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 March 27, 2020

☐

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 March 27, 2020: 20,309,846.

PART 1 - FINANCIAL INFORMATION

Item 1. Financial Statements

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

	First Quarter Ended	
(Thousands, except per share amounts)	**March 27, 2020**	March 29, 2019
Net sales	**$ 277,946**	$ 301,441
Cost of sales	**232,371**	232,129
Gross margin	**45,575**	69,312
Selling, general, and administrative expense	**30,744**	40,064
Research and development expense	**4,185**	3,740
Goodwill impairment charges	**9,053**	—
Held-for-sale impairment charges	**1,713**	—
Restructuring expense	**2,164**	—
Other—net	**2,279**	4,121
Operating (loss) profit	**(4,563)**	21,387
Other non-operating (income) expense—net	**(944)**	245
Interest expense—net	**246**	466
(Loss) Income before income taxes	**(3,865)**	20,676
Income tax (benefit) expense	**(762)**	3,770
Net (loss) income	**$ (3,103)**	$ 16,906
Basic earnings per share:		
Net (loss) income per share of common stock	**$ (0.15)**	$ 0.83
Diluted earnings per share:		
Net (loss) income per share of common stock	**$ (0.15)**	$ 0.82
Weighted-average number of shares of common stock outstanding:		
Basic	**20,384**	20,267
Diluted	**20,384**	20,606

See notes to these consolidated financial statements.

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

(Thousands)	First Quarter Ended	
	March 27, 2020	March 29, 2019
Net (loss) income	**$ (3,103)**	$ 16,906
Other comprehensive (loss) income:		
Foreign currency translation adjustment	**(873)**	(503)
Derivative and hedging activity, net of tax	**(854)**	927
Pension and post-employment benefit adjustment, net of tax	**16**	540
Other comprehensive (loss) income	**(1,711)**	964
Comprehensive (loss) income	**$ (4,814)**	$ 17,870

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Balance Sheets

(Thousands)	(Unaudited) March 27, 2020	Dec. 31, 2019
Assets		
Current assets		
Cash and cash equivalents	**$ 107,576**	$ 125,007
Accounts receivable, net	**138,803**	154,751
Inventories, net	**204,702**	190,390
Prepaid and other current assets	**20,515**	21,839
Assets held for sale	**7,188**	—
Total current assets	**478,784**	491,987
Deferred income taxes	**1,648**	1,666
Property, plant, and equipment	**910,050**	916,965
Less allowances for depreciation, depletion, and amortization	**(675,074)**	(684,689)
Property, plant, and equipment—net	**234,976**	232,276
Operating lease, right-of-use assets	**36,465**	23,413
Intangible assets	**5,972**	6,380
Other assets	**18,399**	17,937
Goodwill	**69,832**	79,011
Total Assets	**$ 846,076**	$ 852,670
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	**$ 877**	$ 868
Accounts payable	**54,145**	43,206
Salaries and wages	**18,820**	41,167
Other liabilities and accrued items	**32,920**	32,477
Income taxes	**1,387**	1,342
Unearned revenue	**2,317**	3,380
Liabilities held for sale	**3,204**	—
Total current liabilities	**113,670**	122,440
Other long-term liabilities	**10,575**	11,560
Operating lease liabilities	**32,374**	18,091
Finance lease liabilities	**16,652**	17,424
Retirement and post-employment benefits	**31,444**	32,466
Unearned income	**39,091**	32,891
Long-term income taxes	**3,480**	3,451
Deferred income taxes	**1,186**	2,410
Long-term debt	**1,126**	1,260
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 March 27 and December 31)	**253,967**	249,674
Retained earnings	**584,505**	589,888
Common stock in treasury	**(198,311)**	(186,845)
Accumulated other comprehensive loss	**(47,173)**	(45,462)
Other equity	**3,490**	3,422
Total shareholders' equity	**596,478**	610,677
Total Liabilities and Shareholders' Equity	**$ 846,076**	$ 852,670

See the notes to these consolidated financial statements.

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

(Thousands)	Three Months Ended March 27, 2020	Three Months Ended March 29, 2019
Cash flows from operating activities:		
Net (loss) income	**$ (3,103)**	$ 16,906
Adjustments to reconcile net (loss) income to net cash provided by (used in) operating activities:		
Depreciation, depletion, and amortization	**14,274**	9,067
Amortization of deferred financing costs in interest expense	**182**	236
Stock-based compensation expense (non-cash)	**1,492**	1,547
Deferred income tax (benefit) expense	**(1,227)**	371
Held-for-sale impairment charges	**10,766**	—
Changes in assets and liabilities:		
Decrease (increase) in accounts receivable	**11,049**	(14,698)
Decrease (increase) in inventory	**(16,723)**	(9,561)
Decrease (increase) in prepaid and other current assets	**1,127**	(556)
Increase (decrease) in accounts payable and accrued expenses	**(13,002)**	(16,030)
Increase (decrease) in unearned revenue	**(938)**	(724)
Increase (decrease) in interest and taxes payable	**368**	2,525
Domestic pension plan contributions	**—**	(1,500)
Other-net	**4,865**	(200)
Net cash provided by (used in) operating activities	**9,130**	(12,617)
Cash flows from investing activities:		
Payments for purchase of property, plant, and equipment	**(14,789)**	(8,027)
Payments for mine development	**—**	(1,352)
Proceeds from sale of property, plant, and equipment	**10**	58
Net cash used in investing activities	**(14,779)**	(9,321)
Cash flows from financing activities:		
Repayment of long-term debt	**(142)**	(197)
Principal payments under finance lease obligations	**(233)**	(298)
Cash dividends paid	**(2,245)**	(2,125)
Repurchase of common stock	**(6,766)**	(199)
Payments of withholding taxes for stock-based compensation awards	**(2,015)**	(3,978)
Net cash used in financing activities	**(11,401)**	(6,797)
Effects of exchange rate changes	**(381)**	(46)
Net change in cash and cash equivalents	**(17,431)**	(28,781)
Cash and cash equivalents at beginning of period	**125,007**	70,645
Cash and cash equivalents at end of period	**$ 107,576**	$ 41,864

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 Income (Loss)**	**Other Equity**	**Total**
Balance at December 31, 2018	20,242	(6,906)	$ 234,704	$ 548,374	$ (175,426)	$ (58,234)	$ 4,488	$ 553,906
Net income	—	—	—	16,906	—	—	—	16,906
Other comprehensive income (loss)	—	—	—	—	—	964	—	964
Cumulative effect of accounting change	—	—	—	(179)	—	—	—	(179)
Cash dividends declared ($0.105 per share)	—	—	—	(2,125)	—	—	—	(2,125)
Stock-based compensation activity	192	192	6,759	(35)	(5,177)	—	—	1,547
Payments of withholding taxes for stock-based compensation awards	(75)	(75)	—	—	(3,978)	—	—	(3,978)
Repurchase of shares	(5)	(5)	—	—	(199)	—	—	(199)
Directors' deferred compensation	—	—	17	—	(32)	—	50	35
Balance at March 29, 2019	20,354	(6,794)	$ 241,480	$ 562,941	$ (184,812)	$ (57,270)	$ 4,538	$ 566,877
Balance at December 31, 2019	20,404	(6,744)	$ 249,674	$ 589,888	$ (186,845)	$ (45,462)	$ 3,422	$ 610,677
Net loss	—	—	—	(3,103)	—	—	—	(3,103)
Other comprehensive income (loss)	—	—	—	—	—	(1,711)	—	(1,711)
Cash dividends declared ($0.11 per share)	—	—	—	(2,245)	—	—	—	(2,245)
Stock-based compensation activity	99	99	4,262	(35)	(2,643)	—	—	1,584
Payments of withholding taxes for stock-based compensation awards	(36)	(36)	—	—	(2,015)	—	—	(2,015)
Repurchase of shares	(158)	(158)	—	—	(6,766)	—	—	(6,766)
Directors' deferred compensation	1	1	31	—	(42)	—	68	57
Balance at March 27, 2020	20,310	(6,838)	$ 253,967	$ 584,505	$ (198,311)	$ (47,173)	$ 3,490	$ 596,478

See notes to these consolidated financial statements.

