



Where innovation
delivers performance

FERRO REPORTS RESILIENT SECOND QUARTER 2020 PERFORMANCE

Innovation and optimization drive year-over-year Gross Profit Margin expansion

Second Quarter Continuing Operations*

- Net Sales declined 21.5% to \$204.8M, or 19.6% on a constant currency basis
- Gross Profit declined 19.4% to \$63.7M, Gross Profit Margin improved 80 bps to 31.1%
- Adjusted Gross Profit Margin improved 30 bps to 32.1%
- GAAP diluted EPS of \$(0.03), Adjusted diluted EPS of \$0.12
- Net Loss¹ declined 151.0% to \$5.5M, Adjusted EBITDA declined 29.5% to \$30.9M
- Adjusted EBITDA Margin declined to 15.1%

Year to Date Continuing Operations*

- Net Sales declined 12.8% to \$457.1M, or 10.9% on a constant currency basis
- Gross Profit declined 8.0% to \$144.5M, Gross Profit Margin improved 170 bps to 31.6%
- Adjusted Gross Profit Margin improved 130 bps to 32.3%
- GAAP diluted EPS of \$0.16, Adjusted diluted EPS of \$0.37
- Net Income¹ declined 56.8% to \$10.6M, Adjusted EBITDA declined 8.5% to \$71.6M
- Adjusted EBITDA Margin improved 80 bps to 15.7%

**Comparative information is relative to prior-year second quarter and prior-year to June 30 year to date for Continuing Operations*

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

“**Ferro demonstrated the resilience of its portfolio in the second quarter, increasing gross profit margins despite the challenging macro-economic circumstances. The breadth of our product lines mitigated the impact of weakness in certain sectors, as many of our products serve critical industries that continued to operate during the quarter. Adjusted Gross Profit Margin improved to 32.1 percent, even with sales volumes down 20 percent. Our business proposition of high-margin, essential products, supplemented by innovation and optimization initiatives showed its potential.**

Our second quarter performance, although down from last year, was in line with our expectations and, as we moved through the quarter, established what we see as a trend of meaningful improvement from the macro-economic low point. Order patterns in the later part of the quarter showed our customers beginning to have more visibility into their business needs for the second half of 2020, and we now expect the third quarter to track in the same favorable direction that we experienced coming out of the second quarter. In addition, based on what we have seen so far, we are cautiously optimistic that this positive momentum will continue into the fourth quarter. Although the timing and strength of an economic recovery are unknown, we see signs that our continuing operations will produce sequential quarterly improvement. However, visibility through the second half of the year remains somewhat clouded to publish a guidance range for the remainder of the year.

Ferro's associates around the globe remain committed to delivering our essential products and services to critical industries, even as they manage through the challenges presented by the COVID-19 pandemic. They also are advancing on our strategic priorities of innovation and optimization and the sale of our Tile Coatings Systems business, which we continue to expect to complete in the second half of 2020. I am proud of their dedication and professionalism and we continue to make their health and safety a top priority.

Peter Thomas
Chairman, President and CEO, Ferro Corporation



Key Results from Continuing Operations*

(amounts in millions, except EPS)

Sales and Gross Profits	Q2 2020	% Change	2020 YTD	% Change
Net Sales	\$ 204,801	-21.5%	\$ 457,127	-12.8%
Net Sales (constant currency)	204,801	-19.6%	457,127	-10.9%
Gross Profit (GAAP)	63,744	-19.4%	144,482	-8.0%
Gross Profit Margin	31.1%	80 bps	31.6%	170 bps
Adjusted Gross Profit (constant currency)	65,676	-19.0%	147,592	-7.1%
Adjusted Gross Profit Margin	32.1%	30 bps	32.3%	130 bps

Net Income/(Loss), EBITDA and EPS	Q2 2020	% Change	2020 YTD	% Change
Net Income/(Loss) ¹	\$ (5,540)	-151.0%	\$ 10,583	-56.8%
Adjusted EBITDA	30,896	-29.5%	71,619	-8.5%
Adjusted EBITDA Margin	15.1%	(170) bps	15.7%	80 bps
GAAP diluted EPS	\$ (0.03)	-123.1%	\$ 0.16	-30.4%
Adjusted EPS	0.12	-47.8%	0.37	-2.6%

*Comparative information is relative to prior-year second quarter and prior-year to June 30 year to date for Continuing Operations.

