ferro Corporation
common shareholders to Adjusted EBITDA (unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31,	
	2018	2017
Net income attributable to Ferro Corporation common shareholders	\$ 23,391	\$ 21,898
Net income attributable to noncontrolling interests	207	223
Restructuring and impairment charges	4,106	3,018
Other expense, net	2,414	847
Interest expense	7,962	6,224
Income tax expense	7,514	7,138
Depreciation and amortization	14,262	11,854
Less: interest amortization expense and other	(870)	(479)
Cost of sales adjustments ¹	979	2,637
SG&A adjustments ¹	4,059	2,550
Adjusted EBITDA	\$ 64,024	\$ 55,910
Net sales	\$ 405,532	\$ 320,555
Adjusted EBITDA as a % of net sales	15.8%	17.4%

(1) For details of Non-GAAP adjustments, refer to Table 5 for the reconciliation of cost of sales to adjusted cost of sales and SG&A to adjusted SG&A for the three months ended March 31, 2018 and 2017, respectively.

It should be noted that adjusted EBITDA is a financial measure not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). This non-GAAP financial measure should be considered as a supplement to, and not as a substitute for, the financial measures prepared in accordance with U.S. GAAP and a reconciliation of this financial measure to the most comparable U.S. GAAP financial measure is presented. Adjusted EBITDA is net income attributable to Ferro Corporation common shareholders before the effects of net income attributable to noncontrolling interests, restructuring and impairment charges, other expense, net, interest expense, income tax expense, depreciation and amortization, non-GAAP adjustments to cost of sales and non-GAAP adjustments to SG&A. We believe this data provides investors with additional information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 8
Ferro Corporation and Subsidiaries
Supplemental Information
Change in Net Debt (unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31,	
	2018	2017
Beginning of period		
Gross debt	\$ 759,078	\$ 578,205
Cash	63,551	45,582
Debt, net of cash	695,527	532,623
Unamortized debt issuance costs	7,451	3,720
Debt, net of cash and unamortized debt issuance costs	688,076	528,903
End of period		
Gross debt	815,930	643,173
Cash	53,296	92,829
Debt, net of cash	762,634	550,344
Unamortized debt issuance costs	7,163	8,206
Debt, net of cash and unamortized debt issuance costs	755,471	542,138
Change from FX on Euro term loan debt	(7,915)	-
Period increase in debt, net of cash, unamortized debt issuance costs and FX	\$ (59,192)	\$ (17,721)
Period increase in debt, net of cash and unamortized debt issuance costs	\$ (67,395)	\$ (13,235)

It should be noted that the change in net debt is a financial measure not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). This non-GAAP financial measure should be considered as a supplement to, and not as a substitute for, the financial measures prepared in accordance with U.S. GAAP and a reconciliation of this financial measure to the most comparable U.S. GAAP financial measure is presented. We believe that given the significant cash and cash equivalents on the balance sheet that the change in cash against outstanding debt, net debt, between periods is a meaningful measure.

Table 9
Ferro Corporation and Subsidiaries
Supplemental Information
Adjusted Free Cash Flow from Continuing Operations (unaudited)

(Dollars in thousands)

	Three Months Ended	
	March 31,	
	2018	2017
	As Adjusted	
Adjusted EBITDA ¹	\$ 64,024	\$ 55,910
Capital expenditures	(14,474)	(6,766)
Working capital	(67,023)	(35,545)
Cash income taxes	(4,575)	(4,097)
Cash interest	(7,314)	(6,535)
Pension	(632)	(619)
Incentive compensation payments	(16,172)	(12,224)
Other	5,027	7,661
Adjusted Free Cash Flow from Continuing Operations	\$ (41,139)	\$ (2,215)
Restructuring/Other	(11,505)	(436)
Outflows from M&A activity	(6,548)	(2,358)
Debt issuance costs	-	(12,712)
Period increase in debt, net of cash, unamortized debt issuance costs and FX ²	\$ (59,192)	\$ (17,721)
Change in unamortized debt issuance costs	(288)	4,486
Change from FX on Euro term loan debt	(7,915)	-
Period increase in debt, net of cash and unamortized debt issuance costs	\$ (67,395)	\$ (13,235)

(1) See Table 7 for the reconciliation of net income attributable to Ferro Corporation common shareholders to adjusted EBITDA.

(2) See Table 8 for the reconciliation of period change in debt, net of cash, unamortized debt issuance costs and FX.

It should be noted that adjusted EBITDA and adjusted free cash flow from continuing operations are financial measures not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). These non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, the financial measures prepared in accordance with U.S. GAAP and a reconciliation of these financial measures to the most comparable U.S. GAAP financial measures is presented. Adjusted EBITDA is net income attributable to Ferro Corporation common shareholders before the effects of income attributable to noncontrolling interest, restructuring and impairment charges, other expense, net, interest expense, income tax expense, depreciation and amortization, non-GAAP adjustments to cost of sales, and non-GAAP adjustments to SG&A. Adjusted Free Cash Flow from Continuing Operations is adjusted EBITDA less capital expenditures, changes in working capital, cash income taxes, cash interest, pension contributions, incentive compensation payments, and other continuing operations cash items. We believe this data provides investors with additional information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance. In addition, these measures are used in the calculation of certain incentive compensation programs for selected employees.