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

FORM 10-Q

(Mark One)

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

For the quarterly period ended July 2, 2021

OR

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

For the transition period from to

Commission file number 001-15885

MATERION CORPORATION

(Exact name of Registrant as specified in charter)

Ohio	**34-1919973**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6070 Parkland Blvd., Mayfield Heights, Ohio 44124
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code:
(216)-486-4200

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, no par value	MTRN	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

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

Large accelerated filer ☑ Accelerated filer ☐

Non-accelerated filer ☐ Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑
Number of Shares of Common Stock, without par value, outstanding at July 2, 2021: 20,437,646.

PART 1 - FINANCIAL INFORMATION

Item 1. Financial Statements

Materion Corporation and Subsidiaries
Consolidated Statements of Income
(Unaudited)

(Thousands, except per share amounts)	Second Quarter Ended July 2, 2021	Second Quarter Ended June 26, 2020*	Six Months Ended July 2, 2021	Six Months Ended June 26, 2020*
Net sales	$ 370,999	$ 271,468	$ 725,385	$ 549,414
Cost of sales	301,418	224,513	589,008	457,889
Gross margin	69,581	46,955	136,377	91,525
Selling, general, and administrative expense	38,060	32,852	74,836	63,596
Research and development expense	6,604	4,502	12,810	8,687
Goodwill impairment charges	—	—	—	9,053
Asset impairment charges	—	—	—	1,713
Restructuring expense (income)	—	2,387	(378)	4,551
Other—net	4,194	(357)	8,668	1,922
Operating profit	20,723	7,571	40,441	2,003
Other non-operating income—net	(1,277)	(851)	(2,553)	(1,795)
Interest expense—net	858	1,259	1,619	1,505
Income before income taxes	21,142	7,163	41,375	2,293
Income tax expense	3,274	1,360	6,740	368
Net income	$ 17,868	$ 5,803	$ 34,635	$ 1,925
Basic earnings per share:				
Net income per share of common stock	$ 0.87	$ 0.29	$ 1.70	$ 0.09
Diluted earnings per share:				
Net income per share of common stock	$ 0.87	$ 0.28	$ 1.68	$ 0.09
Weighted-average number of shares of common stock outstanding:				
Basic	20,429	20,317	20,402	20,350
Diluted	20,651	20,554	20,647	20,587

*Amounts for the periods ended June 26, 2020 have been adjusted to reflect the change in inventory accounting method, as described in Note A to the Consolidated Financial Statements in the Company's 2020 Annual Report on Form 10-K.

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Comprehensive Income
(Unaudited)

(Thousands)	Second Quarter Ended July 2, 2021	Second Quarter Ended June 26, 2020*	Six Months Ended July 2, 2021	Six Months Ended June 26, 2020*
Net income	**$ 17,868**	$ 5,803	**$ 34,635**	$ 1,925
Other comprehensive income (loss):				
Foreign currency translation adjustment	**3,193**	1,166	**(5,664)**	293
Derivative and hedging activity, net of tax	**(273)**	347	**972**	(507)
Pension and post-employment benefit adjustment, net of tax	**83**	89	**247**	105
Other comprehensive income (loss)	**3,003**	1,602	**(4,445)**	(109)
Comprehensive income	**$ 20,871**	$ 7,405	**$ 30,190**	$ 1,816

*Amounts for the periods ended June 26, 2020 have been adjusted to reflect the change in inventory accounting method, as described in Note A to the Consolidated Financial Statements in the Company's 2020 Annual Report on Form 10-K.

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Balance Sheets
(Unaudited)

(Thousands)	July 2, 2021	Dec. 31, 2020
Assets		
Current assets		
Cash and cash equivalents	**$ 24,345**	$ 25,878
Accounts receivable, net	**179,326**	166,447
Inventories, net	**290,739**	250,778
Prepaid and other current assets	**22,155**	20,896
Total current assets	**516,565**	463,999
Deferred income taxes	**1,909**	3,134
Property, plant, and equipment	**1,052,464**	998,312
Less allowances for depreciation, depletion, and amortization	**(702,903)**	(688,626)
Property, plant, and equipment, net	**349,561**	309,686
Operating lease, right-of-use assets	**58,833**	62,089
Intangible assets, net	**50,851**	54,672
Other assets	**21,724**	19,364
Goodwill	**142,054**	144,916
Total Assets	**$ 1,141,497**	$ 1,057,860
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	**$ 435**	$ 1,937
Accounts payable	**80,600**	55,640
Salaries and wages	**27,505**	18,809
Other liabilities and accrued items	**36,930**	40,887
Income taxes	**4,837**	1,898
Unearned revenue	**10,920**	7,713
Total current liabilities	**161,227**	126,884
Other long-term liabilities	**17,477**	17,002
Operating lease liabilities	**53,736**	56,761
Finance lease liabilities	**18,410**	20,539
Retirement and post-employment benefits	**40,001**	41,877
Unearned income	**95,290**	86,761
Deferred income taxes	**14,817**	15,864
Long-term debt	**58,838**	36,542
Shareholders' equity		
Serial preferred stock (no par value; 5,000 authorized shares, none issued)	**—**	—
Common stock (no par value; 60,000 authorized shares, issued shares of 27,148 at both July 2nd and December 31st)	**268,205**	258,642
Retained earnings	**660,851**	631,058
Common stock in treasury	**(208,854)**	(199,187)
Accumulated other comprehensive loss	**(43,084)**	(38,639)
Other equity	**4,583**	3,756
Total shareholders' equity	**681,701**	655,630
Total Liabilities and Shareholders' Equity	**$ 1,141,497**	$ 1,057,860

See the notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Cash Flows
(Unaudited)

(Thousands)	Six Months Ended July 2, 2021	Six Months Ended June 26, 2020*
Cash flows from operating activities:		
Net income	**$ 34,635**	$ 1,925
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion, and amortization	**19,063**	23,522
Amortization of deferred financing costs in interest expense	**364**	364
Stock-based compensation expense (non-cash)	**3,512**	3,966
Deferred income tax expense (benefit)	**367**	(723)
Impairment charges	**—**	10,766
Changes in assets and liabilities:		
Accounts receivable	**(13,941)**	5,331
Inventory	**(40,651)**	(18,446)
Prepaid and other current assets	**(1,718)**	(7,264)
Accounts payable and accrued expenses	**28,403**	(7,634)
Unearned revenue	**3,246**	(257)
Interest and taxes payable	**2,868**	1,058
Unearned income due to customer prepayments	**8,043**	26,713
Other-net	**(126)**	(2,888)
Net cash provided by operating activities	**44,065**	36,433
Cash flows from investing activities:		
Payments for purchase of property, plant, and equipment	**(57,712)**	(32,034)
Proceeds from sale of property, plant, and equipment	**603**	33
Net cash used in investing activities	**(57,109)**	(32,001)
Cash flows from financing activities:		
Proceeds from borrowings under revolving credit agreement, net	**22,500**	150,000
Repayment of long-term debt	**(1,654)**	(428)
Principal payments under finance lease obligations	**(1,512)**	(626)
Cash dividends paid	**(4,791)**	(4,582)
Repurchase of common stock	**—**	(6,766)
Payments of withholding taxes for stock-based compensation awards	**(3,021)**	(2,025)
Net cash provided by financing activities	**11,522**	135,573
Effects of exchange rate changes	**(11)**	56
Net change in cash and cash equivalents	**(1,533)**	140,061
Cash and cash equivalents at beginning of period	**25,878**	125,007
Cash and cash equivalents at end of period	**$ 24,345**	$ 265,068

*Amounts for the period ended June 26, 2020 have been adjusted to reflect the change in inventory accounting method, as described in Note A to the Consolidated Financial Statements in the Company's 2020 Annual Report on Form 10-K.

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Shareholders' Equity
(Unaudited)

	Common Shares		Shareholders' Equity					
(Thousands, except per share amounts)	**Common Shares**	**Common Shares Held in Treasury**	**Common Stock**	**Retained Earnings***	**Common Stock in Treasury**	**Accumulated Other Comprehensive Loss**	**Other Equity**	**Total***
Balance at April 2, 2021	20,414	(6,734)	$ 264,940	$ 645,468	$ (206,845)	$ (46,087)	$ 3,860	$ 661,336
Net income	—	—	—	17,868	—	—	—	17,868
Other comprehensive income	—	—	—	—	—	3,003	—	3,003
Cash dividends declared ($0.12 per share)	—	—	—	(2,453)	—	—	—	(2,453)
Stock-based compensation activity	25	25	3,215	(32)	(1,144)	—	—	2,039
Payments of withholding taxes for stock-based compensation awards	(2)	(2)	—	—	(183)	—	—	(183)
Directors’ deferred compensation	1	1	50	—	(682)	—	723	91
Balance at July 2, 2021	20,438	(6,710)	$ 268,205	$ 660,851	$ (208,854)	$ (43,084)	$ 4,583	$ 681,701
Balance at March 27, 2020	20,310	(6,838)	$ 253,967	$ 618,796	$ (198,311)	$ (47,173)	$ 3,490	$ 630,769
Net income	—	—	—	5,803	—	—	—	5,803
Other comprehensive income	—	—	—	—	—	1,602	—	1,602
Cash dividends declared ($0.115 per share)	—	—	—	(2,337)	—	—	—	(2,337)
Stock-based compensation activity	11	11	2,775	(43)	(259)	—	—	2,473
Payments of withholding taxes for stock-based compensation awards	—	—	—	—	(10)	—	—	(10)
Directors’ deferred compensation	1	1	14	—	(146)	—	188	56
Balance at June 26, 2020	20,322	(6,826)	$ 256,756	$ 622,219	$ (198,726)	$ (45,571)	$ 3,678	$ 638,356

(Thousands, except per share amounts)	Common Shares: Common Shares	Common Shares: Common Shares Held in Treasury	Shareholders' Equity: Common Stock	Shareholders' Equity: Retained Earnings*	Shareholders' Equity: Common Stock in Treasury	Shareholders' Equity: Accumulated Other Comprehensive Loss	Shareholders' Equity: Other Equity	Shareholders' Equity: Total*
Balance at December 31, 2020	20,328	(6,820)	$ 258,642	$ 631,058	$ (199,187)	$ (38,639)	$ 3,756	$ 655,630
Net income	—	—	—	34,635	—	—	—	34,635
Other comprehensive loss	—	—	—	—	—	(4,445)	—	(4,445)
Cash dividends declared ($0.235 per share)	—	—	—	(4,791)	—	—	—	(4,791)
Stock-based compensation activity	152	152	9,474	(51)	(5,911)	—	—	3,512
Payments of withholding taxes for stock-based compensation awards	(45)	(45)	—	—	(3,021)	—	—	(3,021)
Directors’ deferred compensation	3	3	89	—	(735)	—	827	181
Balance at July 2, 2021	20,438	(6,710)	$ 268,205	$ 660,851	$ (208,854)	$ (43,084)	$ 4,583	$ 681,701
Balance at December 31, 2019	20,404	(6,744)	$ 249,674	$ 624,954	$ (186,845)	$ (45,462)	$ 3,422	$ 645,743
Net income	—	—	—	1,925	—	—	—	1,925
Other comprehensive loss	—	—	—	—	—	(109)	—	(109)
Cash dividends declared ($0.225 per share)	—	—	—	(4,582)	—	—	—	(4,582)
Stock-based compensation activity	110	110	7,037	(78)	(2,902)	—	—	4,057
Payments of withholding taxes for stock-based compensation awards	(36)	(36)	—	—	(2,025)	—	—	(2,025)
Repurchase of shares	(158)	(158)	—	—	(6,766)	—	—	(6,766)
Directors’ deferred compensation	2	2	45	—	(188)	—	256	113
Balance at June 26, 2020	20,322	(6,826)	$ 256,756	$ 622,219	$ (198,726)	$ (45,571)	$ 3,678	$ 638,356

*Amounts for the periods ended June 26, 2020 have been adjusted to reflect the change in inventory accounting method, as described in Note A to the Consolidated Financial Statements in the Company's 2020 Annual Report on Form 10-K.