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

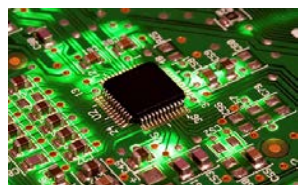
Second Quarter 2020 Highlights

Net sales in the second quarter of 2020 declined 21.5% to \$204.8 million and declined 19.6% on a constant currency basis. The decrease in the quarter was due primarily to impacts of COVID-19, which caused demand softness in many of Ferro's end markets. Demand in the electronics material business generated double digit sales growth. For the quarter, gross profit declined 19.4% to \$63.7 million and declined 19.0% to \$65.7 million on a constant currency basis compared to the prior year quarter. Gross Profit Margin in the second quarter of 2020 increased 80 basis points to 31.1%. Adjusted Gross Profit Margin increased 30 basis points to 32.1%. The improvement in Gross Profit Margin was primarily due to lower raw material costs, improved mix, and price stability.

Second quarter GAAP diluted EPS was a loss of \$0.03. Adjusted diluted EPS for the second quarter was \$0.12. There was a Net Loss¹ of \$5.5 million for the second quarter, and Adjusted EBITDA declined 29.5% to \$30.9 million.

¹ Note: Net (Loss) attributable to Ferro Corporation common shareholders.

Segment Results Continuing Operations* (amounts in millions, except EPS)



	Q2 2020	% Change	2020 YTD	% Change
Functional Coatings				
Net Sales	\$ 131,672	-19.6%	\$ 287,107	-13.2%
Net Sales (Constant Currency)	131,672	-17.3%	287,107	-11.0%
Gross Profit (GAAP)	36,119	-26.7%	83,936	-13.9%
Gross Profit Margin	27.4%	(270) bps	29.2%	(30) bps
Adjusted Gross Profit (Constant Currency)	37,847	-23.6%	86,722	-10.6%
Adj. Gross Profit Margin (Constant Currency)	28.7%	(240) bps	30.2%	10 bps



	Q2 2020	% Change	2020 YTD	% Change
Color Solutions				
Net Sales	\$ 73,129	-24.8%	\$ 170,020	-12.2%
Net Sales (Constant Currency)	73,129	-23.4%	170,020	-10.7%
Gross Profit (GAAP)	26,985	-9.1%	60,772	4.6%
Gross Profit Margin	36.9%	640 bps	35.7%	570 bps
Adjusted Gross Profit (Constant Currency)	26,985	-11.2%	60,795	2.1%
Adj. Gross Profit Margin (Constant Currency)	36.9%	510 bps	35.8%	450 bps

*Comparative information is relative to prior-year second quarter and prior-year to June 30 year to date for Continuing Operations.

Currency Exposure 2019 Weighting

EUR – Euro	35% to 40%
CNY -Yuan Renminbi	6% to 8%
MXN – Mexican Peso	2% to 4%

FX sensitivity

% Change	Operating Profit
+1% all FX change	~\$0.6 million to ~\$0.8 million
+1% Euro change	~\$0.4 million to ~\$0.6 million

Constant currency

Constant currency results reflect the remeasurement of 2019 reported and adjusted local currency results using 2020 exchange rates, which produces constant currency comparatives for 2020 reported and adjusted results. These non-GAAP financial measures should not be considered a substitute for the measures of financial performance prepared in accordance with GAAP.

Conference Call

Ferro will conduct an investor teleconference at 8:00 a.m. EDT Wednesday August 5, 2020. Investors can access this conference via any of the following:

- Webcast can be accessed by clicking on the Investors link at the top of Ferro's website at ferro.com.
- Live telephone: Call 800-735-5968 within the U.S. or +1 212-231-2904 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 4:30 p.m. Eastern Time on August 5, 2020.
- 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 21966876).
- Presentation material and podcast: Earnings presentation material and podcasts can be accessed through the Investors portion of the Company's website 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: Functional Coatings and Color Solutions. Headquartered in Mayfield Heights, Ohio, the Company has approximately 5,890 associates globally and reported 2019 sales of \$1.0 billion. Included within our employee count are approximately 2,100 employees in our foreign consolidated subsidiaries associated with the Tile Coatings Systems business.

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:

- other factors affecting the Company’s business that are beyond its control, including disasters, pandemics (such as COVID-19), accidents and governmental actions;
- Ferro’s ability to successfully complete the sale of its Tile Coatings Systems business, including obtaining the requisite regulatory approvals;
- demand in the industries into which Ferro sells its products may be unpredictable, cyclical, or heavily influenced by consumer spending;
- the effectiveness of the Company’s efforts to improve operating margins through sales growth, price increases, productivity gains, and improved purchasing techniques;
- currency conversion rates and economic, social, political, and regulatory conditions in the U.S. and around the world;
- the availability of reliable sources of energy and raw materials at a reasonable cost;
- challenges associated with a multi-national company such as Ferro competing lawfully with local competitors in certain regions of the world;
- Ferro’s ability to successfully implement and/or administer its optimization initiatives, including its investment and restructuring programs, and to produce the desired results;
- Ferro’s ability to successfully introduce new products and services or enter into new growth markets;
- 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 impact of damage to, or the interruption, failure or compromise of the Company’s information systems due to events including but not limited to aging information systems infrastructure, computer viruses and cyber security breaches;
- the implementation and operations of business information systems and processes;
- increasingly aggressive domestic and foreign governmental regulation of hazardous and other materials and regulations affecting health, safety and the environment;
- our ability to address safety, human health, social, product liability and environmental risks associated with our current and historical products, product life cycles and production processes;
- competitive factors, including intense price competition;
- increased, and possibly inconsistent, domestic and foreign regulations of privacy and data security;
- changes in U.S. and other governments’ trade policies;
- 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; sale of products and materials into highly regulated industries;
- limited or no redundancy for certain of the Company’s manufacturing facilities and possible interruption of operations at those facilities;
- our ability to attract and retain key personnel;
- exposure to lawsuits, governmental investigations and proceedings relating to current and historical operations and products;
- Ferro’s ability to protect its intellectual property, including trade secrets, or to successfully resolve claims of infringement brought against it;
- 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;
- borrowing costs that could be affected adversely by interest rate increases;

Cautionary Note on Forward-Looking Statements (continued)

- management of Ferro's general and administrative expenses;
- the impact of the Tax Cuts and Jobs Act on our business;
- 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;
- risks and uncertainties associated with intangible assets;
- the effectiveness of strategies to increase Ferro's return on invested capital, internal rate of return and other return metrics, and the short-term impact that acquisitions may have on such metrics;
- liens on the Company's assets by its lenders affect its ability to dispose of property and businesses; and
- amount and timing of any repurchase of Ferro's common stock.

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, 2019.

Ferro Corporation

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

(In thousands, except per share amounts)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Net sales	\$ 204,801	\$ 260,958	\$ 457,127	\$ 524,340
Cost of sales	141,057	181,828	312,645	367,351
Gross profit	63,744	79,130	144,482	156,989
Selling, general and administrative expenses	50,541	53,249	106,587	110,180
Restructuring and impairment charges	8,619	4,057	9,784	5,797
Other expense (income):				
Interest expense	6,177	6,281	11,707	12,576
Interest earned	(307)	(832)	(561)	(1,643)
Foreign currency losses (gains), net	1,143	2,043	(172)	4,007
Miscellaneous expense (income), net	(703)	318	(2,166)	364
Income (loss) before income taxes	(1,726)	14,014	19,303	25,708
Income tax expense	200	2,653	5,317	5,546
Income (loss) from continuing operations	(1,926)	11,361	13,986	20,162
Income (loss) from discontinued operations, net of income taxes	(3,238)	(252)	(3,017)	4,825
Net income (loss)	(5,164)	11,109	10,969	24,987
Less: Net income attributable to noncontrolling interests	376	238	386	512
Net income (loss) attributable to Ferro Corporation common shareholders	\$ (5,540)	\$ 10,871	\$ 10,583	\$ 24,475
Earnings (loss) per share attributable to Ferro Corporation common				
Basic earnings (loss):				
Continuing operations	(0.03)	0.13	0.17	0.24
Discontinued operations	(0.04)	-	(0.04)	0.06
Diluted earnings (loss):				
Continuing operations	(0.03)	0.13	0.16	0.23
Discontinued operations	(0.04)	-	(0.04)	0.06
Shares outstanding:				
Weighted-average basic shares	82,246	81,932	82,171	82,206
Weighted-average diluted shares	82,927	82,678	83,279	83,055
End-of-period basic shares	82,251	81,933	82,251	81,933

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

(Dollars in thousands)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Segment Net Sales				
Functional Coatings	\$ 131,672	\$ 163,692	\$ 287,107	\$ 330,718
Color Solutions	73,129	97,266	170,020	193,622
Total segment net sales	\$ 204,801	\$ 260,958	\$ 457,127	\$ 524,340
Segment Gross Profit				
Functional Coatings	\$ 36,119	\$ 49,307	\$ 83,936	\$ 97,537
Color Solutions	26,985	29,702	60,772	58,098
Other costs of sales	640	121	(226)	1,354
Total gross profit	\$ 63,744	\$ 79,130	\$ 144,482	\$ 156,989
Selling, general and administrative expenses				
Strategic services	\$ 21,495	\$ 26,588	\$ 47,111	\$ 54,847
Functional services	24,892	23,870	50,443	48,485
Incentive compensation	1,971	(85)	4,091	1,203
Stock-based compensation	2,183	2,876	4,942	5,645
Total selling, general and administrative expenses	\$ 50,541	\$ 53,249	\$ 106,587	\$ 110,180