Note A — Accounting Policies

Basis of Presentation: In management's opinion, 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 2020 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 2019 Annual Report on Form 10-K. The interim period results are not necessarily indicative of the results to be expected for the full year.

New Pronouncements Adopted: In June 2016, the FASB issued Accounting Standards Update (ASU) 2016-13, *Financial Instruments - Credit Losses*. This ASU requires an entity to change its accounting approach in determining impairment of certain financial instruments, including trade receivables, from an "incurred loss" to a "current expected credit loss" model. The standard is effective for fiscal years beginning after December 15, 2019, including interim periods within such fiscal years. Early adoption is permitted. The Company adopted this guidance as of January 1, 2020, and the adoption did not have a material effect on the Company's consolidated financial statements.

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 — Segment Reporting

The Company has the following reportable segments: Performance Alloys and Composites, Advanced Materials, Precision Coatings, 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, beryllia ceramics, and bulk metallic glass materials.

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 braze materials, and ultra-fine wire.

Precision Coatings 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 Coatings	Other	Total
First Quarter 2020					
Net sales	**$ 99,067**	**$ 160,165**	**$ 18,714**	**$ —**	**$ 277,946**
Intersegment sales	**215**	**9,191**	**—**	**—**	**9,406**
Operating profit (loss)	**4,791**	**4,785**	**(9,592)**	**(4,547)**	**(4,563)**
First Quarter 2019					
Net sales	$ 127,113	$ 144,025	$ 30,303	$ —	$ 301,441
Intersegment sales	9	17,213	—	—	17,222
Operating profit (loss)	18,958	7,080	2,077	(6,728)	21,387

The following table disaggregates revenue for each segment by end market for the first quarter of 2020 and 2019:

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Coatings	Other	Total
First Quarter 2020					
End Market					
Semiconductor	$ 906	$ 120,819	$ 11	$ —	$ 121,736
Industrial	23,340	8,362	3,097	—	34,799
Aerospace and Defense	14,206	1,426	5,109	—	20,741
Consumer Electronics	14,695	118	3,541	—	18,354
Automotive	18,163	2,080	17	—	20,260
Energy	5,429	23,468	—	—	28,897
Telecom and Data Center	9,989	871	—	—	10,860
Other	12,339	3,021	6,939	—	22,299
Total	$ 99,067	$ 160,165	$ 18,714	$ —	$ 277,946
First Quarter 2019					
End Market					
Semiconductor	$ 1,965	$ 105,090	$ 112	$ —	$ 107,167
Industrial	26,430	7,928	4,150	—	38,508
Aerospace and Defense	27,074	1,493	4,871	—	33,438
Consumer Electronics	13,555	205	3,486	—	17,246
Automotive	20,713	1,353	221	—	22,287
Energy	11,094	22,197	—	—	33,291
Telecom and Data Center	17,592	202	—	—	17,794
Other	8,690	5,557	17,463	—	31,710
Total	$ 127,113	$ 144,025	$ 30,303	$ —	$ 301,441

Intersegment sales are eliminated in consolidation.

Note C — 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 (ASC) 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 March 27, 2020. 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 March 27, 2020, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately $37.0 million.

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

(Thousands)	**March 27, 2020**	December 31, 2019	$ change	% change
Accounts receivable, trade	**$ 129,139**	$ 141,168	$ (12,029)	(9)%
Unbilled receivables	**9,265**	13,583	(4,318)	(32)%
Unearned revenue	**2,317**	3,380	(1,063)	(31)%

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 quarter of 2020.

Unbilled receivables represent expenditures on contracts, plus applicable profit margin, not yet billed. Unbilled receivables are normally 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 $2.1 million of the unearned amounts as revenue during the first quarter of 2020.

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 D — Other-net

Other-net for the first quarter of 2020 and 2019 is summarized as follows:

	First Quarter Ended	
(Thousands)	**March 27, 2020**	March 29, 2019
Metal consignment fees	**$ 2,229**	$ 3,091
Amortization of intangible assets	**188**	390
Foreign currency (gain) loss	**(62)**	77
Net loss on disposal of fixed assets	**46**	24
Other items	**(122)**	539
Total	**$ 2,279**	$ 4,121

Note E — Restructuring

In the first quarter of 2020, the Company initiated a restructuring plan in its Performance Alloys and Composites (PAC) segment to close its Warren, Michigan and Fremont, California locations. Costs associated with the plan totaled $2.2 million in the first quarter of 2020 and included $0.5 million of severance associated with approximately 63 employees, $1.3 million of facility and other related costs.

Remaining severance payments of $0.5 million and facility costs of $1.3 million related to these initiatives are reflected within Other liabilities and accrued items in the Consolidated Balance Sheets. The Company expects to incur additional costs related to these initiatives of approximately $6 million in the remainder of 2020.

Note F — Income Taxes

The Company's effective tax rate for the first quarter of 2020 and 2019 was 19.7% and 18.2%, respectively. The effective tax rate for each period is lower than the statutory tax rate primarily due to the impact of percentage depletion and the research and development credit. The effective tax rate for the first quarter of 2020 included discrete income tax expense of $0.2 million, primarily related to $0.7 million of tax expense from an impairment of goodwill and $0.4 million of tax benefit related to excess tax benefits from stock-based compensation awards. The effective tax rate for the first quarter of 2019 included a discrete income tax benefit of $0.9 million, primarily related to excess tax benefits from stock-based compensation awards.

On March 27, 2020, President Trump signed into law the Coronavirus Aid, Relief and Economic Security (CARES) Act. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, and modifications to the net interest deduction limitations. While the Company continues to examine the impacts the CARES Act may have on its business, it does not expect it will have a material impact to its consolidated financial statements.

Note G — (Loss) Earnings Per Share (EPS)

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

	First Quarter Ended	
(Thousands, except per share amounts)	**March 27, 2020**	March 29, 2019
Numerator for basic and diluted EPS:		
Net (loss) income	**$ (3,103)**	$ 16,906
Denominator:		
Denominator for basic EPS:		
Weighted-average shares outstanding	**20,384**	20,267
Effect of dilutive securities:		
Stock appreciation rights	**—**	107
Restricted stock units	**—**	83
Performance-based restricted stock units	**—**	149
Diluted potential common shares	**—**	339
Denominator for diluted EPS:		
Adjusted weighted-average shares outstanding	**20,384**	20,606
Basic EPS	**$ (0.15)**	$ 0.83
Diluted EPS	**$ (0.15)**	$ 0.82

Adjusted weighted-average shares outstanding - diluted for the three months ended March 27, 2020 excludes the dilutive effect of approximately 239,000 shares, primarily related to restricted stock units and stock appreciation rights, as their inclusion would have been anti-dilutive due to the Company's net loss.