See notes to these consolidated financial statements.

Note A — Accounting Policies

Basis of Presentation: The accompanying consolidated financial statements of Materion Corporation and its subsidiaries (referred to herein as the Company, our, we, or us) contain all of the adjustments necessary to present fairly the financial position, results of operations, and cash flows for the interim periods reported. All adjustments were of a normal and recurring nature. Certain amounts in prior periods have been reclassified to conform to the 2021 consolidated financial statement presentation.

These consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in the Company's 2020 Annual Report on Form 10-K. The interim period results are not necessarily indicative of the results to be expected for the full year.

Business Combinations: The Company records assets acquired and liabilities assumed at the date of acquisition at their respective fair values. Any intangible assets acquired in a business combination are recognized and reported apart from goodwill. Goodwill represents the excess purchase price over the fair value of the tangible net assets and intangible assets acquired in a business combination. Acquisition-related expenses are recognized separately from the business combination and are expensed as incurred.

The amounts reflected in Note B to the Consolidated Financial Statements are the results of a preliminary purchase price allocation and will be updated upon completion of the final valuation. The Company is required to complete the purchase price allocation within 12 months of the acquisition date. If such completion of the allocation results in a change in the preliminary values, the measurement period adjustment will be recognized in the period in which the adjustment amount is determined.

Change in Accounting Principle: During the fourth quarter of 2020, the Company elected to change its method for valuing its inventories at locations that previously used the last-in, first-out (LIFO) method to the first-in, first-out (FIFO) method. The Company believes that the FIFO method is preferable as it improves comparability with its most similar peers, it more closely resembles the physical flow of its inventory (i.e., it provides better matching of revenues and expenses), and it results in uniformity across a significant majority of the Company’s inventory. The effects of the change in accounting principle from LIFO to FIFO were retrospectively applied. As a result of the retrospective application of the change in accounting principle, certain financial statement line items in the Company’s consolidated balance sheet as of June 26, 2020 and the consolidated statements of income, comprehensive income, shareholders’ equity, and cash flows for the three and six months ended June 26, 2020 were adjusted as necessary. For further information, refer to the Company's 2020 Annual Report on Form 10-K.

The following tables reflect the impact to the financial statement line items as a result of the change in accounting principle for the prior periods presented in the accompanying financial statements:

Consolidated Statement of Income

(Thousands except per share amounts)

	Second Quarter Ended June 26, 2020			Six Months Ended June 26, 2020		
Selected Items	**As Reported**	**As Adjusted**	**Adjustment**	**As Reported**	**As Adjusted**	**Adjustment**
Cost of sales	$ 223,378	$ 224,513	$ 1,135	$ 455,749	$ 457,889	$ 2,140
Gross margin	48,090	46,955	(1,135)	93,665	91,525	(2,140)
Operating profit	8,706	7,571	(1,135)	4,143	2,003	(2,140)
Income before income taxes	8,298	7,163	(1,135)	4,433	2,293	(2,140)
Income tax expense	1,620	1,360	(260)	858	368	(490)
Net income	6,678	5,803	(875)	3,575	1,925	(1,650)
Basic earnings per share:						
Net income per share of common stock	$ 0.33	$ 0.29	$ (0.04)	$ 0.18	$ 0.09	$ (0.09)
Diluted earnings per share:						
Net income per share of common stock	$ 0.32	$ 0.28	$ (0.04)	$ 0.17	$ 0.09	$ (0.08)

Consolidated Statement of Comprehensive Income
(Thousands)

	Second Quarter Ended June 26, 2020			Six Months Ended June 26, 2020		
Selected Items	**As Reported**	**As Adjusted**	**Adjustment**	**As Reported**	**As Adjusted**	**Adjustment**
Net income	$ 6,678	$ 5,803	$ (875)	$ 3,575	$ 1,925	$ (1,650)
Comprehensive income	8,280	7,405	(875)	3,466	1,816	(1,650)

Consolidated Statement of Cash Flows
(Thousands)

	Six Months Ended June 26, 2020		
Selected Items	**As Reported**	**As Adjusted**	**Adjustment**
Net income	$ 3,575	$ 1,925	$ (1,650)
Deferred income tax benefit	(234)	(723)	(489)
Increase in inventory	(20,585)	(18,446)	2,139

New Pronouncements Adopted: In December 2019, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2019-12, *Income Taxes (Topic 740) - Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing various exceptions, such as the exception to the incremental approach for intra-period tax allocation when there is a loss from continuing operations and income or a gain from other items. The amendments in this update also simplify the accounting for income taxes related to income-based franchise taxes and require that an entity reflect enacted tax laws or rates in the annual effective tax rate computation in the interim period that includes the enactment date. The Company adopted the standard on January 1, 2021. The adoption did not materially impact the Company's financial statements or disclosures.

New Accounting Guidance Issued and Not Yet Adopted: In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. This guidance is intended to provide temporary optional expedients and exceptions to the U.S. GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burden related to the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. This guidance is available immediately and may be implemented in any period prior to the guidance expiration on December 31, 2022. The Company is currently assessing which of its various contracts will require an update for a new reference rate, and will determine the timing for implementation of this guidance at the completion of that analysis.

No other recently issued or effective ASUs had, or are expected to have, a material effect on the Company's results of operations, financial condition, or liquidity.

Note B — Acquisition

Business acquisitions have been accounted for using the acquisition method, with acquired assets and assumed liabilities recognized at their respective fair values as of the acquisition date. The cost in excess of the net assets of the business acquired is included in goodwill.

On July 17, 2020, the Company completed the acquisition of Optics Balzers AG (Optics Balzers), an industry leader in thin film optical coatings. The purchase price for Optics Balzers was $136.1 million, including the assumption of $22.5 million of debt. The transaction was funded with cash on hand. Based on the fair value of assets acquired and liabilities assumed, goodwill of $70.8 million and identifiable intangible assets of $49.3 million were recorded. Goodwill associated with this acquisition is not tax deductible. This acquisition is being reported in our Precision Optics segment and the results of Optics Balzers are not material to our Consolidated Financial Statements. No material measurement period adjustments have been recorded during the second quarter or first six months of 2021. As of July 2, 2021, the purchase price allocation remains preliminary as the Company completes its assessments of income taxes.

Note C — Segment Reporting

The Company has the following reportable segments: Performance Alloys and Composites, Advanced Materials, Precision Optics, and Other. The Company’s reportable segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the Chief Executive Officer, the Company's chief operating decision maker, in determining how to allocate the Company’s resources and evaluate performance.

Performance Alloys and Composites produces strip and bulk form alloy products, strip metal products with clad inlay and overlay metals, beryllium-based metals, beryllium, and aluminum metal matrix composites, in rod, sheet, foil, and a variety of customized forms, and beryllia ceramics.

Advanced Materials produces advanced chemicals, microelectric packaging, precious metal, non-precious metal, and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature, and braze materials.

Precision Optics produces thin film coatings, optical filter materials, sputter-coated, and precision-converted thin film materials.

The Other reportable segment includes unallocated corporate costs and assets.

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Optics	Other	Total
Second Quarter 2021					
Net sales	**$ 125,294**	**$ 213,114**	**$ 32,591**	**$ —**	**$ 370,999**
Intersegment sales	**10**	**3,185**	**—**	**—**	**3,195**
Operating profit (loss)	**17,314**	**8,333**	**2,626**	**(7,550)**	**20,723**
Second Quarter 2020					
Net sales	$ 101,614	$ 150,108	$ 19,746	$ —	$ 271,468
Intersegment sales	(213)	8,997	—	—	8,784
Operating profit (loss)	6,824	4,653	2,091	(5,997)	7,571
First Six Months 2021					
Net sales	**$ 239,437**	**$ 417,758**	**$ 68,190**	**$ —**	**$ 725,385**
Intersegment sales	**15**	**5,872**	**—**	**—**	**5,887**
Operating profit (loss)	**30,805**	**17,266**	**7,184**	**(14,814)**	**40,441**
First Six Months 2020					
Net sales	$ 200,681	$ 310,273	$ 38,460	$ —	$ 549,414
Intersegment sales	2	18,188	—	—	18,190
Operating profit (loss)	10,347	9,703	(7,501)	(10,546)	2,003

The following table disaggregates revenue for each segment by end market for the second quarter and first six months of 2021 and 2020:

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Optics	Other	Total
Second Quarter 2021					
End Market					
Semiconductor	$ 1,806	$ 166,968	$ 563	$ —	$ 169,337
Industrial	30,264	10,687	7,634	—	48,585
Aerospace and defense	19,250	1,660	5,597	—	26,507
Consumer electronics	10,722	266	6,964	—	17,952
Automotive	25,766	1,757	2,107	—	29,630
Energy	4,880	24,216	—	—	29,096
Telecom and data center	13,025	39	—	—	13,064
Other	19,581	7,521	9,726	—	36,828
Total	$ 125,294	$ 213,114	$ 32,591	$ —	$ 370,999
Second Quarter 2020					
End Market					
Semiconductor	$ 1,537	$ 123,908	$ 232	$ —	$ 125,677
Industrial	23,831	8,419	2,574	—	34,824
Aerospace and defense	17,952	1,650	4,119	—	23,721
Consumer electronics	9,956	21	3,404	—	13,381
Automotive	16,415	1,186	7	—	17,608
Energy	5,590	9,327	—	—	14,917
Telecom and data center	12,586	788	—	—	13,374
Other	13,747	4,809	9,410	—	27,966
Total	$ 101,614	$ 150,108	$ 19,746	$ —	$ 271,468

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Optics	Other	Total
First Six Months 2021					
End Market					
Semiconductor	$ 2,803	$ 322,029	$ 1,034	$ —	$ 325,866
Industrial	54,294	23,277	15,009	—	92,580
Aerospace and defense	41,092	3,058	12,173	—	56,323
Consumer electronics	20,766	431	16,424	—	37,621
Automotive	49,273	3,426	4,300	—	56,999
Energy	9,017	51,406	—	—	60,423
Telecom and data center	24,368	109	—	—	24,477
Other	37,824	14,022	19,250	—	71,096
Total	$ 239,437	$ 417,758	$ 68,190	$ —	$ 725,385
First Six Months 2020					
End Market					
Semiconductor	$ 2,443	$ 244,727	$ 243	$ —	$ 247,413
Industrial	47,171	16,781	5,671	—	69,623
Aerospace and defense	32,158	3,077	9,228	—	44,463
Consumer electronics	24,651	138	6,946	—	31,735
Automotive	34,579	3,266	24	—	37,869
Energy	11,019	32,795	—	—	43,814
Telecom and data center	22,575	1,658	—	—	24,233
Other	26,085	7,831	16,348	—	50,264
Total	$ 200,681	$ 310,273	$ 38,460	$ —	$ 549,414

Intersegment sales are eliminated in consolidation.