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

(Dollars in thousands)

	June 30, 2020	December 31, 2019
ASSETS		
Current assets		
Cash and cash equivalents	\$ 62,031	\$ 96,202
Accounts receivable, net	133,349	139,333
Inventories	290,659	264,476
Other receivables	71,913	69,365
Other current assets	19,072	22,373
Current assets held-for-sale	279,576	291,420
Total current assets	856,600	883,169
Other assets		
Property, plant and equipment, net	296,290	302,672
Goodwill	171,545	172,209
Intangible assets, net	122,024	127,815
Deferred income taxes	101,114	98,714
Operating leased assets	15,042	20,088
Other non-current assets	75,211	72,023
Non-current assets held-for-sale	157,389	157,931
Total assets	<u>\$ 1,795,215</u>	<u>\$ 1,834,621</u>
LIABILITIES AND EQUITY		
Current liabilities		
Loans payable and current portion of long-term debt	\$ 20,379	\$ 8,703
Accounts payable	117,856	138,799
Accrued payrolls	27,799	27,447
Accrued expenses and other current liabilities	76,685	73,016
Current liabilities held-for-sale	103,466	133,780
Total current liabilities	346,185	381,745
Other liabilities		
Long-term debt, less current portion	810,793	798,862
Postretirement and pension liabilities	168,643	174,021
Operating leased non-current liabilities	9,716	14,474
Other non-current liabilities	60,037	56,976
Non-current liabilities held-for-sale	39,186	38,341
Total liabilities	1,434,560	1,464,419
Equity		
Total Ferro Corporation shareholders' equity	350,573	360,376
Noncontrolling interests	10,082	9,826
Total liabilities and equity	<u>\$ 1,795,215</u>	<u>\$ 1,834,621</u>

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

(Dollars in thousands)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Cash flows from operating activities				
Net income	\$ (5,164)	\$ 11,109	\$ 10,969	\$ 24,987
Loss on sale of assets	19	(1,383)	506	(1,219)
Depreciation and amortization	10,403	14,086	20,854	28,350
Interest amortization	866	912	1,795	1,812
Restructuring and impairment	6,609	6,579	6,916	6,758
Accounts receivable	(476)	(27,097)	(51,017)	(70,830)
Inventories	(23,474)	(2,449)	(34,771)	(15,101)
Accounts payable	(5,438)	(14,792)	(45,089)	(58,472)
Other current assets and liabilities, net	(16,780)	274	(1,646)	(545)
Other adjustments, net	409	1,339	(13,078)	5,311
Net cash used in operating activities	(33,026)	(11,422)	(104,561)	(78,949)
Cash flows from investing activities				
Capital expenditures for property, plant and equipment and other long-lived assets	(6,666)	(14,308)	(14,982)	(37,634)
Collections of financing receivables	33,753	21,085	62,580	41,271
Business acquisitions, net of cash acquired	-	-	-	(251)
Other investing activities	33	1,898	778	1,898
Net cash provided by investing activities	27,120	8,675	48,376	5,284
Cash flows from financing activities				
Net borrowings under loans payable	11,283	7,495	11,420	7,528
Principal payments on term loan facility - Amended Credit Facility	(2,050)	(2,050)	(4,100)	(4,100)
Proceeds from revolving credit facility - Amended Credit Facility	180,000	61,246	360,000	165,420
Principal payments on revolving credit facility - Amended Credit Facility	(163,383)	(70,077)	(343,383)	(122,943)
Purchase of treasury stock	-	-	-	(25,000)
Other financing activities	(1,634)	(154)	(1,418)	(568)
Net cash provided by (used in) financing activities	24,216	(3,540)	22,519	20,337
Effect of exchange rate changes on cash and cash equivalents	703	(39)	(505)	338
Increase (decrease) in cash and cash equivalents	19,013	(6,326)	(34,171)	(52,990)
Cash and cash equivalents at beginning of period	51,218	57,637	104,402	104,301
Cash and cash equivalents at end of period	70,231	51,311	70,231	51,311
Less: Cash and cash equivalents of discontinued operations at end of period	8,200	8,200	8,200	8,200
Cash and cash equivalents of continuing operations at end of period	\$ 62,031	\$ 43,111	\$ 62,031	\$ 43,111
Cash paid during the period for:				
Interest	\$ 8,883	\$ 8,725	\$ 16,736	\$ 16,957
Income taxes	\$ 3,291	\$ 4,311	\$ 7,722	\$ 8,251