Additionally, weighted average shares outstanding - diluted exclude securities totaling 302,573 and 201,394 for the quarters ended March 27, 2020 and March 29, 2019, respectively. These securities primarily related to restricted stock units and stock appreciation rights with fair market values and exercise prices less 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 H — Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

(Thousands)	March 27, 2020	December 31, 2019
Raw materials and supplies	**$ 46,843**	$ 35,612
Work in process	**180,123**	177,780
Finished goods	**26,144**	25,506
Subtotal	**$ 253,110**	$ 238,898
Less: LIFO reserve balance	**48,408**	48,508
Inventories	**$ 204,702**	$ 190,390

The liquidation of last in, first out (LIFO) inventory layers had no impact to cost of sales in the first quarter of 2020 or 2019.

The Company maintains the majority of the precious metals and copper used 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 $338.5 million as of March 27, 2020 versus $309.3 million as of December 31, 2019.

Note I — Held for Sale

As of March 27, 2020, the Company committed to a plan to sell its Large Area Coatings (LAC) reporting unit within the Precision Coatings segment and determined that it met the criteria to be classified as held for sale. Therefore, its assets and liabilities have been presented as held for sale in the Consolidated Balance Sheet as of March 27, 2020. Assets and liabilities classified as held for sale are measured at the lower of carrying value or fair value less costs to sell. The Company entered into a letter of intent to sell the LAC reporting unit in March 2020.

Before measuring the fair value less costs to sell of the disposal group as a whole, the Company first reviewed individual assets and liabilities to determine if any fair value adjustments were required. Based on the letter of intent entered into by the Company and the prospective buyer, the Company recorded a goodwill impairment charge of $9.1 million to write-off the remaining balance of goodwill for the LAC reporting unit. The Company determined fair value based on its expected proceeds to be received, which it concluded is most representative of the value of the assets.

The Company then estimated the fair value of the disposal group as a whole, less costs to sell, and compared the fair value to the remaining carrying value. Based on this review, the Company recorded an additional $1.7 million asset impairment loss.

The assets and liabilities of the LAC reporting unit classified as held for sale at March 27, 2020 were as follows:

(Thousands)	
Accounts receivable, net	**$ 3,902**
Inventories, net	**1,650**
Prepaid and other current assets	**56**
Property, plant, and equipment - net	**2,516**
Operating lease, right-of-use assets	**777**
Impairment on carrying value	**$ (1,713)**
Assets held for sale	**$ 7,188**
Accounts payable	**$ 1,528**
Salaries and wages	**236**
Other liabilities and accrued items	**808**
Operating lease liabilities	**588**
Other long term liabilities	**44**
Liabilities held for sale	**$ 3,204**

The pending transaction is subject to the entry into a definitive agreement and customary closing conditions and is expected to close no later than the third quarter of 2020.

Excluding the $9.1 million goodwill impairment charge and $1.7 million asset impairment charge recorded in the first quarter of 2020, the operating results of the LAC reporting unit were not material to the Company for any period presented.

Note J — Goodwill

A summary of changes in goodwill by reportable segment is as follows:

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Coatings	Total
Balance at December 31, 2019	$ 1,899	$ 50,190	$ 26,922	$ 79,011
Impairment charge	—	—	(9,053)	(9,053)
Other	—	(126)	—	(126)
Balance at March 27, 2020	$ 1,899	$ 50,064	$ 17,869	$ 69,832

Goodwill is reviewed annually for impairment or more frequently if impairment indicators arise. The Company conducts its annual goodwill impairment assessment as of the first day of the fourth quarter, or more frequently under certain circumstances. Goodwill is assigned to the reporting unit, which is the operating segment level or one level below the operating segment.

To date the Company has recorded $20.6 million of impairment charges related to goodwill in the LAC reporting unit. See Note I for additional information.

Note K — Customer Prepayments

As of the end of the first quarter of 2020, the Company has received $11.8 million of prepayments from a customer to enable the Company to establish a new manufacturing facility to supply product to the customer. The Company expects to finalize a long-term supply agreement later this year. The prepayments from the customer are expected to be applied when commercial production of the product is sold and delivered to the customer. Accordingly, the $11.8 million of prepayments are classified as Unearned Income in the Consolidated Balance Sheet, and the liability is expected to be settled as commercial shipments are made.

Note L — Pensions and Other Post-employment Benefits

The following is a summary of the net periodic benefit cost for the first quarter of 2020 and 2019 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	
	First Quarter Ended		First Quarter Ended	
(Thousands)	**March 27, 2020**	March 29, 2019	**March 27, 2020**	March 29, 2019
Components of net periodic benefit cost (benefit)				
Service cost	**$ —**	$ 1,340	**$ 15**	$ 17
Interest cost	**1,215**	1,557	**53**	100
Expected return on plan assets	**(2,205)**	(2,123)	**—**	—
Amortization of prior service cost (benefit)	**—**	120	**(374)**	(374)
Amortization of net loss (gain)	**284**	804	**(83)**	(23)
Net periodic benefit (benefit) cost	**$ (706)**	$ 1,698	**$ (389)**	$ (280)

The Company did not make any contributions to its domestic defined benefit plan in the first quarter of 2020 and made contributions of $1.5 million in the first quarter of 2019.

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 M — Accumulated Other Comprehensive Income (Loss)

Changes in the components of accumulated other comprehensive income, including the amounts reclassified, for the first quarter of 2020 and 2019 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 December 31, 2019	$ 1,324	$ (452)	$ 25	$ 897	$ (41,346)	$ (5,013)	$ (45,462)
Other comprehensive (loss) income before reclassifications	(142)	(823)	(778)	(1,743)	—	(873)	(2,616)
Amounts reclassified from accumulated other comprehensive income	(1)	318	321	638	(24)	—	614
Net current period other comprehensive income (loss) before tax	(143)	(505)	(457)	(1,105)	(24)	(873)	(2,002)
Deferred taxes	(33)	(116)	(102)	(251)	(40)	—	(291)
Net current period other comprehensive income (loss) after tax	(110)	(389)	(355)	(854)	16	(873)	(1,711)
Balance at March 27, 2020	$ 1,214	$ (841)	$ (330)	$ 43	$ (41,330)	$ (5,886)	$ (47,173)
Balance at December 31, 2018	$ 1,263	$ 79	$ (441)	$ 901	$ (54,543)	$ (4,592)	$ (58,234)
Other comprehensive income (loss) before reclassifications	517	(73)	884	1,328	—	(503)	825
Amounts reclassified from accumulated other comprehensive income	2	(61)	(71)	(130)	660	—	530
Net current period other comprehensive income (loss) before tax	519	(134)	813	1,198	660	(503)	1,355
Deferred taxes	119	(31)	183	271	120	—	391
Net current period other comprehensive income (loss) after tax	400	(103)	630	927	540	(503)	964
Balance at March 29, 2019	$ 1,663	$ (24)	$ 189	$ 1,828	$ (54,003)	$ (5,095)	$ (57,270)

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

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

Note N — Stock-based Compensation Expense

Stock-based compensation expense, which includes awards settled in shares and in cash, was $1.0 million and $2.7 million in the first quarter of 2020 and 2019, respectively.

The Company granted 64,636 stock appreciation rights (SARs) to certain employees during the first three months of 2020. The weighted-average exercise price per share and weighted-average fair value per share of the SARs granted during the three months ended March 27, 2020 were $50.95 and $13.67, 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	1.41%
Dividend yield	0.9%
Volatility	31.8%
Expected term (in years)	4.8

The Company granted 60,652 stock-settled restricted stock units (RSUs) to certain employees during the first three months of 2020. 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 $49.53 for stock-settled RSUs granted to employees during the three months ended March 27, 2020. RSUs are expensed over the vesting period of three years.