Note D — Revenue Recognition

Net sales consist primarily of revenue from the sale of precious and non-precious specialty metals, beryllium and copper-based alloys, beryllium composites, and other products into numerous end markets. The Company requires an agreement with a customer that creates enforceable rights and performance obligations. The Company generally recognizes revenue, in an amount that reflects the consideration to which it expects to be entitled, upon satisfaction of a performance obligation, by transferring control over a product to the customer. Control over the product is generally transferred to the customer when the Company has a present right to payment, the customer has legal title, the customer has physical possession, the customer has the significant risks and rewards of ownership, and/or the customer has accepted the product.

Transaction Price Allocated to Future Performance Obligations: Accounting Standards Codification 606, *Revenue from Contracts with Customers,* requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied at July 2, 2021. Remaining performance obligations include non-cancelable purchase orders and customer contracts. The guidance provides certain practical expedients that limit this requirement. As such, the Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

After considering the practical expedient at July 2, 2021, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately $78.1 million.

Contract Balances: The timing of revenue recognition, billings, and cash collections resulted in the following contract assets and contract liabilities:

(Thousands)	July 2, 2021	December 31, 2020	$ change	% change
Accounts receivable, trade	$ **169,279**	$ 156,821	$ 12,458	8 %
Unbilled receivables	**10,682**	8,832	1,850	21 %
Unearned revenue	**10,920**	7,713	3,207	42 %

Accounts receivable, trade represents payments due from customers relating to the transfer of the Company's products and services. The Company believes that its receivables are collectible and appropriate allowances for doubtful accounts have been recorded. Impairment losses (bad debt) incurred relating to our receivables were immaterial during the first six months of 2021.

Unbilled receivables represent expenditures on contracts, plus applicable profit margin, not yet billed. Unbilled receivables are generally billed and collected within one year. Billings made on contracts are recorded as a reduction of unbilled receivables.

Unearned revenue is recorded for consideration received from customers in advance of satisfaction of the related performance obligations. The Company recognized approximately $3.2 million of the December 31, 2020 unearned amounts as revenue during the first six months of 2021.

As a practical expedient, the Company does not adjust the promised amount of consideration for the effects of a significant financing component because the period between the transfer of a product or service to a customer and when the customer pays for that product or service will be one year or less. The Company does not include extended payment terms in its contracts with customers.

Note E — Other-net

Other-net for the second quarter and first six months of 2021 and 2020 is summarized as follows:

	Second Quarter Ended		Six Months Ended	
(Thousands)	**July 2, 2021**	June 26, 2020	**July 2, 2021**	June 26, 2020
Metal consignment fees	$ **2,464**	$ 2,037	$ **4,614**	$ 4,266
Amortization of intangible assets	**1,005**	106	**2,178**	294
Foreign currency (gain) loss	**(33)**	(2,486)	**1,216**	(2,548)
Net loss (gain) on disposal of fixed assets	**24**	9	**(364)**	55
Other items	**734**	(23)	**1,024**	(145)
Total	$ **4,194**	$ (357)	$ **8,668**	$ 1,922

Note F — Restructuring

During 2020, the Company determined it would close its Large Area Coatings (LAC) business (a reporting unit in the Precision Optics segment). The closure was substantially completed by the end of the first quarter of 2021. Income of $0.4 million was recorded in the first quarter of 2021, primarily related to lower than previously estimated facility closure costs that were recorded in 2020.

Remaining severance payments are immaterial and reflected in Salaries and wages in the Consolidated Balance Sheet as of July 2, 2021. Any additional costs related to the closure of this business are expected to be immaterial.

In addition, during 2020, the Company initiated a restructuring plan in its Performance Alloys and Composites segment to close its Warren, Michigan and Fremont, California locations. Costs associated with the plan totaled $2.4 million and

$4.6 million in the second quarter and first six months of 2020, respectively. In the second quarter of 2020, these costs included $0.9 million of severance associated with approximately 60 employees and $1.5 million of facility and other related costs. Included in restructuring charges for the first six months of 2020 was $1.4 million of severance associated with approximately 60 employees and $3.1 million of facility and other related costs.

Remaining severance payments of $0.1 million and facility costs of $0.5 million related to these initiatives are reflected within Salaries and wages and Other liabilities and accrued items, respectively, in the Consolidated Balance Sheet and are expected to be substantially paid in the next twelve months.

Note G — Income Taxes

The Company's effective tax rate for the second quarter of 2021 and 2020 was 15.5% and 19.0%, respectively, and 16.3% and 16.0% in the first six months of 2021 and 2020, respectively. The effective tax rate for each period in 2021 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development credits, and the foreign derived intangible income deduction. The effective tax rate for each period in 2020 was lower than the statutory rate primarily due to the impact of percentage depletion and research and development credits. The effective tax rate for the first six months of 2021 included a net discrete income tax benefit of $0.5 million, primarily related to excess tax benefits from stock-based compensation awards. The effective tax rate for the first six months of 2020 included a net discrete income tax expense of $0.8 million, primarily related to an impairment of goodwill.

On March 11, 2021, President Biden signed the American Rescue Plan (the Rescue Plan) into law. The Rescue Plan, among other things, extends and enhances a number of current-law tax incentives for businesses. While the Company continues to examine the impacts the Rescue Plan may have on its business, it does not expect it will have a material impact to its consolidated financial statements.

Note H — Earnings Per Share (EPS)

The following table sets forth the computation of basic and diluted EPS:

	Second Quarter Ended		Six Months Ended	
(Thousands, except per share amounts)	**July 2, 2021**	June 26, 2020	**July 2, 2021**	June 26, 2020
Numerator for basic and diluted EPS:				
Net income	**$ 17,868**	$ 5,803	**$ 34,635**	$ 1,925
Denominator:				
Denominator for basic EPS:				
Weighted-average shares outstanding	**20,429**	20,317	**20,402**	20,350
Effect of dilutive securities:				
Stock appreciation rights	**79**	36	**75**	36
Restricted stock units	**93**	63	**108**	80
Performance-based restricted stock units	**50**	138	**62**	121
Diluted potential common shares	**222**	237	**245**	237
Denominator for diluted EPS:				
Adjusted weighted-average shares outstanding	**20,651**	20,554	**20,647**	20,587
Basic EPS	**$ 0.87**	$ 0.29	**$ 1.70**	$ 0.09
Diluted EPS	**$ 0.87**	$ 0.28	**$ 1.68**	$ 0.09

Adjusted weighted-average shares outstanding - diluted exclude securities totaling 52,709 and 191,500 for the quarters ended July 2, 2021 and June 26, 2020, respectively and 64,478 and 230,893 for the six months ended July 2, 2021 and June 26, 2020, respectively. These securities are primarily related to restricted stock units and stock appreciation rights with fair market values and exercise prices greater than the average market price of the Company's common shares and were excluded from the dilution calculation as the effect would have been anti-dilutive.

Note I — Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

(Thousands)	July 2, 2021	December 31, 2020
Raw materials and supplies	$ **67,281**	$ 42,905
Work in process	**172,425**	156,093
Finished goods	**51,033**	51,780
Inventories, net	$ **290,739**	$ 250,778

The Company maintains the majority of the precious metals and copper used in production on a consignment basis in order to reduce its exposure to metal price movements and to reduce its working capital investment. The notional value of off-balance sheet precious metals and copper was $456.3 million and $400.0 million as of July 2, 2021 and December 31, 2020, respectively. Amounts for the year ended December 31, 2020 have been revised to reflect a $44.6 million reclassification out of work in process and into finished goods inventory.

Note J — Customer Prepayments

The Company entered into investment and master supply agreements with a customer to procure equipment to manufacture product for the customer. The customer is providing prepayments to the Company in the amount of approximately $70 million in the aggregate to enable the Company to purchase and install certain equipment and make necessary infrastructure improvements to supply product to the customer. The Company will own the equipment and be responsible for operating and maintenance costs. The prepayment from the customer will be applied when commercial production of the product is sold and delivered to the customer in connection with a master supply agreement. Accordingly, as of July 2, 2021 and December 31, 2020, $66.9 million and $58.8 million, respectively, of prepayments are classified as Unearned Income in the Consolidated Balance Sheet, of which $2.2 million and $8.0 million, respectively, was received during the second quarter and first six months of 2021.

Note K — Pensions and Other Post-employment Benefits

The following is a summary of the net periodic benefit cost for the second quarter and first six months of 2021 and 2020 for the domestic pension plans (which include the defined benefit pension plan and the supplemental retirement plans) and the domestic retiree medical plan.

	Pension Benefits		Other Benefits	
	Second Quarter Ended		Second Quarter Ended	
(Thousands)	July 2, 2021	June 26, 2020	July 2, 2021	June 26, 2020
Components of net periodic benefit (credit) cost				
Service cost	$ **—**	$ —	$ **20**	$ 15
Interest cost	**987**	1,215	**29**	53
Expected return on plan assets	**(2,234)**	(2,205)	**—**	—
Amortization of prior service cost (benefit)	**—**	—	**(375)**	(374)
Amortization of net loss (gain)	**417**	284	**(68)**	(83)
Net periodic benefit (credit) cost	$ **(830)**	$ (706)	$ **(394)**	$ (389)
Settlements	**—**	94	**—**	—
Total net benefit (credit) cost	$ **(830)**	$ (612)	$ **(394)**	$ (389)

	Pension Benefits		Other Benefits	
	Six Months Ended		Six Months Ended	
(Thousands)	July 2, 2021	June 26, 2020	July 2, 2021	June 26, 2020
Components of net periodic benefit (credit) cost				
Service cost	$ —	$ —	$ 40	$ 31
Interest cost	1,973	2,429	58	107
Expected return on plan assets	(4,468)	(4,410)	—	—
Amortization of prior service cost (benefit)	—	—	(749)	(749)
Amortization of net loss (gain)	835	568	(137)	(166)
Net periodic benefit (credit) cost	$ (1,660)	$ (1,413)	$ (788)	$ (777)
Settlements	—	94	—	—
Total net benefit (credit) cost	$ (1,660)	$ (1,319)	$ (788)	$ (777)

The Company did not make any contributions to its domestic defined benefit plan in the second quarter or first six months of 2021 or 2020.

The Company reports the service cost component of net periodic benefit cost in the same line item as other compensation costs in operating expenses and the non-service cost components of net periodic benefit cost in Other non-operating (income) expense.

In May 2019, the Company's Board of Directors approved changes to the U.S. defined benefit pension plan. The Company froze the pay and service amounts used to calculate pension benefits for active participants in the pension plan as of January 1, 2020.