Table 5
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Reported Income to Adjusted Income
For the Three Months Ended June 30 (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 ⁶	Net income attributable to common shareholders	Diluted earnings per share
	2020						
As reported	\$ 141,057	\$ 50,541	\$ 8,619	\$ 6,310	\$ 200	\$ (2,302)	\$ (0.03)
Adjustments:							
Restructuring	-	-	(8,619)	-	-	8,619	0.10
Acquisition related costs ¹	-	(534)	-	-	-	534	0.01
Costs related to optimization projects ³	(1,932)	(3,307)	-	-	-	5,239	0.06
Costs related to divested businesses and assets	-	(1,517)	-	(52)	-	1,569	0.02
Tax on adjustments	-	-	-	-	4,031	(4,031)	(0.05)
Total adjustments ⁷	(1,932)	(5,358)	(8,619)	(52)	4,031	11,930	0.14
As adjusted	\$ 139,125	\$ 45,183	\$ -	\$ 6,258	\$ 4,231	\$ 9,628	\$ 0.12
	2019						
As reported	\$ 181,828	\$ 53,249	\$ 4,057	\$ 7,810	\$ 2,653	\$ 11,123	\$ 0.13
Adjustments:							
Restructuring	-	-	(4,057)	-	-	4,057	0.05
Acquisition related costs ²	(321)	(760)	-	(768)	-	1,849	0.02
Costs related to optimization projects ⁴	(3,322)	(2,688)	-	-	-	6,010	0.07
Costs related to divested businesses and assets	-	(475)	-	(67)	-	542	0.01
Other ⁵	-	-	-	1,237	-	(1,237)	(0.01)
Tax on adjustments	-	-	-	-	2,994	(2,994)	(0.04)
Total adjustments ⁷	(3,643)	(3,923)	(4,057)	402	2,994	8,227	0.10
As adjusted	\$ 178,185	\$ 49,326	\$ -	\$ 8,212	\$ 5,647	\$ 19,350	\$ 0.23

- (1) The adjustments to "Selling general and administrative expenses" primarily include legal, professional and other expenses related to acquisition costs.
- (2) The adjustments to "Cost of Sales" primarily include environmental costs related to our recent acquisitions. The adjustments to "Selling general and administrative expenses" primarily include legal, professional and other expenses related to acquisition costs. The adjustments to "Other expense, net" relate to purchase price adjustments related to an acquisition that is beyond the measurement period.
- (3) Costs related to Optimization projects of \$5.2 million include costs associated with our Americas manufacturing optimization initiative of \$2.7 million, which is comprised of costs for process development and production testing, professional fees for legal and tax services, supplies and equipment commissioning, and utility setup and testing. The remaining \$2.5 million of costs relate to global optimization projects and discrete projects at our previous acquisitions.
- (4) Costs related to Optimization projects of \$6.0 million include costs associated with our Americas manufacturing optimization initiative of \$5.0 million, which is comprised of costs for process development and production testing, professional fees for legal and tax services, supplies and equipment commissioning, and utility setup and testing. The remaining \$1.0 million of costs relate to global optimization projects and discrete projects at our previous acquisitions.
- (5) The adjustments to "Other expense, net" relate to gains and losses on asset sales.
- (6) Income tax expense reflects the reported expense, adjusted for adjustments being tax effected at the respective statutory rate where the item originated.
- (7) Due to rounding, total earnings per share related to adjustments does not always add to the total adjusted earnings per share.

It should be noted that adjusted net 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 by excluding these costs, our adjusted earnings per share better reflect our underlying business performance, as well as being considered in our internal evaluation of financial performance. These costs are ones that we have concluded are not normal, recurring cash operating expenses necessary to operate our business, and we believe it is useful to present this non-GAAP financial measure to provide investors greater comparability of our base business.