The Company granted stock-settled performance-based restricted stock units (PRSUs) to certain employees in the first three months of 2020. The weighted-average fair value of the stock-settled PRSUs was $57.65 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 the total return to shareholders over the vesting period relative to a peer group's performance over the same period.

At March 27, 2020, unamortized compensation cost related to the unvested portion of all stock-based awards was approximately $13.7 million, and is expected to be recognized over the remaining vesting period of the respective grants.

Note O — 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 March 27, 2020 and December 31, 2019:

	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)	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Financial Assets								
Deferred compensation investments	**$ 2,719**	$ 3,391	**$ 2,719**	$ 3,391	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**175**	188	**—**	—	**175**	188	**—**	—
Precious metal swaps	**—**	35	**—**	—	**—**	35	**—**	—
Copper swaps	**—**	61	**—**	—	**—**	61	**—**	—
Total	**$ 2,894**	$ 3,675	**$ 2,719**	$ 3,391	**$ 175**	$ 284	**$ —**	$ —
Financial Liabilities								
Deferred compensation liability	**$ 2,719**	$ 3,391	**$ 2,719**	$ 3,391	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**438**	211	**—**	—	**438**	211	**—**	—
Precious metal swaps	**1,093**	623	**—**	—	**1,093**	623	**—**	—
Copper swaps	**424**	28	**—**	—	**424**	28	**—**	—
Total	**$ 4,674**	$ 4,253	**$ 2,719**	$ 3,391	**$ 1,955**	$ 862	**$ —**	$ —

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 March 27, 2020 and December 31, 2019. 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 P — 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 March 27, 2020 and December 31, 2019:

	March 27, 2020		December 31, 2019	
(Thousands)	**Notional Amount**	**Fair Value**	Notional Amount	Fair Value
Foreign currency forward contracts				
Prepaid expenses	**$ 1,297**	**$ 3**	$ 13,734	$ 95
Other liabilities and accrued items	**12,471**	**21**	5,757	16

These outstanding foreign currency derivatives were related to balance sheet hedges and intercompany loans. Other-net included $0.6 million of foreign currency gains relating to these derivatives during the first quarter of 2020 and included no foreign currency impact in the first quarter of 2019.

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 March 27, 2020 and December 31, 2019:

	March 27, 2020		December 31, 2019	
(Thousands)	**Notional Amount**	**Fair Value**	Notional Amount	Fair Value
Prepaid expenses				
Foreign currency forward contracts - yen	**$ 807**	**$ 16**	$ 1,025	$ 10
Foreign currency forward contracts - euro	**12,434**	**156**	3,466	83
Precious metal swaps	**—**	**—**	1,116	34
Copper swaps	**—**	**—**	1,951	61
Total	**13,241**	**172**	7,558	188
Other assets				
Precious metal swaps	**—**	**—**	157	1
Other liabilities and accrued items				
Foreign currency forward contracts - yen	**2,780**	**32**	2,355	12
Foreign currency forward contracts - euro	**6,956**	**328**	15,686	183
Precious metal swaps	**8,441**	**1,093**	7,034	618
Copper swaps	**3,140**	**424**	1,266	28
Total	**21,317**	**1,877**	26,341	841
Other long-term liabilities				
Foreign currency forward contracts - yen	**109**	**4**	—	—
Foreign currency forward contracts - euro	**1,075**	**53**	—	—
Precious metal swaps	**—**	**—**	149	5
Total	**1,184**	**57**	149	5
Total	**$ 35,742**	**$ 1,762**	$ 34,205	$ 657

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 March 27, 2020 to the Consolidated Statements of Income within the next 15-month period. Refer to Note M 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 first quarter of 2020 and 2019:

(Thousands)		First Quarter Ended March 27, 2020	First Quarter Ended March 29, 2019
Hedging relationship	**Line item**		
Foreign currency forward contracts	Net sales	$ (1)	$ 2
Precious metal swaps	Cost of sales	318	(61)
Copper swaps	Cost of sales	321	(71)
Total		$ 638	$ (130)

Note Q — Contingencies

Legal Proceedings. For general information regarding legal proceedings relating to *Chronic Beryllium Disease Claims*, refer to Note R ("Contingencies and Commitments") in the Company's 2019 Annual Report on Form 10-K.

One beryllium case was filed in 2019 and was outstanding as of March 27, 2020. The Company does not expect the resolution of this matter 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.

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 $5.8 million and $5.9 million at March 27, 2020 and December 31, 2019, respectively. Environmental projects tend to be long-term, and the final actual remediation costs may differ from the amounts currently recorded.

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 electrical, 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) First Quarter 2020 Update

The significant macroeconomic impact of the ongoing COVID-19 pandemic impacted several of the Company's end markets beginning in the first quarter of 2020 primarily in the form of reduced demand, particularly in the automotive, energy, aerospace and defense, and industrial end markets. The Company also recorded additional reserves for slow-moving and excess inventory of approximately $1.3 million related to the collapse in demand in the oil and gas industry. The Company also reviewed for any other potential impairment indicators and did not identify any. The Company's facilities continue to operate with federal and state government approvals due to the qualification of our facilities as essential and critical. However, we may temporarily shut down our facilities in response to reduced demand due to employees being impacted by COVID-19 or changes in government policy. The Company also is not currently experiencing any significant supply chain disruptions. We expect reduced demand to continue at least through the second quarter of 2020, but the extent and timing cannot be reasonably estimated due to the evolving nature of this pandemic.

The impact of the COVID-19 pandemic is fluid and continues to evolve, and therefore, we cannot predict the extent to which our business, results of operations, financial condition, or cash flows will ultimately be impacted.

The Company suspended its share buyback program late in the first quarter of 2020. In addition, the Company is currently evaluating the impact of the CARES Act. See Note F for additional discussion.

From a liquidity perspective, we believe we are well positioned to manage through this global crisis. We ended the first quarter with total cash of $107.6 million, only $2.1 million of total debt, and $345.8 million of available borrowings under our revolving credit facility. In order to ensure we have more than adequate liquidity, we borrowed $150.0 million under the revolving credit facility in April 2020.

RESULTS OF OPERATIONS

First Quarter

	First Quarter Ended			
(Thousands, except per share data)	**March 27, 2020**	March 29, 2019	$ Change	% Change
Net sales	**$ 277,946**	$ 301,441	$ (23,495)	(8)%
Value-added sales	**158,666**	187,681	(29,015)	(15)%
Gross margin	**45,575**	69,312	(23,737)	(34)%
Gross margin as a % of value-added sales	**29%**	37%		
Selling, general, and administrative (SG&A) expense	**30,744**	40,064	(9,320)	(23)%
SG&A expense as a % of value-added sales	**19%**	21%		
Research and development (R&D) expense	**4,185**	3,740	445	12 %
R&D expense as a % of value-added sales	**3%**	2%		
Goodwill impairment charges	**9,053**	—	9,053	N/A
Held-for-sale impairment charges	**1,713**	—	1,713	N/A
Restructuring expense	**2,164**	—	2,164	N/A
Other—net	**2,279**	4,121	(1,842)	(45)%
Operating (loss) profit	**(4,563)**	21,387	(25,950)	(121)%
Other non-operating (income) expense—net	**(944)**	245	(1,189)	(485)%
Interest expense—net	**246**	466	(220)	(47)%
(Loss) Income before income taxes	**(3,865)**	20,676	(24,541)	(119)%
Income tax (benefit) expense	**(762)**	3,770	(4,532)	(120)%
Net (loss) income	**$ (3,103)**	$ 16,906	$ (20,009)	(118)%
Diluted earnings per share	**$ (0.15)**	$ 0.82	$ (0.97)	(118)%

N/A = Not Applicable

Net sales of $277.9 million in the first quarter of 2020 decreased $23.5 million from $301.4 million in the first quarter of 2019. Net sales growth in our Advanced Materials segment was more than offset by decreased net sales in our Performance Alloys and Composites and Precision Coatings segments driven by lower sales volumes. The change in precious metal and copper prices favorably impacted net sales during the first quarter of 2020 by $19.3 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 $158.7 million in the first quarter of 2020 decreased $29.0 million, or 15%, compared to the first quarter of 2019. The increase in semiconductor end market sales was more than offset by the decrease in value-added sales due to reduced demand in the aerospace and defense, telecom and data center, and energy end markets.