Note L — Accumulated Other Comprehensive Income (Loss)

Changes in the components of accumulated other comprehensive income, including the amounts reclassified, for the second quarter and first six months of 2021 and 2020 are as follows:

	Gains and Losses on Cash Flow Hedges						
(Thousands)	Foreign Currency	Precious Metals	Copper	Total	Pension and Post-Employment Benefits	Foreign Currency Translation	Total
Balance at April 2, 2021	$ 1,462	$ 320	$ 280	$ 2,062	$ (43,309)	$ (4,840)	$ (46,087)
Other comprehensive income (loss) before reclassifications	183	(239)	1,145	1,089	—	3,193	4,282
Amounts reclassified from accumulated other comprehensive income (loss)	—	65	(1,507)	(1,442)	77	—	(1,365)
Net current period other comprehensive (loss) income before tax	183	(174)	(362)	(353)	77	3,193	2,917
Deferred taxes	42	(40)	(82)	(80)	(6)	—	(86)
Net current period other comprehensive (loss) income after tax	141	(134)	(280)	(273)	83	3,193	3,003
Balance at July 2, 2021	$ 1,603	$ 186	$ —	$ 1,789	$ (43,226)	$ (1,647)	$ (43,084)
Balance at March 27, 2020	$ 1,214	$ (841)	$ (330)	$ 43	$ (41,330)	$ (5,886)	$ (47,173)
Other comprehensive (loss) income before reclassifications	(201)	(411)	426	(186)	—	1,166	980
Amounts reclassified from accumulated other comprehensive income (loss)	8	491	132	631	70	—	701
Net current period other comprehensive (loss) income before tax	(193)	80	558	445	70	1,166	1,681
Deferred taxes	(44)	18	124	98	(19)	—	79
Net current period other comprehensive (loss) income after tax	(149)	62	434	347	89	1,166	1,602
Balance at June 26, 2020	$ 1,065	$ (779)	$ 104	$ 390	$ (41,241)	$ (4,720)	$ (45,571)

	Gains and Losses on Cash Flow Hedges						
(Thousands)	**Foreign Currency**	**Precious Metals**	**Copper**	**Total**	**Pension and Post-Employment Benefits**	**Foreign Currency Translation**	**Total**
Balance at December 31, 2020	$ 519	$ (170)	$ 468	$ 817	$ (43,473)	$ 4,017	$ (38,639)
Other comprehensive income (loss) before reclassifications	1,268	502	2,436	4,206	—	(5,664)	(1,458)
Amounts reclassified from accumulated other comprehensive income (loss)	140	(39)	(3,041)	(2,940)	234	—	(2,706)
Net current period other comprehensive (loss) income before tax	1,408	463	(605)	1,266	234	(5,664)	(4,164)
Deferred taxes	324	107	(137)	294	(13)	—	281
Net current period other comprehensive (loss) income after tax	1,084	356	(468)	972	247	(5,664)	(4,445)
Balance at July 2, 2021	$ 1,603	$ 186	$ —	$ 1,789	$ (43,226)	$ (1,647)	$ (43,084)
Balance at December 31, 2019	$ 1,324	$ (452)	$ 25	$ 897	$ (41,346)	$ (5,013)	$ (45,462)
Other comprehensive (loss) income before reclassifications	(343)	(1,234)	(352)	(1,929)	—	293	(1,636)
Amounts reclassified from accumulated other comprehensive income (loss)	7	809	453	1,269	46	—	1,315
Net current period other comprehensive (loss) income before tax	(336)	(425)	101	(660)	46	293	(321)
Deferred taxes	(77)	(98)	22	(153)	(59)	—	(212)
Net current period other comprehensive (loss) income after tax	(259)	(327)	79	(507)	105	293	(109)
Balance at June 26, 2020	$ 1,065	$ (779)	$ 104	$ 390	$ (41,241)	$ (4,720)	$ (45,571)

Reclassifications from accumulated other comprehensive income (loss) of gains and losses on foreign currency cash flow hedges are recorded in Net sales in the Consolidated Statements of Income (Loss). Reclassifications from accumulated other comprehensive income (loss) of gains and losses on precious metal and copper cash flow hedges are recorded in Cost of sales in the Consolidated Statements of Income. Refer to Note O for additional details on cash flow hedges.

Reclassifications from accumulated other comprehensive income (loss) for pension and post-employment benefits are included in the computation of the net periodic pension and post-employment benefit expense. Refer to Note K for additional details on pension and post-employment expenses.

Note M — Stock-based Compensation Expense

Stock-based compensation expense, which includes awards settled in shares and in cash, was $2.2 million and $3.8 million in the second quarter and first six months of 2021, respectively, compared to $3.1 million and $4.1 million, respectively, in the same periods of 2020.

The Company granted 52,709 stock appreciation rights (SARs) to certain employees during the first six months of 2021. The weighted-average exercise price per share and weighted-average fair value per share of the SARs granted during the six months ended July 2, 2021 were $68.82 and $20.66, respectively. The Company estimated the fair value of the SARs using the following weighted-average assumptions in the Black-Scholes model:

Risk-free interest rate	0.57 %
Dividend yield	0.7 %
Volatility	37.6 %
Expected term (in years)	4.6

The Company granted 55,064 stock-settled restricted stock units (RSUs) to certain employees and 9,904 to non-employee directors during the first six months of 2021. The Company measures the fair value of stock-settled RSUs based on the closing market price of a share of Materion common stock on the date of the grant. The weighted-average fair value per share was $68.44 and $75.77 for stock-settled RSUs granted to employees and non-employee directors, respectively, during the six months ended July 2, 2021. RSUs are generally expensed over the vesting period of three years for employees and one year for non-employee directors.

The Company granted stock-settled performance-based restricted stock units (PRSUs) to certain employees in the first six months of 2021. The weighted-average fair value of the stock-settled PRSUs was $83.78 per share and will be expensed over the vesting period of three years. The final payout to the employees for all PRSUs will be based upon the Company’s return on invested capital and its total return to shareholders over the vesting period relative to a peer group’s performance over the same period.

At July 2, 2021, unamortized compensation cost related to the unvested portion of all stock-based awards was approximately $12.7 million, and is expected to be recognized over the remaining vesting period of the respective grants.

Note N — Fair Value of Financial Instruments

The Company measures and records financial instruments at fair value. A hierarchy is used for those instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company’s assumptions (unobservable inputs). The hierarchy consists of three levels:

Level 1 — Quoted market prices in active markets for identical assets and liabilities;

Level 2 — Inputs other than Level 1 inputs that are either directly or indirectly observable; and

Level 3 — Unobservable inputs developed using estimates and assumptions developed by the Company, which reflect those that a market participant would use.

The following table summarizes the financial instruments measured at fair value in the Consolidated Balance Sheets as of July 2, 2021 and December 31, 2020:

	Total Carrying Value in the Consolidated Balance Sheets		Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
(Thousands)	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
Financial Assets								
Deferred compensation investments	**$ 3,881**	$ 3,802	**$ 3,881**	$ 3,802	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**477**	107	**—**	—	**477**	107	**—**	—
Precious metal swaps	**258**	127	**—**	—	**258**	127	**—**	—
Copper swaps	**—**	632	**—**	—	**—**	632	**—**	—
Total	**$ 4,616**	$ 4,668	**$ 3,881**	$ 3,802	**$ 735**	$ 866	**$ —**	$ —
Financial Liabilities								
Deferred compensation liability	**$ 3,881**	$ 3,802	**$ 3,881**	$ 3,802	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**151**	1,203	**—**	—	**151**	1,203	**—**	—
Precious metal swaps	**17**	349	**—**	—	**17**	349	**—**	—
Copper swaps	**—**	27	**—**	—	**—**	27	**—**	—
Total	**$ 4,049**	$ 5,381	**$ 3,881**	$ 3,802	**$ 168**	$ 1,579	**$ —**	$ —

The Company uses a market approach to value the assets and liabilities for financial instruments in the table above. Outstanding contracts are valued through models that utilize market observable inputs, including both spot and forward prices, for the same underlying currencies and metals. The carrying values of the other working capital items and debt in the Consolidated Balance Sheets approximate fair values as of July 2, 2021 and December 31, 2020. The Company's deferred compensation investments and liabilities are based on the fair value of the investments corresponding to the employees' investment selections, primarily in mutual funds, based on quoted prices in active markets for identical assets. Deferred compensation investments are primarily presented in Other assets. Deferred compensation liabilities are primarily presented in Other long-term liabilities.

Note O — Derivative Instruments and Hedging Activity

The Company uses derivative contracts to hedge portions of its foreign currency exposures and uses derivatives to hedge a portion of its precious metal and copper exposures. The objectives and strategies for using derivatives in these areas are as follows:

Foreign Currency. The Company sells a portion of its products to overseas customers in their local currencies, primarily the euro and yen. The Company secures foreign currency derivatives, mainly forward contracts and options, to hedge these anticipated sales transactions. The purpose of the hedge program is to protect against the reduction in the dollar value of foreign currency sales from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency sales should be partially offset by gains on the hedge contracts. Depending upon the methods used, the hedge contracts may limit the benefits from a weakening U.S. dollar.

The use of forward contracts locks in a firm rate and eliminates any downside from an adverse rate movement as well as any benefit from a favorable rate movement. The Company may from time to time choose to hedge with options or a tandem of options, known as a collar. These hedging techniques can limit or eliminate the downside risk but can allow for some or all of the benefit from a favorable rate movement to be realized. Unlike a forward contract, a premium is paid for an option; collars, which are a combination of a put and call option, may have a net premium but can be structured to be cash neutral. The Company will primarily hedge with forward contracts due to the relationship between the cash outlay and the level of risk.

The use of foreign currency derivative contracts is governed by policies approved by the Audit Committee of the Board of Directors. A team consisting of senior financial managers reviews the estimated exposure levels, as defined by budgets, forecasts, and other internal data, and determines the timing, amounts, and instruments to use to hedge exposures. Management analyzes the effective hedged rates and the actual and projected gains and losses on the hedging transactions against the program objectives, targeted rates, and levels of risk assumed. Foreign currency contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of market rate movements.

Precious Metals. The Company maintains the majority of its precious metal production requirements on consignment in order to reduce its working capital investment and the exposure to metal price movements. When a precious metal product is fabricated and ready for shipment to the customer, the metal is purchased out of consignment at the current market price. The price paid by the Company forms the basis for the price charged to the customer. This methodology allows for changes in either direction in the market prices of the precious metals used by the Company to be passed through to the customer and reduces the impact changes in prices could have on the Company's margins and operating profit. The consigned metal is owned by financial institutions that charge the Company a financing fee based upon the current value of the metal on hand.

In certain instances, a customer may want to establish the price for the precious metal at the time the sales order is placed rather than at the time of shipment. Setting the sales price at a different date than when the material would be purchased potentially creates an exposure to movements in the market price of the metal. Therefore, in these limited situations, the Company may elect to enter into a forward contract to purchase precious metal. The forward contract allows the Company to purchase metal at a fixed price on a specific future date. The price in the forward contract serves as the basis for the price to be charged to the customer. By doing so, the selling price and purchase price are matched, and the Company's price exposure is reduced.

The Company refines precious metal-containing materials for its customers and typically will purchase the refined metal from the customer at current market prices. In limited circumstances, the customer may want to fix the price to be paid at the time of the order as opposed to when the material is refined. The customer may also want to fix the price for a set period of time. The Company may then elect to enter into a hedge contract, either a forward contract or a swap, to fix the price for the estimated quantity of metal to be purchased, thereby reducing the exposure to adverse movements in the price of the metal. The Company may also enter into hedges to mitigate the risk relating to the prices of the metals which we process or refine.

In certain circumstances, the Company also refines metal from the customer and may retain a portion of the refined metal as payment. The Company may elect to enter into a forward contract to sell precious metal to reduce the Company's price exposure.

The Company may from time to time elect to purchase precious metal and hold in inventory rather than on consignment due to potential credit line limitations or other factors. These purchases are typically held for a short duration. A forward contract will be secured at the time of the purchase to fix the price to be used when the metal is transferred back to the consignment line, thereby limiting any price exposure during the time when the metal was owned.

Copper. The Company also uses copper in its production processes. When possible, fluctuations in the purchase price of copper are passed on to customers in the form of price adders or reductions. While over time the Company's price exposure to copper is generally in balance, there can be a lag between the change in the Company's cost and the pass-through to its customers, resulting in higher or lower margins in a given period. To mitigate this impact, the Company hedges a portion of this pricing risk.

The Company will only enter into a derivative contract if there is an underlying identified exposure. Contracts are typically held to maturity. The Company does not engage in derivative trading activities and does not use derivatives for speculative purposes. The Company only uses hedge contracts that are denominated in the same currency or metal as the underlying exposure.