Table 6
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Reported Income to Adjusted Income
For the Six Months Ended June 30 (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 ⁶	Net income attributable to common shareholders	Diluted earnings per share
2020							
As reported	\$ 312,645	\$ 106,587	\$ 9,784	\$ 8,808	\$ 5,317	\$ 13,600	\$ 0.16
Adjustments:							
Restructuring	-	-	(9,784)	-	-	9,784	0.12
Acquisition related costs ¹	(9)	(1,070)	-	-	-	1,079	0.01
Costs related to optimization projects ³	(3,103)	(5,445)	-	-	-	8,548	0.10
Costs related to divested businesses and assets	-	(3,243)	-	(107)	-	3,350	0.04
Tax on adjustments	-	-	-	-	5,474	(5,474)	(0.07)
Total adjustments ⁷	(3,112)	(9,758)	(9,784)	(107)	5,474	17,287	0.21
As adjusted	\$ 309,533	\$ 96,829	\$ -	\$ 8,701	\$ 10,791	\$ 30,887	\$ 0.37
2019							
As reported	\$ 367,351	\$ 110,180	\$ 5,797	\$ 15,304	\$ 5,546	\$ 19,650	\$ 0.23
Adjustments:							
Restructuring	-	-	(5,797)	-	-	5,797	0.07
Acquisition related costs ²	(396)	(2,441)	-	(768)	-	3,605	0.04
Costs related to optimization projects ⁴	(4,286)	(2,635)	-	(50)	-	6,971	0.08
Costs related to divested businesses and assets	-	(806)	-	(139)	-	945	0.01
Other ⁵	-	-	-	1,237	-	(1,237)	(0.01)
Tax on adjustments	-	-	-	-	4,063	(4,063)	(0.05)
Total adjustments ⁷	(4,682)	(5,882)	(5,797)	280	4,063	12,018	0.14
As adjusted	\$ 362,669	\$ 104,298	\$ -	\$ 15,584	\$ 9,609	\$ 31,668	\$ 0.38

- (1) The adjustments to "Selling general and administrative expenses" primarily include legal, professional and other expenses related to acquisition costs.
- (2) The adjustments to "Cost of Sales" primarily include the amortization of purchase accounting adjustments related to our recent acquisitions and environmental costs related to our recent acquisitions. The adjustments to "Selling general and administrative expenses" primarily include legal, professional and other expenses related to acquisition costs. The adjustments to "Other expense, net" primarily relate to earn out adjustments related to an acquisition that are beyond the measurement period.
- (3) Cost related to Optimization projects of \$8.5 million includes costs associated with our Americas manufacturing optimization initiative of \$5.0 million, which is comprised of costs for process development and production testing, professional fees for legal and tax services, supplies and equipment commissioning, and utility setup and testing. The remaining \$3.5 million of costs relate to global optimization projects and discrete projects at our previous acquisitions.
- (4) Cost related to Optimization projects of \$7.0 million includes costs associated with our Americas manufacturing optimization initiative of \$7.0 million, which is comprised of costs for process development and production testing, professional fees for legal and tax services, supplies and equipment commissioning, and utility setup and testing.
- (5) The adjustments to "Other expense, net" relate to gains and losses on asset sales.
- (6) Income tax expense reflects the reported expense, adjusted for adjustments being tax effected at the respective statutory rate where the item originated.
- (7) Due to rounding, total earnings per share related to adjustments does not always add to the total adjusted earnings per share.

It should be noted that adjusted net 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 by excluding these costs, our adjusted earnings per share better reflect our underlying business performance, as well as being considered in our internal evaluation of financial performance. These costs are ones that we have concluded are not normal, recurring cash operating expenses necessary to operate our business, and we believe it is useful to present this non-GAAP financial measure to provide investors greater comparability of our base business.

Table 7
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Adjusted Gross Profit

(Dollars in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Functional Coatings	\$ 131,672	\$ 163,692	\$ 287,107	\$ 330,718
Color Solutions	73,129	97,266	170,020	193,622
Total net sales	<u>\$ 204,801</u>	<u>\$ 260,958</u>	<u>\$ 457,127</u>	<u>\$ 524,340</u>
Total net sales	\$ 204,801	\$ 260,958	\$ 457,127	\$ 524,340
Adjusted cost of sales ¹	139,125	178,185	309,533	362,669
Adjusted gross profit	<u>\$ 65,676</u>	<u>\$ 82,773</u>	<u>\$ 147,594</u>	<u>\$ 161,671</u>
Adjusted gross profit percentage	32.1%	31.7%	32.3%	30.8%

(1) Refer to Table 5 for the reconciliation of adjusted cost of sales for the three months ended June 30, 2020 and 2019, respectively. Refer to Table 6 for the reconciliation of adjusted cost of sales for the six months ended June 30, 2020 and 2019, respectively.