Gross margin in the first quarter of 2020 was $45.6 million, which was down 34% compared to the first quarter of 2019. Gross margin expressed as a percentage of value-added sales decreased to 29% in the first quarter of 2020 from 37% in the first quarter of 2019. The decrease was primarily driven by unfavorable sales mix and manufacturing yields, as well as a $1.3 million charge to reserve for slow moving and excess inventory related to the oil and gas industry.

SG&A expense was $30.7 million in the first quarter of 2020, compared to $40.1 million in the first quarter of 2019. The decrease in SG&A expense for the first quarter of 2020 was primarily driven by lower variable compensation expense. Expressed as a percentage of value-added sales, SG&A expense was 19% and 21% in the first quarter of 2020 and 2019, respectively.

R&D expense consists primarily of direct personnel costs for pre-production evaluation and testing of new products, prototypes, and applications. R&D expense accounted for 3% and 2% of value-added sales in the first quarter of 2020 and 2019, respectively. The increase reflects additional investment in new product and application development.

Goodwill and Held-for-sale impairment charges includes non-recurring charges relating to goodwill and other assets in our Precision Coatings segment. Refer to Notes I and J to the Consolidated Financial Statements for additional discussion.

Restructuring expense consists primarily of cost reduction actions taken in order to reduce our fixed cost structure. In the first quarter of 2020, we recorded $2.2 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 E to the Consolidated Financial Statements for additional discussion.

Other-net was $2.3 million of expense in the first quarter of 2020, or a $1.8 million decrease from the first quarter of 2019. Refer to Note D to the Consolidated Financial Statements for details of the major components within Other-net.

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

Interest expense-net was $0.2 million and $0.5 million in the first quarter of 2020 and 2019, respectively. The decrease in interest expense in the first quarter of 2020 compared to the first quarter of 2019 is primarily due to interest income on investments held in money market accounts.

Income tax (benefit) expense for the first quarter of 2020 was a benefit of $0.8 million compared to expense of $3.8 million in the first quarter of 2019. The effective tax rate for the first quarter of 2020 was 19.7% compared to 18.2% in the prior-year period. The effective tax rate for each period is lower than the statutory tax rate primarily due to the impact of percentage depletion and the research and development credit. The effective tax rate for the first quarter of 2020 included discrete income tax expense of $0.2 million, primarily related to $0.7 million of tax expense from an impairment of goodwill and $0.4 million of tax benefit related to excess tax benefits from stock-based compensation awards. The effective tax rate for the first quarter of 2019 included a discrete income tax benefit of $0.9 million, primarily related to excess tax benefits from stock-based compensation awards. Refer to Note F to the Consolidated Financial Statements for further details on income taxes.

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 first quarter of 2020 and 2019 is as follows:

	First Quarter Ended	
(Thousands)	**March 27, 2020**	March 29, 2019
Net sales		
Performance Alloys and Composites	**$ 99,067**	$ 127,113
Advanced Materials	**160,165**	144,025
Precision Coatings	**18,714**	30,303
Other	**—**	—
Total	**$ 277,946**	$ 301,441
Less: pass-through metal costs		
Performance Alloys and Composites	**$ 15,352**	$ 17,512
Advanced Materials	**100,977**	86,518
Precision Coatings	**1,725**	7,766
Other	**1,226**	1,964
Total	**$ 119,280**	$ 113,760
Value-added sales		
Performance Alloys and Composites	**$ 83,715**	$ 109,601
Advanced Materials	**59,188**	57,507
Precision Coatings	**16,989**	22,537
Other	**(1,226)**	(1,964)
Total	**$ 158,666**	$ 187,681

The cost of gold, silver, platinum, palladium, and copper 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.

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.

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 Coatings, and Other. The Other reportable segment includes unallocated corporate costs.

Performance Alloys and Composites

First Quarter

(Thousands)	First Quarter Ended March 27, 2020	March 29, 2019	$ Change	% Change
Net sales	**$ 99,067**	$ 127,113	$ (28,046)	(22)%
Value-added sales	**83,715**	109,601	(25,886)	(24)%
Operating profit	**4,791**	18,958	(14,167)	(75)%

Net sales from the Performance Alloys and Composites segment of $99.1 million in the first quarter of 2020 were 22% lower than net sales of $127.1 million in the first quarter of 2019. The decrease was due to reduced sales into all major end markets, with the largest declines in aerospace and defense and telecom and data center.

Value-added sales of $83.7 million in the first quarter of 2020 were 24% lower than value-added sales of $109.6 million in the first quarter of 2019. The decrease in value-added sales was due to the same factors driving the decrease in net sales.

Performance Alloys and Composites generated operating profit of $4.8 million in the first quarter of 2020 compared to $19.0 million in the first quarter of 2019. The decrease in operating profit was primarily due to reduced sales volumes as well as restructuring charges of $2.2 million in the first quarter of 2020 related to the closure of our Warren, Michigan and Fremont, California facilities. In addition, we recorded $1.3 million of additional reserves for slow-moving and excess inventory related to the collapse in demand in the oil and gas industry.

Advanced Materials

First Quarter

(Thousands)	First Quarter Ended March 27, 2020	March 29, 2019	$ Change	% Change
Net sales	**$ 160,165**	$ 144,025	16,140	11 %
Value-added sales	**59,188**	57,507	1,681	3 %
Operating profit	**4,785**	7,080	(2,295)	(32)%

Net sales from the Advanced Materials segment of $160.2 million in the first quarter of 2020 were 11% higher than net sales of $144.0 million in the first quarter of 2019. The increase in net sales was primarily due to the impact of higher pass-through metal prices of $18.6 million, partially offset by a lower mix of precious metal-containing products and the mix of customer-supplied material.

Value-added sales of $59.2 million in the first quarter of 2020 were up 3% compared to value-added sales of $57.5 million in the first quarter of 2019. The increase was primarily driven by improved value-added sales into the semiconductor end market.

The Advanced Materials segment generated operating profit of $4.8 million in the first quarter of 2020 compared to $7.1 million in the first quarter of 2019. Decreased operating profit in the first quarter of 2020, compared to the first quarter of 2019, was the result of unfavorable sales mix and reduced manufacturing yields primarily related to new product introductions.