All derivatives are recorded on the balance sheet at fair value. If the derivative is designated and effective as a cash flow hedge, changes in the fair value of the derivative are recognized in other comprehensive income (OCI) until the hedged item is recognized in earnings. The ineffective portion of a derivative's fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in the fair value are adjusted through income. The fair values of the outstanding derivatives are recorded on the balance sheet as assets (if the derivatives are in a gain position) or liabilities (if the derivatives are in a loss position). The fair values will also be classified as short-term or long-term depending upon their maturity dates.

The following table summarizes the notional amount and the fair value of the Company’s outstanding derivatives not designated as hedging instruments (on a gross basis) and balance sheet classification as of July 2, 2021 and December 31, 2020:

	July 2, 2021		December 31, 2020	
(Thousands)	**Notional Amount**	**Fair Value**	Notional Amount	Fair Value
Foreign currency forward contracts				
Prepaid expenses	**$ 62,324**	**$ 142**	$ 62,012	$ 107
Other liabilities and accrued items	**12,427**	**75**	7,695	55

These outstanding foreign currency derivatives were related to balance sheet hedges and intercompany loans. Other-net included $0.4 million of foreign currency losses in the second quarter of 2021 and $1.2 million of foreign currency gains related to derivatives in the first six months of 2021, compared to $1.7 million and $2.3 million of foreign currency gains in the second quarter and first six months of 2020, respectively.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives designated as cash flow hedges (on a gross basis) and balance sheet classification as of July 2, 2021 and December 31, 2020:

	July 2, 2021		December 31, 2020	
(Thousands)	Notional Amount	Fair Value	Notional Amount	Fair Value
Prepaid expenses				
Foreign currency forward contracts - yen	$ 3,778	$ 107	$ —	$ —
Foreign currency forward contracts - euro	20,727	199	—	—
Precious metal swaps	4,538	258	2,155	127
Copper swaps	—	—	6,225	632
Total	29,043	564	8,380	759
Other assets				
Foreign currency forward contracts - yen	275	3	—	—
Foreign currency forward contracts - euro	1,822	26	—	—
Total	2,097	29	—	—
Other liabilities and accrued items				
Foreign currency forward contracts - yen	471	2	2,668	59
Foreign currency forward contracts - euro	5,900	61	17,611	1,089
Precious metal swaps	518	17	4,964	349
Copper swaps	—	—	2,445	27
Total	6,889	80	27,688	1,524
Other long-term liabilities				
Foreign currency forward contracts - yen	271	—	—	—
Foreign currency forward contracts - euro	2,383	13	—	—
Total	2,654	13	—	—
Total	$ 40,683	$ 500	$ 36,068	$ 765

All of these contracts were designated and effective as cash flow hedges. The Company expects to relieve substantially the entire balance in OCI as of July 2, 2021 to the Consolidated Statements of Income within the next 15-months. Refer to Note L for additional OCI details.

The following table summarizes the amounts reclassified from accumulated other comprehensive income relating to the hedging relationship of the Company's outstanding derivatives designated as cash flow hedges and income statement classification as of the second quarter and first six months of 2021 and 2020:

		Second Quarter Ended	
(Thousands)		July 2, 2021	June 26, 2020
Hedging relationship	**Line item**		
Foreign currency forward contracts	Net sales	$ —	$ 8
Precious metal swaps	Cost of sales	65	491
Copper swaps	Cost of sales	(1,507)	132
Total		$ (1,442)	$ 631

		Six Months Ended	
(Thousands)		**July 2, 2021**	June 26, 2020
Hedging relationship	**Line item**		
Foreign currency forward contracts	Net sales	$ 140	$ 7
Precious metal swaps	Cost of sales	(39)	809
Copper swaps	Cost of sales	(3,041)	453
Total		$ (2,940)	$ 1,269

Note P — Contingencies

Legal Proceedings. For general information regarding legal proceedings relating to *Chronic Beryllium Disease Claims*, refer to Note T ("Contingencies and Commitments") in the Company's 2020 Annual Report on Form 10-K.

Two beryllium cases were outstanding as of July 2, 2021. The Company does not expect the resolution of these matters to have a material impact on the consolidated financial statements.

Other Litigation. The Company is party to several pending legal proceedings and claims arising in the normal course of business. The Company records a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. In the event the Company determines that a loss is not probable, but is reasonably possible, and it becomes possible to develop what the Company believes to be a reasonable range of possible loss, then the Company will include disclosure related to such matters. To the extent there is a reasonable possibility that the losses could exceed any amounts accrued, the Company will adjust the accrual in the period the determination is made, disclose an estimate of the additional loss or range of loss, indicate that the estimate is immaterial with respect to its financial statements as a whole or, if the amount of such adjustment cannot be reasonably estimated, disclose that an estimate cannot be made.

On October 14, 2020, Garett Lucyk, et al. v. Materion Brush Inc., et. al., case number 20CV0234, a wage and hour purported collective and class action, was filed in the Northern District of Ohio against the Company and its subsidiary, Materion Brush Inc. (collectively, the Company). Plaintiff, a former hourly production employee at the Company's Elmore, Ohio facility, alleges, among other things, that he and other similarly situated employees nationwide are not paid for all time they spend donning and doffing personal protective equipment in violation of the Fair Labor Standards Act and Ohio law. The case is currently in the preliminary stages. The Company believes that it has substantive defenses and intends to vigorously defend this suit.

Environmental Proceedings. The Company has an active environmental compliance program and records reserves for the probable cost of identified environmental remediation projects. The reserves are established based upon analyses conducted by the Company’s engineers and outside consultants and are adjusted from time to time based upon ongoing studies, the difference between actual and estimated costs, and other factors. The reserves may also be affected by rulings and negotiations with regulatory agencies. The undiscounted reserve balance was $5.2 million and $5.5 million at July 2, 2021 and December 31, 2020, respectively, and is included in Other liabilities and accrued items and Other long-term liabilities on the Consolidated Balance Sheet. Environmental projects tend to be long-term, and the final actual remediation costs may differ from the amounts currently recorded.

Note Q — Debt

(Thousands)	**July 2, 2021**	December 31, 2020
Borrowings under Credit Agreement	**$ 56,500**	$ 34,000
Foreign debt	**2,773**	3,157
Fixed rate industrial development revenue bonds	**—**	1,322
Total debt outstanding	**59,273**	38,479
Current portion of long-term debt	**(435)**	(1,937)
Long-term debt	**$ 58,838**	$ 36,542

As of July 2, 2021 and December 31, 2020, the Company had $56.5 million and $34.0 million, respectively, outstanding against its revolving credit facility with average interest rates of 1.46% and 1.65% at July 2, 2021 and December 31, 2020, respectively. The remaining borrowing capacity under the revolving credit facility as of July 2, 2021 and December 31, 2020 was $273.0 million and $245.8 million, respectively. The Company has the option to repay or borrow additional funds under the revolving credit facility until the maturity date in 2024. The Credit Agreement includes covenants subject to a maximum leverage ratio and a minimum fixed charge coverage ratio. The Company was in compliance with all of its debt covenants as of July 2, 2021.

At July 2, 2021 and December 31, 2020, there was $47.3 million and $48.1 million outstanding against the letters of credit sub-facility, respectively.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

OVERVIEW

We are an integrated producer of high-performance advanced engineered materials used in a variety of electronic, thermal, and structural applications. Our products are sold into numerous end markets, including semiconductor, industrial, aerospace and defense, automotive, consumer electronics, energy, and telecom and data center.

Coronavirus (COVID-19) Second Quarter 2021 Update

The significant macroeconomic impact of the ongoing COVID-19 pandemic impacted several of our end markets throughout 2020 primarily in the first half of the year in the form of reduced demand, particularly in the consumer electronics, automotive, energy, aerospace and defense, and industrial end markets. During the first six months of 2021, we continued to see improvements in demand as global government-imposed restrictions continued to be lifted and many country vaccination programs gained further momentum. However, the world continues to be impacted by the COVID-19 pandemic and the impact on our operations and the markets we serve is fluid and will depend largely on future developments, including the availability and effectiveness of vaccines globally, new information which may emerge concerning the severity of the pandemic and actions by government authorities to contain the pandemic or mitigate its economic, public health, and other impacts. These developments are constantly evolving and cannot be accurately predicted. We continue to invest in the business, people, and strategies necessary to achieve our long-term priorities as we focus on driving profitable growth. We have continued to operate during the course of the COVID-19 pandemic in all our production facilities, having taken the recommended public health measures to ensure worker and workplace safety.

RESULTS OF OPERATIONS

Second Quarter

	Second Quarter Ended			
(Thousands, except per share data)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 370,999**	$ 271,468	$ 99,531	37 %
Value-added sales	**207,887**	159,068	48,819	31 %
Gross margin	**69,581**	46,955	22,626	48 %
Gross margin as a % of value-added sales	**33 %**	30 %		
Selling, general, and administrative (SG&A) expense	**38,060**	32,852	5,208	16 %
SG&A expense as a % of value-added sales	**18 %**	21 %		
Research and development (R&D) expense	**6,604**	4,502	2,102	47 %
R&D expense as a % of value-added sales	**3 %**	3 %		
Restructuring expense	**—**	2,387	(2,387)	(100)%
Other—net	**4,194**	(357)	4,551	(1,275)%
Operating profit	**20,723**	7,571	13,152	174 %
Other non-operating (income)—net	**(1,277)**	(851)	(426)	50 %
Interest expense—net	**858**	1,259	(401)	(32)%
Income before income taxes	**21,142**	7,163	13,979	195 %
Income tax expense	**3,274**	1,360	1,914	141 %
Net income	**$ 17,868**	$ 5,803	$ 12,065	208 %
Diluted earnings per share	**$ 0.87**	$ 0.28	$ 0.59	211 %

Net sales of $371.0 million in the second quarter of 2021 increased $99.5 million from $271.5 million in the second quarter of 2020. Net sales increased in all of our segments primarily due to increased volumes, as well as due to sales attributable to our Optics Balzers acquisition, which was completed during the third quarter of 2020. The change in precious metal and copper prices favorably impacted net sales during the second quarter of 2021 by $19.8 million.

Value-added sales is a non-GAAP financial measure that removes the impact of pass-through metal costs and allows for analysis without the distortion of the movement or volatility in metal prices and changes in mix due to customer-supplied material. Internally, we manage our business on this basis, and a reconciliation of net sales, the most directly comparable GAAP financial measure, to value-added sales is included herein. Value-added sales of $207.9 million in the second quarter of 2021 increased $48.8 million, or 31%, compared to the second quarter of 2020. The increase is primarily driven by increased value-added sales into the semiconductor, industrial, and automotive end markets, as well as value-added sales from our Optics Balzers acquisition.

Gross margin in the second quarter of 2021 was $69.6 million, which was up 48% compared to the second quarter of 2020. Gross margin expressed as a percentage of value-added sales increased to 33% in the second quarter of 2021 from 30% in the second quarter of 2020. The increase was primarily driven by increased sales volumes in the second quarter of 2021.

SG&A expense was $38.1 million in the second quarter of 2021, compared to $32.9 million in the second quarter of 2020. The increase in SG&A expense for the second quarter of 2021 was primarily driven by increased variable compensation expense, as well as costs attributable to our Optics Balzers acquisition. Expressed as a percentage of value-added sales, SG&A expense was 18% and 21% in the second quarter of 2021 and 2020, respectively.