It should be noted that adjusted gross profit 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 this data provides investors with additional useful 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
Constant Currency Schedule of Adjusted Operating Profit (unaudited)

(Dollars in thousands)	Three Months Ended June 30,			
	2019	Adjusted 2019 ¹	2020	2020 vs Adjusted 2019
Segment net sales				
Functional Coatings	\$ 163,692	\$ 159,124	\$ 131,672	\$ (27,452)
Color Solutions	97,266	95,494	73,129	(22,365)
Total segment net sales	<u>\$ 260,958</u>	<u>\$ 254,618</u>	<u>\$ 204,801</u>	<u>\$ (49,817)</u>
Segment adjusted gross profit				
Functional Coatings	\$ 50,949	\$ 49,563	\$ 37,847	\$ (11,716)
Color Solutions	30,770	30,400	26,985	(3,415)
Other costs of sales	1,114	1,124	844	(280)
Total adjusted gross profit ²	<u>\$ 82,833</u>	<u>\$ 81,087</u>	<u>\$ 65,676</u>	<u>\$ (15,411)</u>
Adjusted selling, general and administrative expenses				
Strategic services	\$ 26,537	\$ 26,011	\$ 21,450	\$ (4,561)
Functional services	20,576	20,303	19,626	(677)
Incentive compensation	(117)	(135)	1,927	2,062
Stock-based compensation	2,350	2,350	2,183	(167)
Total adjusted selling, general and administrative expenses ³	<u>\$ 49,346</u>	<u>\$ 48,529</u>	<u>\$ 45,186</u>	<u>\$ (3,343)</u>
Adjusted operating profit	<u>\$ 33,487</u>	<u>\$ 32,558</u>	<u>\$ 20,490</u>	<u>\$ (12,068)</u>
Adjusted operating profit as a % of net sales	12.8%	12.8%	10.0%	

- (1) Reflects the remeasurement of 2019 reported and adjusted local currency results using 2020 exchange rates, resulting in constant currency comparative figures to 2020 reported and adjusted results. See Table 5 for Non-GAAP adjustments applicable to the three month period.
- (2) Refer to Table 7 for the reconciliation of adjusted gross profit for the three months ended June 30, 2020 and 2019, respectively.
- (3) Refer to Table 5 for the reconciliation of adjusted SG&A expenses for the three months ended June 30, 2020 and 2019, respectively.

It should be noted that adjusted net sales, gross profit, SG&A expenses, and operating profit 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 are presented within this table, as well as Table 5 and Table 7. We believe this data provides investors with additional useful information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 9
Ferro Corporation and Subsidiaries
Supplemental Information
Constant Currency Schedule of Adjusted Operating Profit (unaudited)

(Dollars in thousands)	Six Months Ended June 30,			
	2019	Adjusted 2019 ¹	2020	2020 vs Adjusted 2019
Segment net sales				
Functional Coatings	\$ 330,718	\$ 322,685	\$ 287,107	\$ (35,578)
Color Solutions	193,622	190,365	170,020	(20,345)
Total segment net sales	<u>\$ 524,340</u>	<u>\$ 513,050</u>	<u>\$ 457,127</u>	<u>\$ (55,923)</u>
Segment adjusted gross profit				
Functional Coatings	\$ 99,488	\$ 97,043	\$ 86,722	\$ (10,321)
Color Solutions	60,111	59,551	60,795	1,244
Other costs of sales	2,184	2,200	75	(2,125)
Total adjusted gross profit ²	<u>\$ 161,783</u>	<u>\$ 158,794</u>	<u>\$ 147,592</u>	<u>\$ (11,202)</u>
Adjusted selling, general and administrative expenses				
Strategic services	\$ 54,803	\$ 53,642	\$ 46,821	\$ (6,821)
Functional services	43,238	42,728	40,981	(1,747)
Incentive compensation	1,159	1,107	4,091	2,984
Stock-based compensation	5,119	5,119	4,942	(177)
Total adjusted selling, general and administrative expenses ³	<u>\$ 104,319</u>	<u>\$ 102,596</u>	<u>\$ 96,835</u>	<u>\$ (5,761)</u>
Adjusted operating profit	\$ 57,464	\$ 56,198	\$ 50,757	\$ (5,441)
Adjusted operating profit as a % of net sales	11.0%	11.0%	11.1%	

- (1) Reflects the remeasurement of 2019 reported and adjusted local currency results using 2020 exchange rates, resulting in constant currency comparative figures to 2020 reported and adjusted results. See Table 6 for Non-GAAP adjustments applicable to the six month period.
- (2) Refer to Table 7 for the reconciliation of adjusted gross profit for the six months ended June 30, 2020 and 2019, respectively.
- (3) Refer to Table 6 for the reconciliation of adjusted SG&A expenses for the six months ended June 30, 2020 and 2019, respectively.