Precision Coatings

First Quarter

(Thousands)	First Quarter Ended March 27, 2020	March 29, 2019	$ Change	% Change
Net sales	**$ 18,714**	$ 30,303	(11,589)	(38)%
Value-added sales	**16,989**	22,537	(5,548)	(25)%
Operating (loss) profit	**(9,592)**	2,077	(11,669)	(562)%

Net sales from the Precision Coatings segment of $18.7 million in the first quarter of 2020 decreased 38% compared to net sales of $30.3 million in the first quarter of 2019 primarily due to reduced sales volumes and lower mix of precious metal-containing products.

Value-added sales of $17.0 million in the first quarter of 2020 decreased 25% compared to value-added sales of $22.5 million in the first quarter of 2019. The decrease is primarily due to a reduction in value-added sales related to blood glucose test strip products.

The Precision Coatings segment generated an operating loss of $9.6 million in the first quarter of 2020, compared to an operating profit of $2.1 million in the first quarter of 2019. The operating loss was driven by a goodwill impairment charge of $9.1 million and a held-for-sale impairment charge of $1.7 million related to our LAC reporting unit, which met the criteria to be classified as held for sale as of March 27, 2020.

Other

First Quarter

(Thousands)	First Quarter Ended March 27, 2020	March 29, 2019	$ Change	% Change
Net sales	**$ —**	$ —	—	— %
Value-added sales	**(1,226)**	(1,964)	738	(38)%
Operating loss	**(4,547)**	(6,728)	2,181	(32)%

The Other reportable segment in total includes unallocated corporate costs.

Corporate costs of $4.5 million in the first quarter of 2020 decreased $2.2 million as compared to $6.7 million in the first quarter of 2019. Corporate costs accounted for 3% and 4% of Company-wide value-added sales in the first quarters of 2020 and 2019, respectively. The decrease in corporate costs in the first quarter of 2020, compared to the first quarter of 2019, is primarily related to lower variable compensation expense.

FINANCIAL POSITION

Cash Flow

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

(Thousands)	Three Months Ended March 27, 2020	March 29, 2019	$ Change
Net cash provided by (used in) operating activities	**$ 9,130**	$ (12,617)	$ 21,747
Net cash used in investing activities	**(14,779)**	(9,321)	(5,458)
Net cash used in financing activities	**(11,401)**	(6,797)	(4,604)
Effects of exchange rate changes	**(381)**	(46)	(335)
Net change in cash and cash equivalents	**$ (17,431)**	$ (28,781)	$ 11,350

Net cash provided by operating activities totaled $9.1 million in the first quarter of 2020 versus $12.6 million used in operating activities in the prior-year period. Working capital requirements used cash of $18.7 million and $40.3 million during the first three months of 2020 and 2019, respectively. Cash flows provided by accounts receivable were $25.7 million higher than the

prior-year period. Three-month trailing days sales outstanding was approximately 45 days at March 27, 2020 and 47 days at December 31, 2019. Cash flows used for inventory were $16.7 million in the first quarter of 2020, compared to $9.6 million in the prior-year period primarily in our Performance Alloys and Composites segment. Cash flows used for accounts payable and accrued expenses were $13.0 million compared to the prior-year period use of cash of $16.0 million due to higher accounts payable balances related to increased inventory levels.

Net cash used in investing activities was $14.8 million in the first quarter of 2020 compared to $9.3 million in the prior-year period due to increased levels of capital spending. The increase in capital expenditures was due to investments in new equipment funded by customer prepayments. See Note K 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 2020, the Company expects payments for property, plant, and equipment to be approximately $30.0 million, excluding any capital expenditures related to customer prepayments, and mine development expenditures to be approximately $10.0 million.

Net cash used in financing activities totaled $11.4 million in the first quarter of 2020 versus $6.8 million used in financing activities in the comparable prior-year period. The increase in cash used is primarily due to the repurchase of 158,000 of our common shares for $6.8 million in the first quarter 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, and the current dividend program, environmental remediation projects, and strategic acquisitions. At March 27, 2020, cash and cash equivalents held by our foreign operations totaled $20.3 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 March 27, 2020 and December 31, 2019 is as follows:

(Thousands)	**March 27, 2020**	December 31, 2019
Cash and cash equivalents	**$ 107,576**	$ 125,007
Total outstanding debt	**2,077**	2,218
Net cash	**$ 105,499**	$ 122,789
Available borrowing capacity	**$ 345,772**	$ 340,906

Net 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 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 March 27, 2020. Cash on hand does not affect the covenants or the borrowing capacity under our debt agreements.

In April 2020, we borrowed $150.0 million under our Credit Agreement as a precautionary response to macroeconomic conditions caused by the COVID-19 pandemic.

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 $111.5 million as of March 27, 2020, compared to $140.7 million as of December 31, 2019. 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. In the first three months of 2020, we repurchased 158,000 shares of our common stock for $6.8 million. Since the approval of the repurchase plan, we have purchased 1,254,264 shares at a total cost of $41.7 million. Due to the COVID-19 pandemic, we have temporarily suspended our share repurchase program.

We paid cash dividends of $2.2 million on our common stock in the first quarter of 2020. 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 $338.5 million as of March 27, 2020, versus $309.3 million as of December 31, 2019. We were in compliance with all of the covenants contained in the consignment agreements as of March 27, 2020 and December 31, 2019. For additional information on our contractual obligations, refer to our 2019 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 2019 Annual Report on Form 10-K.

Held for Sale

The Company records assets and liabilities of a business to be sold as held for sale in the Consolidated Balance Sheet when all the required criteria are met. The held for sale assets and liabilities are initially measured at the lesser of their carrying value or fair value less cost to sell, with any resulting loss being immediately recognized. In each subsequent reporting period until the business is sold, the Company continues to estimate the fair value less cost to sell of the business and recognizes any additional losses, or any gains to the extent losses were previously recorded on the held for sale assets and liabilities.

As of March 27, 2020, the Company committed to a plan to sell its LAC reporting unit within the Precision Coatings segment and determined that it met the criteria to be classified as held for sale. Therefore, its assets and liabilities have been presented as held for sale in the Consolidated Balance Sheet as of March 27, 2020. Assets and liabilities classified as held for sale are measured at the lower of carrying value or fair value less costs to sell. The Company entered into a letter of intent to sell the LAC reporting unit in March 2020.

Before measuring the fair value less costs to sell of the disposal group as a whole, the Company first reviewed individual assets and liabilities to determine if any fair value adjustments were required. Based on the letter of intent entered into by the Company and the prospective buyer, the Company recorded a goodwill impairment charge of $9.1 million to write-off the remaining balance of goodwill for the LAC reporting unit. The Company determined fair value based on its expected proceeds to be received, which it concluded is most representative of the value of the assets.

The Company then estimated the fair value of the disposal group as a whole and compared the fair value to the remaining carrying value. Based on this review, the Company recorded an additional $1.7 million held-for-sale impairment charge.

See Note I to the Consolidated Financial Statements for additional information.

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:

- Actual net sales, operating rates, and margins for 2020;
- The global economy, including the impact of tariffs and trade agreements;
- The ultimate impact of the COVID-19 pandemic on our business, results of operations, financial condition, and liquidity;
- 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, with the major market segments being: semiconductor, industrial, aerospace and defense, automotive, energy, consumer electronics, and telecom and data center;
- 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;
- The impact of the results of acquisitions on our ability to fully achieve the strategic and financial objectives related to these acquisitions;
- 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;
- Our ability to successfully complete the disposition of our LAC business;
- 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 our 2019 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 2019 Annual Report on Form 10-K. There have been no material changes in our market risks since the inclusion of this discussion in our 2019 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 March 27, 2020 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 March 27, 2020.