R&D expense consists primarily of direct personnel costs for product innovation including pre-production development, evaluation, and testing of new products, prototypes, and applications to deliver new high performing advanced materials to our customers. R&D expense accounted for 3% of value-added sales in the second quarter of both 2021 and 2020.

Restructuring expense consists primarily of cost reduction actions taken in order to reduce our fixed cost structure.

In the second quarter of 2020, we recorded $2.4 million of restructuring charges in our Performance Alloys and Composites segment related to the closure of our Warren, Michigan and Fremont, California facilities. Refer to Note F to the Consolidated Financial Statements for additional discussion.

Other-net was $4.2 million of expense in the second quarter of 2021, or a $4.6 million increase from the second quarter of 2020, which was primarily driven by $2.5 million of decreased foreign exchange gains, primarily related to a $2.2 million foreign exchange hedge gain realized in the second quarter of 2020, and $0.9 million of increased intangible asset amortization expense, both related to the acquisition of Optics Balzers. Refer to Note E to the Consolidated Financial Statements for details of the major components within Other-net.

Other non-operating (income)-net includes components of pension and post-retirement expense other than service costs. Refer to Note K to the Consolidated Financial Statements for details of the components.

Interest expense-net was $0.9 million and $1.3 million in the second quarter of 2021 and 2020, respectively. The decrease in interest expense is primarily due to reduced borrowings under our revolving credit facility in the second quarter of 2021, compared to the second quarter of 2020.

Income tax expense for the second quarter of 2021 was $3.3 million, compared to $1.4 million in the second quarter of 2020. The effective tax rate for the second quarter of 2021 and 2020 was 15.5% and 19.0%, respectively. The effective tax rate for the second quarter of both 2021 and 2020 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development credits, and the foreign derived intangible income deduction. See Note G to the Consolidated Financial Statements for additional discussion.

Six Months

	Six Months Ended			
(Thousands, except per share data)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 725,385**	$ 549,414	$ 175,971	32 %
Value-added sales	**406,469**	313,039	93,430	30 %
Gross margin	**136,377**	91,525	44,852	49 %
Gross margin as a % of value-added sales	**34 %**	29 %		
SG&A expense	**74,836**	63,596	11,240	18 %
SG&A expense as a % of value-added sales	**18 %**	20 %		
R&D expense	**12,810**	8,687	4,123	47 %
R&D expense as a % of value-added sales	**3 %**	3 %		
Impairment charges	**—**	10,766	(10,766)	(100)%
Restructuring (income) expense	**(378)**	4,551	(4,929)	(108)%
Other—net	**8,668**	1,922	6,746	351 %
Operating profit	**40,441**	2,003	38,438	1,919 %
Other non-operating (income)—net	**(2,553)**	(1,795)	(758)	42 %
Interest expense—net	**1,619**	1,505	114	8 %
Income before income taxes	**41,375**	2,293	39,082	1,704 %
Income tax expense	**6,740**	368	6,372	1,732 %
Net income	**$ 34,635**	$ 1,925	$ 32,710	1,699 %
Diluted earnings per share	**$ 1.68**	$ 0.09	$ 1.59	1,767 %

Net sales of $725.4 million in the first six months of 2021 increased $176.0 million from $549.4 million in the first six months of 2020. Net sales increased in all of our segments primarily due to increased volumes, as well as due to sales attributable to our Optics Balzers acquisition, which was completed during the third quarter of 2020. The change in precious metal and copper prices favorably impacted net sales during the first six months of 2021 by $37.6 million.

Value-added sales of $406.5 million in the first six months of 2021 increased $93.0 million, or 30%, compared to the first six months of 2020. The increase is primarily driven by increased value-added sales into the semiconductor, automotive, aerospace and defense, and industrial end markets, as well as value-added sales from our Optics Balzers acquisition.

Gross margin in the first half of 2021 was $136.4 million, which was up 49% compared to the first half of 2020. Gross margin expressed as a percentage of value-added sales increased to 34% in the first six months of 2021 from 29% in the first six months of 2020. The increase was primarily driven by increased sales volumes in the first half of 2021.

SG&A expense was $74.8 million in the first six months of 2021, compared to $63.6 million in the first six months of 2020. The increase in SG&A expense for the first half of 2021 was primarily driven by increased variable compensation expense, as well as costs attributable to our Optics Balzers acquisition. Expressed as a percentage of value-added sales, SG&A expense was 18% and 20% in the first half of 2021 and 2020, respectively.

R&D expense consists primarily of direct personnel costs for product innovation including pre-production development, evaluation, and testing of new products, prototypes, and applications to deliver new high performing advanced materials to our customers. R&D expense accounted for 3% of value-added sales in the first half of both 2021 and 2020.

Impairment charges include non-recurring charges relating to goodwill and other assets recorded in the first six months of 2020 in our Precision Optics segment.

Restructuring (income) expense consists primarily of cost reduction actions taken in order to reduce our fixed cost structure. During the first quarter of 2021, we substantially completed the closure of our LAC business.

In the first half of 2020, we recorded $4.6 million of restructuring charges in our Performance Alloys and Composites segment related to the closure of our Warren, Michigan and Fremont, California facilities. Refer to Note F to the Consolidated Financial Statements for additional discussion.

Other-net was $8.7 million of expense in the first six months of 2021, or a $6.7 million increase from the first six months of 2020, which was primarily driven by $2.5 million of foreign exchange gains realized during the first six months of 2020 compared to $1.2 million of foreign exchange losses realized in the first six months of 2021, as well as $1.9 million of increased intangible asset amortization expense, both of which were primarily related to the acquisition of Optics Balzers in third quarter of 2020. Refer to Note E to the Consolidated Financial Statements for details of the major components within Other-net.

Other non-operating (income)-net includes components of pension and post-retirement expense other than service costs. Refer to Note K to the Consolidated Financial Statements for details of the components.

Interest expense-net was $1.6 million and $1.5 million in the first six months of 2021 and 2020, respectively.

Income tax expense for the first half of 2021 was $6.7 million, compared to $0.4 million in the first half of 2020. The effective tax rate for the first half of 2021 and 2020 was 16.3% and 16.0%, respectively. The effective tax rate for the first six months of both 2021 and 2020 was lower than the statutory tax rate primarily due to the impact of percentage depletion and research and development credits. The effective tax rate for the first six months of 2021 included a net discrete income tax benefit of $0.5 million, primarily related to excess tax benefits from stock-based compensation awards. The effective tax rate for the first six months of 2020 included a net discrete income tax expense of $0.8 million, primarily related to an impairment of goodwill. See Note G to the Consolidated Financial Statements for additional discussion.

Value-Added Sales - Reconciliation of Non-GAAP Financial Measure

A reconciliation of net sales to value-added sales, a non-GAAP financial measure, for each reportable segment and for the total Company for the second quarter and first six months of 2021 and 2020 is as follows:

	Second Quarter Ended		Six Months Ended	
(Thousands)	**July 2, 2021**	June 26, 2020	**July 2, 2021**	June 26, 2020
Net sales				
Performance Alloys and Composites	**$ 125,294**	$ 101,614	**$ 239,437**	$ 200,681
Advanced Materials	**213,114**	150,108	**417,758**	310,273
Precision Optics	**32,591**	19,746	**68,190**	38,460
Other	**—**	—	**—**	—
Total	**$ 370,999**	$ 271,468	**$ 725,385**	$ 549,414
Less: pass-through metal costs				
Performance Alloys and Composites	**$ 16,696**	$ 11,858	**$ 30,007**	$ 27,210
Advanced Materials	**146,214**	97,944	**287,909**	203,616
Precision Optics	**9**	1,968	**43**	3,693
Other	**193**	630	**957**	1,856
Total	**$ 163,112**	$ 112,400	**$ 318,916**	$ 236,375
Value-added sales				
Performance Alloys and Composites	**$ 108,598**	$ 89,756	**$ 209,430**	$ 173,471
Advanced Materials	**66,900**	52,164	**129,849**	106,657
Precision Optics	**32,582**	17,778	**68,147**	34,767
Other	**(193)**	(630)	**(957)**	(1,856)
Total	**$ 207,887**	$ 159,068	**$ 406,469**	$ 313,039

Internally, management reviews net sales on a value-added basis. Value-added sales is a non-GAAP financial measure that deducts the value of the pass-through metal costs from net sales. Value-added sales allow management to assess the impact of differences in net sales between periods, segments, or markets, and analyze the resulting margins and profitability without the distortion of movements in pass-through metal costs. The dollar amount of gross margin and operating profit is not affected by the value-added sales calculation. We sell other metals and materials that are not considered direct pass-throughs, and these costs are not deducted from net sales when calculating value-added sales. Non-GAAP financial measures, such as value-added sales, have inherent limitations and should not be considered in isolation, or as a substitute for analyses of results as reported under GAAP.

The cost of gold, silver, platinum, palladium, copper, ruthenium, iridium, rhodium, rhenium, and osmium can be quite volatile. Our pricing policy is to directly pass the cost of these metals on to the customer in order to mitigate the impact of metal price volatility on our results from operations. Trends and comparisons of net sales are affected by movements in the market prices of these metals, but changes in net sales due to metal price movements may not have a proportionate impact on our profitability. During the first quarter of 2021, we added ruthenium, iridium, rhodium, rhenium, and osmium to our definition of value-added sales as the costs of these materials are treated as pass-through and the business use and price volatility of these materials has increased in recent periods. Prior period value-added sales amounts have been recast to reflect this change.

Our net sales are also affected by changes in the use of customer-supplied metal. When we manufacture a precious metal product, the customer may purchase metal from us or may elect to provide its own metal, in which case we process the metal on a toll basis and the metal value does not flow through net sales or cost of sales. In either case, we generally earn our margin based upon our fabrication efforts. The relationship of this margin to net sales can change depending upon whether or not the product was made from our metal or the customer's metal. The use of value-added sales removes the potential distortion in the comparison of net sales caused by changes in the level of customer-supplied metal.

By presenting information on net sales and value-added sales, it is our intention to allow users of our financial statements to review our net sales with and without the impact of the pass-through metals.

Segment Results

The Company consists of four reportable segments: Performance Alloys and Composites, Advanced Materials, Precision Optics, and Other. The Other reportable segment includes unallocated corporate costs.

Performance Alloys and Composites

Second Quarter

	Second Quarter Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 125,294**	$ 101,614	$ 23,680	23 %
Value-added sales	**108,598**	89,756	18,842	21 %
Operating profit	**17,314**	6,824	10,490	154 %

Net sales from the Performance Alloys and Composites segment of $125.3 million in the second quarter of 2021 increased 23% compared to net sales of $101.6 million in the second quarter of 2020. The increase was due to sales related to our new precision clad engineered strip project, as well as increased sales into the automotive and industrial end markets. Value-added sales of $108.6 million in the second quarter of 2021 were 21% higher than value-added sales of $89.8 million in the second quarter of 2020.

Performance Alloys and Composites generated operating profit of $17.3 million in the second quarter of 2021 compared to $6.8 million in the second quarter of 2020. The increase in operating profit was primarily due to increased sales volumes and improved operating performance. Operating profit for the second quarter of 2020 included restructuring charges of $2.4 million related to the closure of our Warren, Michigan and Fremont, California facilities.

Six Months

	Six Months Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 239,437**	$ 200,681	$ 38,756	19 %
Value-added sales	**209,430**	173,471	35,959	21 %
Operating profit	**30,805**	10,347	20,458	198 %

Net sales from the Performance Alloys and Composites segment of $239.4 million in the first six months of 2021 increased 19% compared to net sales of $200.7 million in the first six months of 2020. The increase was due to sales related to our new precision clad engineered strip project, as well as increased sales into the automotive and aerospace and defense end markets. Value-added sales of $209.4 million in the first six months of 2021 were 21% higher than value-added sales of $173.5 million in the first six months of 2020.