It should be noted that adjusted net sales, gross profit, SG&A expenses, and operating profit 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 are presented within this table, as well as Table 6 and Table 7. We believe this data provides investors with additional useful information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 10
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 June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net income (loss) attributable to Ferro Corporation common shareholders	\$ (2,302)	\$ 11,123	\$ 13,600	\$ 19,650
Net income attributable to noncontrolling interests	376	238	386	512
Restructuring and impairment charges	8,619	4,057	9,784	5,797
Other (income) expense, net	133	1,529	(2,899)	2,728
Interest expense	6,177	6,281	11,707	12,576
Income tax expense	200	2,653	5,317	5,546
Depreciation and amortization	11,269	11,296	22,649	22,734
Less: interest amortization expense and other	(866)	(912)	(1,795)	(1,812)
Cost of sales adjustments ¹	1,932	3,643	3,112	4,682
SG&A adjustments ¹	5,358	3,923	9,758	5,882
Adjusted EBITDA	\$ 30,896	\$ 43,831	\$ 71,619	\$ 78,295
Net sales	\$ 204,801	\$ 260,958	\$ 457,127	\$ 524,340
Adjusted EBITDA as a % of net sales	15.1%	16.8%	15.7%	14.9%

(1) For details of Non-GAAP adjustments, refer to Table 5 and Table 6 for the reconciliation of adjusted cost of sales and adjusted SG&A for the three and six months ended June 30, 2020 and 2019, 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. We believe this data provides investors with additional useful information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 11
Ferro Corporation and Subsidiaries
Supplemental Information
Change in Net Debt (unaudited)

(Dollars in thousands)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Beginning of period				
Gross debt	\$ 809,868	\$ 875,189	\$ 811,450	\$ 826,224
Cash	43,018	57,637	96,202	104,301
Debt, net of cash	766,850	817,552	715,248	721,923
Unamortized debt issuance costs	4,121	4,592	3,885	4,827
Debt, net of cash and unamortized debt issuance costs	762,729	812,960	711,363	717,096
End of period				
Gross debt	835,486	872,184	835,486	872,184
Cash	62,031	51,311	62,031	51,311
Debt, net of cash	773,455	820,873	773,455	820,873
Unamortized debt issuance costs	4,314	4,356	4,314	4,356
Debt, net of cash and unamortized debt issuance costs	769,141	816,517	769,141	816,517
Unamortized debt issuance costs	193	(236)	429	(471)
FX on cash	703	(39)	(505)	338
Period (increase) in debt, net of cash, unamortized debt issuance costs and FX	\$ (7,308)	\$ (3,282)	\$ (57,702)	\$ (99,288)
Period (increase) in debt, net of cash and unamortized debt issuance costs	\$ (6,412)	\$ (3,557)	\$ (57,778)	\$ (99,421)

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 this data provides investors with additional useful information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.

Table 12
Ferro Corporation and Subsidiaries
Supplemental Information
Reconciliation of Net Cash Used in Operating Activities (GAAP) to
Adjusted Free Cash Flow (Non-GAAP) (unaudited)

(Dollars in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cash flows from operating activities				
Net income	\$ (5,164)	\$ 11,109	\$ 10,969	\$ 24,987
Loss on sale of assets	19	(1,383)	506	(1,219)
Depreciation and amortization	10,403	14,086	20,854	28,350
Interest amortization	866	912	1,795	1,812
Restructuring and impairment	6,609	6,579	6,916	6,758
Accounts receivable	(476)	(27,097)	(51,017)	(70,830)
Inventories	(23,474)	(2,449)	(34,771)	(15,101)
Accounts payable	(5,438)	(14,792)	(45,089)	(58,472)
Other current assets and liabilities, net	(16,780)	274	(1,646)	(545)
Other adjustments, net	409	1,339	(13,078)	5,311
Net cash used in operating activities (GAAP)	\$ (33,026)	\$ (11,422)	\$ (104,561)	\$ (78,949)
Less: Capital Expenditures	(6,666)	(14,308)	(14,982)	(37,634)
Plus: Cash collected for AR securitization	33,753	21,085	62,580	41,271
Adjusted Free Cash Flow (Non-GAAP)	(5,939)	(4,645)	(56,963)	(75,312)
Net Income Attributable to Ferro Corporation Common Shareholders	(5,540)	10,871	10,583	24,475
Adjusted Free Cash Flow Conversion of Net Income Attributable to Ferro Corporation Common Shareholders	107.2%	-42.7%	-538.3%	-307.7%

It should be noted that Adjusted Free Cash Flow is a financial measure not required by, or presented in accordance with, accounting principles generally accepted in the United States (U.S. GAAP). The 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 these financial measures to the most comparable U.S. GAAP financial measures is presented. Adjusted Free Cash Flow (Non-GAAP) is calculated as Cash Flow used in operating activities (GAAP), less capital expenditures and adding cash collected from the Accounts Receivable Securitization program. We believe this data provides investors with additional useful information on the underlying operations and trends of the business and enables period-to-period comparability of financial performance.