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 March 27, 2020 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.

As of March 27, 2020, our subsidiary, Materion Brush Inc., was a defendant in one beryllium case. In 2019, one new 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, 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 apply, subject to an annual deductible.

Item 1A. Risk Factors

The information set forth in this quarterly report on Form 10-Q, including, without limitation, the risk factor presented below, updates and should be read in conjunction with, the risk factors and information disclosed in Part 1, Item 1A., “Risk Factors,” in our 2019 Annual Report on Form 10-K.

Our business, results of operations, financial position, and cash flows have been and are expected to continue to be adversely affected by the COVID-19 pandemic.

In December 2019, there was an outbreak of a novel strain of coronavirus (COVID-19) in China that has since spread to the majority of the regions of the world. The outbreak was subsequently declared a pandemic by the World Health Organization in March 2020. To date, the COVID-19 outbreak and preventative measures taken to contain or mitigate the outbreak have caused, and are continuing to cause, business slowdowns or shutdowns in affected areas and significant disruption in global financial markets. Although we are unable to predict the ultimate impact of the COVID-19 outbreak at this time, the pandemic has adversely affected, and is expected to continue to adversely affect, our business, results of operations, financial position, and cash flows. Such effects may be material and the potential impacts include, but are not limited to:

- disruptions to our facilities, including as a result of facility closures, reductions in operating hours, labor shortages, and changes in operating procedures, including additional cleaning and disinfecting procedures;
- disruptions in our supply chain due to transportation delays, travel restrictions, raw material cost increases, and closures of businesses or facilities;
- reductions in our operating effectiveness due to workforce disruptions resulting from “shelter in place," “stay at home” orders, the need for social distancing, and the unavailability of key personnel necessary to conduct our business activities; and
- volatility in the global financial markets, which could have a negative impact on our ability to access capital and additional sources of financing in the future.

In addition, we cannot predict the impact that COVID-19 will have on our customers, employees, suppliers, and distributors, and any adverse impacts on these parties may have a material adverse impact on our business. The impact of COVID-19 may also exacerbate other risks discussed in Part I, Item 1A, “Risk Factors,” in our 2019 Annual Report on Form 10-K, any of which

could have a material effect on us. This situation is changing rapidly and additional impacts may arise that we are not aware of currently.

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 us during the three months ended March 27, 2020.

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)
January 1 through January 31, 2020				
	—	$ —	—	$ 15,081,991
February 1 through February 28, 2020				
	44,782	49.24	36,000	13,300,234
February 29 through March 27, 2020				
	149,133	44.09	122,000	8,316,239
Total	193,915	$ 45.28	158,000	$ 8,316,239

(1) Includes 8,782 and 27,133 shares surrendered to the Company in February and March, respectively, by employees to satisfy tax withholding obligations on equity awards issued under the Company's stock incentive plan.

(2) On January 14, 2014, we announced that our Board of Directors had authorized the repurchase of up to $50.0 million of our common stock. During the three months ended March 27, 2020, we repurchased 158,000 shares at an average price of $42.82 per share, or $6.8 million in the aggregate. As of March 27, 2020, $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.

10.1	Materion and Subsidiaries Management Incentive Plan for the 2020 Plan Year*
10.2	Form of 2020 Performance-Based Restricted Stock Units Agreement under the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017), covering grants made in 2020*
10.3	Form of 2020 Appreciation Rights Agreement under the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017), covering grants made in 2020*
10.4	Form of 2020 Restricted Stock Unit Agreement (Stock-Settled) under the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017), covering grants made in 2020*
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 March 27, 2020*
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: April 23, 2020

/s/ Joseph P. Kelley

Joseph P. Kelley
Vice President, Finance and Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT 10.1

MATERION and SUBSIDIARIES
MANAGEMENT INCENTIVE PLAN FOR THE 2020 PLAN YEAR
Summary Plan Document

I. INTRODUCTION

The Materion and Subsidiaries Management Incentive Plan for the 2020 Plan Year (the "Plan"), has been established by the Compensation Committee (the "Compensation Committee"), of the Company's Board of Directors to provide incentive compensation to certain eligible employees based principally on annual financial performance. Plan awards have a significant portion based on Company performance and potentially Business Unit or Corporate Function Performance ("Financial Performance"), and a remaining component that recognizes individual and combined contributions toward personal/team objectives ("Personal/Team Performance").

II. DEFINITIONS

Base Salary:
The Participant's annual base salary as of September 30 of the Plan Year will be used to calculate any earned award.

Plan Year:
Calendar year 2020, which is the fiscal year for which Financial Performance and Personal/Team Performance, and any Plan awards, will be calculated.

Business Unit or Corporate Function Performance:
The Compensation Committee has delegated authority to the Company's executive staff to designate the Company's business units/subsidiaries and corporate functions (and their eligible employees) that are eligible for participation in the Plan for the Plan Year. Each business unit or corporate function has defined Financial Performance measures, which have in turn been approved by the Compensation Committee and/or the executive staff. For each of these Financial Performance measures, a minimum goal, target goal and maximum goal will be established. Plan awards include a Financial Performance component based on Company Performance alone, or Company Performance and/or Business Unit/Corporate Function Performance.

Company Performance:
The Company Performance portion of the Financial Performance component of Plan awards will consist of an Earnings Before Interest and Taxes measure (weighted at 70%), a Growth in Value-added Sales measure (weighted at 15%) and a Simple Free Cash Flow measure (weighted at 15%).

Earnings Before Interest and Taxes ("EBIT"):
Earnings Before Interest and Taxes is defined as earnings before interest and taxes, and for domestic and international operations, EBIT will include accrued performance or incentive compensation. Any adjustment to exclude the effect of any extraordinary, unusual or non-reoccurring items will be subject to review and approval by the Compensation Committee.

Growth in Value-added Sales ("VAS"):
Growth in Value-added Sales is defined as the percent increase in VAS for the Plan Year over the prior year. VAS is the amount equal to (1) the Company's sales for the Plan Year minus (2) the aggregate cost to the Company for the Plan Year of gold, silver, platinum, palladium and copper.

Simplified Free Cash Flow ("SFCF"):
Simple Free Cash Flow is defined as the amount equal to (1) operating profit plus depreciation and amortization minus (2) the change in working capital (accounts receivable, accounts payable, and inventory) and capital investments.

Other Metrics:
From time to time, other metrics may be adopted that are aligned with a business unit's strategy and market challenges or a corporate function's strategic imperatives. These metrics will be defined and tracked by the corporate accounting department, subject to approval by the executive staff.

Personal/Team Performance:
An assessment is made of an individual's achievements and his/her contributions to work/project teams during the Plan Year. This assessment is expressed as a percentage of Base Salary. The Personal/Team Performance component is distinct from the Financial Performance component.

Performance Objectives:
Performance Objectives shall mean the measurable performance objective or objectives established for Participants under the Plan for the Plan Year. The Compensation Committee may provide for such adjustments in the Performance Objectives or their evaluation as it may deem necessary or appropriate for purposes of administering this Plan.

Target Annual Award Opportunity
Each Plan Year, MIP eligible participants will be assigned a Target Annual Award Opportunity, expressed as a percent of Base Salary.

III. PARTICIPATION

At the beginning of the Plan Year, the executive staff will, based on delegated authority from the Compensation Committee, identify exempt salaried employees whose responsibilities affect progress on critical issues facing the Company, and those employees will participate in the Plan for the Plan Year. Those individuals selected by the executive staff will be notified of their participation in the Plan, their Target Annual Award Opportunity and applicable business unit designation.