Performance Alloys and Composites generated operating profit of $30.8 million in the first six months of 2021 compared to $10.3 million in the first six months of 2020. The increase in operating profit was primarily due to increased sales volumes. Operating profit for the first half of 2020 included restructuring charges of $4.6 million related to the closure of our Warren, Michigan and Fremont, California facilities.

Advanced Materials

Second Quarter

	Second Quarter Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 213,114**	$ 150,108	63,006	42 %
Value-added sales	**66,900**	52,164	14,736	28 %
Operating profit	**8,333**	4,653	3,680	79 %

Net sales from the Advanced Materials segment of $213.1 million in the second quarter of 2021 were 42% higher than net sales of $150.1 million in the second quarter of 2020. The increase in net sales was primarily due to increased sales volumes, as well as the impact of higher pass-through metal prices of $20.8 million.

Value-added sales of $66.9 million in the second quarter of 2021 increased 28% compared to value-added sales of $52.2 million in the second quarter of 2020. The increase was primarily driven by increased value-added sales into the semiconductor end market.

The Advanced Materials segment generated operating profit of $8.3 million in the second quarter of 2021 compared to $4.7 million in the second quarter of 2020. The increase in operating profit is due to increased sales volumes, as well as improved operating performance.

Six Months

	Six Months Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 417,758**	$ 310,273	107,485	35 %
Value-added sales	**129,849**	106,657	23,192	22 %
Operating profit	**17,266**	9,703	7,563	78 %

Net sales from the Advanced Materials segment of $417.8 million in the first six months of 2021 were 35% higher than net sales of $310.3 million in the first six months of 2020. The increase in net sales was primarily due to increased sales volumes, as well as the impact of higher pass-through metal prices of $39.8 million.

Value-added sales of $129.8 million in the first half of 2021 increased 22% compared to value-added sales of $106.7 million in the first half of 2020. The increase was primarily driven by increased value-added sales into the semiconductor end market.

The Advanced Materials segment generated operating profit of $17.3 million in the first half of 2021 compared to $9.7 million in the first half of 2020. The increase in operating profit is due to increased sales volumes, as well as improved operating performance.

Precision Optics

Second Quarter

	Second Quarter Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 32,591**	$ 19,746	12,845	65 %
Value-added sales	**32,582**	17,778	14,804	83 %
Operating profit	**2,626**	2,091	535	26 %

Net sales from the Precision Optics segment of $32.6 million in the second quarter of 2021 increased 65% compared to net sales of $19.7 million in the second quarter of 2020. The increase was primarily due to sales attributable to our Optics Balzers acquisition, partially offset by no sales related to our LAC reporting unit, whose closure was finalized in the first quarter of 2021. In addition the base business increased slightly compared to the same period last year.

Value-added sales of $32.6 million in the second quarter of 2021 increased 83% compared to value-added sales of $17.8 million in the second quarter of 2020. The increase in value-added sales was due to the same factors driving the increase in net sales.

The Precision Optics segment generated an operating profit of $2.6 million in the second quarter of 2021, compared to an operating profit of $2.1 million in the second quarter of 2020. The increase was driven by our Optics Balzers acquisition.

Six Months

	Six Months Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ 68,190**	$ 38,460	29,730	77 %
Value-added sales	**68,147**	34,767	33,380	96 %
Operating profit (loss)	**7,184**	(7,501)	14,685	NM

NM = Not Meaningful

Net sales from the Precision Optics segment of $68.2 million in the first half of 2021 increased 77% compared to net sales of $38.5 million in the first half of 2020. The increase was primarily due to sales attributable to our Optics Balzers acquisition, partially offset by lower sales related to our LAC reporting unit, whose closure was finalized in the first quarter of 2021.

Value-added sales of $68.1 million in the first half of 2021 increased 96% compared to value-added sales of $34.8 million in the first half of 2020. The increase in value-added sales was due to the same factors driving the increase in net sales.

The Precision Optics segment generated an operating profit of $7.2 million in the first six months of 2021, compared to an operating loss of $7.5 million in the first six months of 2020. The operating profit in the first six months of 2021 was driven by our Optics Balzers acquisition. The operating loss in the first six months of 2020 included impairment charges of $10.8 million related to our LAC reporting unit.

Other

Second Quarter

	Second Quarter Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ —**	$ —	—	— %
Value-added sales	**(193)**	(630)	437	(69)%
Operating loss	**(7,550)**	(5,997)	(1,553)	26 %

The Other reportable segment in total includes unallocated corporate costs.

Corporate costs were $7.6 million in the second quarter of 2021 compared to $6.0 million in the second quarter of 2020. Corporate costs accounted for 4% of Company-wide value-added sales in the second quarter of both 2021 and 2020. The increase in corporate costs in the second quarter of 2021 compared to the second quarter of 2020 is primarily related to increased variable compensation expenses.

Six Months

	Six Months Ended			
(Thousands)	**July 2, 2021**	June 26, 2020	$ Change	% Change
Net sales	**$ —**	$ —	—	— %
Value-added sales	**(957)**	(1,856)	899	(48)%
Operating loss	**(14,814)**	(10,546)	(4,268)	40 %

Corporate costs were $14.8 million in the first half of 2021 compared to $10.5 million in the first half of 2020. Corporate costs accounted for 4% and 3% of Company-wide value-added sales in the first half of 2021 and 2020, respectively. The increase in corporate costs in the first half of 2021 compared to the first half of 2020 is primarily related to increased variable compensation expenses.

FINANCIAL POSITION

Cash Flow

A summary of cash flows provided by (used in) operating, investing, and financing activities is as follows:

	Six Months Ended		
(Thousands)	July 2, 2021	June 26, 2020	$ Change
Net cash provided by operating activities	**$ 44,065**	$ 36,433	$ 7,632
Net cash used in investing activities	**(57,109)**	(32,001)	(25,108)
Net cash provided by financing activities	**11,522**	135,573	(124,051)
Effects of exchange rate changes	**(11)**	56	(67)
Net change in cash and cash equivalents	**$ (1,533)**	$ 140,061	$ (141,594)

Net cash provided by operating activities totaled $44.1 million in the first six months of 2021 versus $36.4 million in the prior-year period. The increase in operating cash flow was primarily due to increased net income of $32.7 million, partially offset by a usage in working capital change of $5.4 million discussed below and less unearned income due to customer prepayments of $18.7 million.

The following table displays the impact of working capital items on cash during the first six months of 2021 and 2020, respectively:

	Six Months Ended		
(Thousands)	July 2, 2021	June 26, 2020	$ Change
Cash provided (used):			
Accounts receivable	**$ (13,941)**	$ 5,331	$ (19,272)
Inventory	**(40,651)**	(18,446)	(22,205)
Accounts payable and accrued expenses	**28,403**	(7,634)	36,037
Cash used in working capital items	**$ (26,189)**	$ (20,749)	$ (5,440)

Three-month trailing days sales outstanding was approximately 42 days at July 2, 2021 and 41 days at December 31, 2020.

Net cash used in investing activities was $57.1 million in the first six months of 2021 compared to $32.0 million in the prior-year period due to increased capital expenditures, primarily related to investments in new equipment funded by customer prepayments. See Note J to the Consolidated Financial Statements for additional discussion.

Capital expenditures are made primarily for new product development, replacing and upgrading equipment, infrastructure investments, and implementing information technology initiatives. For the full year 2021, the Company expects payments for property, plant, and equipment to be approximately $100.0 million.

Net cash provided by financing activities totaled $11.5 million in the first six months of 2021 and $135.6 million in the comparable prior-year period. The decrease is primarily due to decreased net borrowings of $127.5 million under our revolving credit facility in the first six months of 2021, partially offset by no repurchases of common stock in the first six months of 2021 compared to $6.8 million in the first six months of 2020.

Liquidity

We believe cash flow from operations plus the available borrowing capacity and our current cash balance are adequate to support operating requirements, capital expenditures, projected pension plan contributions, the current dividend program, environmental remediation projects, and strategic acquisitions. At July 2, 2021, cash and cash equivalents held by our foreign operations totaled $22.5 million. We do not expect restrictions on repatriation of cash held outside of the United States to have a material effect on our overall liquidity, financial condition, or results of operations for the foreseeable future.

A summary of key data relative to our liquidity, including outstanding debt, cash, and available borrowing capacity, as of July 2, 2021 and December 31, 2020 is as follows:

(Thousands)		July 2, 2021		December 31, 2020
Cash and cash equivalents	**$**	**24,345**	$	25,878
Total outstanding debt		**59,273**		38,506
Net debt	**$**	**(34,928)**	$	(12,628)
Available borrowing capacity	**$**	**272,989**	$	245,772

Net (debt) cash is a non-GAAP financial measure. We are providing this information because we believe it is more indicative of our overall financial position. It is also a measure our management uses to assess financing and other decisions. We believe that based on our typical cash flow generated from operations, we can support a higher leverage ratio in future periods.

The available borrowing capacity in the table above represents the additional amounts that could be borrowed under our revolving credit facility and other secured lines existing as of the end of each period depicted. The applicable debt covenants have been taken into account when determining the available borrowing capacity, including the covenant that restricts the borrowing capacity to a multiple of the twelve-month trailing earnings before interest, income taxes, depreciation and amortization, and other adjustments.

In 2019, we amended and restated the agreement governing our $375.0 million revolving credit facility (Credit Agreement). The maturity date of the Credit Agreement was extended from 2020 to 2024, and the Credit Agreement provides more favorable interest rates under certain circumstances. In addition, the Credit Agreement provides the Company and its subsidiaries with additional capacity to enter into facilities for the consignment, borrowing, or leasing of precious metals and copper, and provides enhanced flexibility to finance acquisitions and other strategic initiatives. Borrowings under the Credit Agreement are secured by substantially all of the assets of the Company and its direct subsidiaries, with the exception of non-mining real property and certain other assets.

The Credit Agreement allows the Company to borrow money at a premium over LIBOR or a prime rate and at varying maturities. The premium resets quarterly according to the terms and conditions available under the agreement. The Credit Agreement includes restrictive covenants relating to restrictions on additional indebtedness, acquisitions, dividends, and stock repurchases. In addition, the Credit Agreement includes covenants subject to a maximum leverage ratio and a minimum fixed charge coverage ratio. We were in compliance with all of our debt covenants as of July 2, 2021. Cash on hand does not affect the covenants or the borrowing capacity under our debt agreements.

Portions of our business utilize off-balance sheet consignment arrangements to finance metal requirements. Expansion of business volumes and/or higher metal prices can put pressure on the consignment line limitations from time to time. In 2019, we entered into a precious metals consignment agreement, maturing on August 27, 2022, which replaced the consignment agreement that would have matured on September 30, 2019. The available and unused capacity under the metal financing lines expiring in August 2022 totaled approximately $93.7 million as of July 2, 2021, compared to $50.0 million as of December 31, 2020. The availability is determined by Board approved levels and actual line capacity.

In January 2014, our Board of Directors approved a plan to repurchase up to $50.0 million of our common stock. The timing of the share repurchases will depend on several factors, including market and business conditions, our cash flow, debt levels, and other investment opportunities. There is no minimum quantity requirement to repurchase our common stock for a given year, and the repurchases may be discontinued at any time. We did not repurchase any shares under this program in the second quarter or first six months of 2021. Since the approval of the repurchase plan, we have purchased 1,254,264 shares at a total cost of $41.7 million.

We paid cash dividends of $2.5 million and $4.8 million on our common stock in the second quarter and first six months of 2021, respectively. We intend to pay a quarterly dividend on an ongoing basis, subject to a determination that the dividend remains in the best interest of our shareholders.

OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL OBLIGATIONS

We maintain the majority of the precious metals and portions of the copper we use in production on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. The notional value of off-balance sheet precious metals and copper was $456.3 million and $400.0 million as of July 2, 2021 and December 31, 2020, respectively. We were in compliance with all of the covenants contained in the consignment agreements as of July 2, 2021. For additional information on our contractual obligations, refer to our 2020 Annual Report on Form 10-K.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires the inherent use of estimates and management's judgment in establishing those estimates. For additional information regarding critical accounting policies, please refer to our 2020 Annual Report on Form 10-K.

Forward-looking Statements: *Portions of the narrative set forth in this document that are not statements of historical or current facts are forward-looking statements. Our actual future performance may materially differ from that contemplated by the forward-looking statements as a result of a variety of factors. These factors include, in addition to those mentioned elsewhere herein: the ultimate impact of the COVID-19 pandemic on our business, results of operations, financial condition, and liquidity; the global economy, including the impact of tariffs and trade agreements; the impact of any U.S. Federal Government shutdowns and sequestrations; the condition of the markets which we serve, whether defined geographically or by segment; changes in product mix and the financial condition of customers; our success in developing and introducing new products and new product ramp-up rates; our success in passing through the costs of raw materials to customers or otherwise mitigating fluctuating prices for those materials, including the impact of fluctuating prices on inventory values; our success in identifying acquisition candidates and in acquiring and integrating such businesses, including the integration of Optics Balzers; the impact of the results of acquisitions on our ability to fully achieve the strategic and financial objectives related to these acquisitions, including, without limitation, the acquisition of Optics Balzers being accretive in the expected timeframe or at all; our success in implementing our strategic plans and the timely and successful completion and start-up of any capital projects; other financial and economic factors, including the cost and availability of raw materials (both base and precious metals), physical inventory valuations, metal financing fees, tax rates, exchange rates, interest rates, pension costs and required cash contributions and other employee benefit costs, energy costs, regulatory compliance costs, the cost and availability of insurance, credit availability, and the impact of the Company's stock price on the cost of incentive compensation plans; the uncertainties related to the impact of war, terrorist activities, and acts of God; changes in government regulatory requirements and the enactment of new legislation that impacts our obligations and operations; the conclusion of pending litigation matters in accordance with our expectation that there will be no material adverse effects; the disruptions on operations from, and other effects of, catastrophic and other extraordinary events including the COVID-19 pandemic; and the risk factors set forth in Part 1, Item 1A of the Company's 2020 Annual Report on Form 10-K.*

Item 3. Quantitative and Qualitative Disclosures about Market Risk

For information regarding market risks, refer to Item 7A. Quantitative and Qualitative Disclosures About Market Risk in our 2020 Annual Report on Form 10-K. There have been no material changes in our market risks since the inclusion of this discussion in our 2020 Annual Report on Form 10-K.

Item 4. Controls and Procedures

a) Evaluation of Disclosure Controls and Procedures

The Company carried out an evaluation under the supervision and with participation of the Company's management, including the chief executive officer and chief financial officer, of the effectiveness of the design and operation of disclosure controls and procedures as of July 2, 2021 pursuant to Rule 13a-15(b) and 15d-15(b) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on that evaluation, management, including the chief executive officer and chief financial officer, concluded that disclosure controls and procedures are effective as of July 2, 2021.

b) Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the quarter ended July 2, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

Our subsidiaries and our holding company are subject, from time to time, to a variety of civil and administrative proceedings arising out of our normal operations, including, without limitation, product liability claims, health, safety, and environmental claims, and employment-related actions. Among such proceedings are cases alleging that plaintiffs have contracted, or have been placed at risk of contracting, beryllium sensitization or chronic beryllium disease or other lung conditions as a result of exposure to beryllium (beryllium cases). The plaintiffs in beryllium cases seek recovery under negligence and various other legal theories and demand compensatory and often punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claim loss of consortium.

Beryllium Claims

As of July 2, 2021, our subsidiary, Materion Brush Inc., was a defendant in two beryllium cases. During 2020, one beryllium case was filed. In Richard Miller v. Dolphin, Inc. et al., case number CV2020-005163, filed in the Superior Court of Arizona, Maricopa County, the Company is one of six named defendants and 100 Doe defendants. The plaintiff alleges that he contracted beryllium disease from exposures to beryllium-containing products supplied to his employer, Karsten Manufacturing Corporation, where he was a production worker, and asserts claims for negligence, strict liability – failure to warn, strict liability – design defect, and fraudulent concealment. The plaintiff seeks general damages, medical expenses, loss of earnings, consequential damages, and punitive damages. A co-defendent, Dolphin, Inc., filed a cross-claim against the Company for indemnification. On August 12, 2020, the Company moved to dismiss the cross-claim for failure to state a claim upon which relief can be granted. The court denied the motion on October 23, 2020. On December 7, 2020, the Company filed a Petition for Special Action in the Court of Appeals seeking to appeal the denial of the motion to dismiss the cross-claim. The Court of Appeals declined to accept jurisdiction on December 30, 2020. The Company believes that it has substantive defenses and intends to vigorously defend this suit.

In 2019, one beryllium case was filed. In Ronald Dwayne Manning v. Arconic Inc. et al., case number 19CI000219, filed in the Superior Court of the State of California, Tehama County, and later removed to the United States District Court, Eastern District of California (Sacramento Division), case number 2:19-CV-02202-MCE-DMC, the Company is one of four named defendants and 120 Doe defendants. The plaintiff alleges that he contracted beryllium disease from exposures to beryllium-containing products during his employment as an auto mechanic, welder, sprinkler installer, and movie projector operator, and asserts claims for negligence, strict liability, fraudulent concealment, and breach of implied warranties. The plaintiff seeks economic damages, non-economic damages, consequential damages, and punitive damages. The Company believes that it has substantive defenses and intends to vigorously defend this suit.

The Company has insurance coverage, which may respond, subject to an annual deductible.

Other Claims

On October 14, 2020, Garett Lucyk, et al. v. Materion Brush Inc., et. al., case number 20CV0234, a wage and hour purported collective and class action, was filed in the Northern District of Ohio against the Company and its subsidiary, Materion Brush Inc. (collectively, the Company). Plaintiff, a former hourly production employee at the Company's Elmore, Ohio facility, alleges, among other things, that he and other similarly situated employees nationwide are not paid for all time they spend donning and doffing personal protective equipment in violation of the Fair Labor Standards Act and Ohio law. The case is currently in the preliminary stages. The Company believes that it has substantive defenses and intends to vigorously defend this suit.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The following table presents information with respect to repurchases of common stock made by the Company during the three months ended July 2, 2021.

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2)
April 3 through May 7, 2021	1,680	$ 72.94	—	$ 8,316,239
May 8 through June 4, 2021	621	77.50	—	8,316,239
June 5 through July 2, 2021	163	76.78	—	8,316,239
Total	2,464	$ 74.34	—	$ 8,316,239

(1) Includes 1,680, 621, and 163 shares surrendered to the Company in April, May, and June, respectively, by employees to satisfy tax withholding obligations on equity awards issued under the Company's stock incentive plan.

(2) On January 14, 2014, the Company announced that its Board of Directors had authorized the repurchase of up to $50.0 million of its common stock. During the three months ended July 2, 2021, the Company did not repurchase any shares under this program. As of July 2, 2021, $8.3 million may still be purchased under the program.

Item 4. Mine Safety Disclosures

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95 to this quarterly report on Form 10-Q.

Item 6. Exhibits

All documents referenced below were filed pursuant to the Exchange Act by Materion Corporation, file number 001-15885, unless otherwise noted.

31.1	Certification of Chief Executive Officer required by Rule 13a-14(a) or 15d-14(a)*
31.2	Certification of Chief Financial Officer required by Rule 13a-14(a) or 15d-14(a)*
32	Certifications of Chief Executive Officer and Chief Financial Officer required by 18 U.S.C. Section 1350*
95	Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the period ended July 2, 2021*
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document*
101.SCH	Inline XBRL Taxonomy Extension Schema Document*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document*
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in the Exhibit 101 attachments)

*Submitted electronically herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MATERION CORPORATION

Dated: August 3, 2021

/s/ Shelly M. Chadwick

Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATIONS

I, Jugal K. Vijayvargiya, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Materion Corporation (the "registrant");

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Jugal K. Vijayvargiya

Dated: August 3, 2021

Jugal K. Vijayvargiya
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Shelly M. Chadwick, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Materion Corporation (the “registrant”);

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

c) evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5) The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

/s/ Shelly M. Chadwick

Dated: August 3, 2021

Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer

Exhibit 32

Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the Quarterly Report on Form 10-Q of Materion Corporation (the “Company”) for the quarter ended July 2, 2021 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned officers of the Company certifies that, to such officer’s knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)), and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: August 3, 2021

/s/ Jugal K. Vijayvargiya
Jugal K. Vijayvargiya
President and Chief Executive Officer

/s/ Shelly M. Chadwick
Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer

Exhibit 95

Materion Corporation

Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the Fiscal Quarter Ended July 2, 2021

Materion Natural Resources Inc., a wholly owned subsidiary, operates a beryllium mining complex in the State of Utah which is regulated by both the U.S. Mine Safety and Health Administration ("MSHA") and state regulatory agencies. We endeavor to conduct our mining and other operations in compliance with all applicable federal, state and local laws and regulations. We present information below regarding certain mining safety and health citations which MSHA has levied with respect to our mining operations.

Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Section 1503(a)") requires the Company to present certain information regarding mining safety in its periodic reports filed with the Securities and Exchange Commission.

The following table reflects citations, orders and notices issued to Materion Natural Resources Inc. by MSHA during the fiscal quarter ended July 2, 2021 (the "Reporting Period") and contains certain additional information as required by Section 1503(a) and Item 104 of Regulation S-K, including information regarding mining-related fatalities, proposed assessments from MSHA and legal actions ("Legal Actions") before the Federal Mine Safety and Health Review Commission, an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act.

Included below is the information required by Section 1503(a) with respect to the beryllium mining complex (MSHA Identification Number 4200706) for the Reporting Period:

(A)	Total number of alleged violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard under Section 104 of the Mine Act for which Materion Natural Resources Inc. received a citation from MSHA	0
(B)	Total number of orders issued under Section 104(b) of the Mine Act	0
(C)	Total number of citations and orders for alleged unwarrantable failure by Materion Natural Resources Inc. to comply with mandatory health or safety standards under Section 104(d) of the Mine Act	0
(D)	Total number of alleged flagrant violations under Section 110(b)(2) of the Mine Act	0
(E)	Total number of imminent danger orders issued under Section 107(a) of the Mine Act	0
(F)	Total dollar value of proposed assessments from MSHA under the Mine Act	$0
(G)	Total number of mining-related fatalities	0
(H)	Received notice from MSHA of a pattern of violations under Section 104(e) of the Mine Act	No
(I)	Received notice from MSHA of the potential to have a pattern of violations under Section 104(e) of the Mine Act	No
(J)	Total number of Legal Actions pending as of the last day of the Reporting Period	0
(K)	Total number of Legal Actions instituted during the Reporting Period	0
(L)	Total number of Legal Actions resolved during the Reporting Period	0