Following the beginning of the Plan Year, the executive staff may admit new hires or individuals who are promoted or assigned additional and significant responsibilities to also participate in the Plan for the Plan Year. The executive staff may also alter Target Annual Award Opportunities to reflect changed responsibilities of participants during the Plan Year.

An employee who replaces or otherwise assumes the job functions or role of another employee does not automatically assume the Plan participation characteristics that had applied to such other employee. Rather, participation by the new or replacing employee must be individually considered and approved by the executive staff.

Participants who are newly employed on or before September 30th of the Plan Year will be eligible for a prorated Plan award based on the number of months of participation in the Plan for such Plan Year. Participants who's hire date is on or before the 15th day of the month will receive full credit for the month of hire. Those hired after the 15th day of the month will begin participation on the 1st day of the subsequent month.

Plan awards for Participants who transfer from another Materion incentive plan to the MIP Plan for purposes of the Plan Year, will be prorated based on the number of months of participation in the Plan Year. Participants who's transfer date is on or before the 15th day of the month will receive full credit for the month of transfer. Participants who transfer after the 15th day of the month will begin participation on the 1st day of the subsequent month. The transferred employee's eligibility under the previous incentive plan will cease for the Plan Year.

Changes in a Target Annual Award opportunity during a Plan Year will result in prorated participation for Plan awards.

Employees who participate in any other annual incentive, commission or performance compensation plan of the Company or as a subsidiary are not eligible. The executive staff may consider prorated participation in the Plan for the Plan Year under special circumstances.

With two exceptions, Participants must be employed on the day award payments are issued to be eligible for any plan award. For a Participant who becomes eligible for and who elects a severance option under the Chronic Beryllium Disease Policy as amended, any award under the Plan will be prorated to the beginning of the month after the

employee exercises the severance option. The second exception pertains to either the death of the Participant or the retirement (at age 65, or at age 55 or older with 10 years of service) of the Participant, in which case, any Plan award will be prorated to the beginning of the month following the employee's death or the employee's retirement date, as applicable. In no event will a prorated Plan award be earned where the proration percent is less than one-third (1/3).

Participants who have been on a leave of absence more than 13 weeks during the Plan Year will have their Plan award reduced on a pro-rata basis to reflect their actual contribution.

IV. TARGET ANNUAL AWARD OPPORTUNITY

The Compensation Committee (or executive staff), along with a Participant's assigned salary grade level will determine the Target Annual Award Opportunity, as a percent of Base Salary, for participants in the MIP. The Target Annual Award Opportunity for participants in salary levels A, B, and C will be individualized as determined by the Compensation Committee or executive staff. The Target Annual Award Opportunity for participants in salary levels D, E, and EE will be determined by their salary grade level and executive staff.

Below is a summary of the Target Annual Award Opportunities at minimum, target, and maximum goal achievement, as a percent of Base Salary, for the 2020 Plan Year:

<table>
<tr><th rowspan="2">Level</th><th colspan="3">Financial Performance</th><th colspan="3">Personal /Team Performance [2]</th><th colspan="3">Total Award Opportunity</th></tr>
<tr><th>Min.</th><th>Target</th><th>Max.</th><th>Min.</th><th>Target</th><th>Max.</th><th>Min.</th><th>Target</th><th>Max.</th></tr>
<tr><td>A – C</td><td rowspan="5">25% of Target</td><td>Individualized [1]</td><td rowspan="5">200% of Target</td><td rowspan="4">0%</td><td rowspan="4">10%</td><td rowspan="4">20%</td><td colspan="3">Individualized [1]</td></tr>
<tr><td rowspan="2">D</td><td>20% or</td><td>5.00%</td><td>30.00%</td><td>60 %</td></tr>
<tr><td>15%</td><td>3.75%</td><td>25.00%</td><td>50 %</td></tr>
<tr><td rowspan="2">E</td><td>10% or</td><td>2.50%</td><td>20.00%</td><td>40 %</td></tr>
<tr><td>5%</td><td>1.25%</td><td>15.00%</td><td>30 %</td></tr>
<tr><td>EE</td><td>5%</td><td>0%</td><td>5%</td><td>10%</td><td>1.25%</td><td>10.00%</td><td>20 %</td></tr>
</table>

[1] Determined by Compensation Committee or executive staff

[2] Excludes Named Executive Officers (NEOs)

V. PLAN AWARD OPPORTUNITY FOR FINANCIAL PERFORMANCE COMPONENT

The Compensation Committee (or the executive staff) will establish minimum, target and maximum goals for each Financial Performance component of a Plan award opportunity. The executive staff will assign Participants to a specific business unit/subsidiary or corporate function for the Financial Performance component of Plan awards.

Performance that reaches the minimum level of a Financial goal will result in an award of 25 percent of the target opportunity for that measure. Unless the minimum level goal for Operating Profit has been met, no other Financial Performance component of plan awards (business unit, company, function, sub-unit, and/or other measurement), will result in an award greater than 100 percent of the target opportunity for that measure.

Performance that reaches or exceeds the maximum goal of a measure will result in an award at 200 percent of target opportunity for that measure. Award amounts for levels of achievement between minimum and target

goals, at target goals, and between target and maximum goals will be prorated according to the level of achievement.

The Financial Performance portion of awards will be prorated for transfers between units (or between business unit and Corporate) according to the length of service by months in each unit during the Plan Year.

VI. PLAN AWARD OPPORTUNITY FOR PERSONAL/TEAM PERFORMANCE COMPONENT

The funding pool of the Personal/Team performance component will be determined by the financial results against the goals in the Financial Performance component of the Plan. For target levels of performance, the funding of the Personal/Team award pool will be 10 percent of base salary for Grades A through E, and 5 percent for Grade EE. The Personal/Team funding pool will be adjusted up or down based on the actual business financial performance. Performance that reaches the minimum level of a financial goal will result in funding of 25 percent, and Performance that reaches the maximum level of a financial goal will result in funding of 140 percent. The funding between minimum and target and target and maximum will be prorated according to the level of achievement.

The business unit executive and the executive staff will decide allocation of the pool among eligible participants based on their performance throughout the Plan year relative to achieving established goals and objectives. Personal/Team incentive awards may range from 0% to 200% of a participant's Personal/Team target incentive opportunity based on their individual performance. The aggregate total dollar amount of awards within each group may not exceed its total funded pool.

VII. PAYMENT

Distribution of any payouts for plan awards earned under the Plan to participants will be made in March of the year following the Plan Year.

VIII. GENERAL PROVISIONS

The executive staff has authority to make administrative decisions regarding the Plan.

The Company's Board of Directors, through the Compensation Committee, shall have final and conclusive authority for interpretation, application, and possible modification of this Plan or established targets. The Board of Directors, through the Compensation Committee, reserves the right to amend or terminate the Plan at any time. Subject to the preceding sentences, any determination by the Company's independent accountants shall be final and conclusive as it relates to the calculation of financial results.

This Plan is not a contract of employment.

Exhibit 10.2

MATERION CORPORATION

Performance-Based Restricted Stock Units Agreement

WHEREAS, _____ (the "Grantee") is an employee of Materion Corporation, an Ohio corporation (the "Corporation"), or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this "Agreement") has been authorized by resolution of the Compensation Committee (the "Committee") of the Board of Directors of the Corporation that was duly adopted on _____ __, 2020.

NOW, THEREFORE, pursuant to the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the "Plan"), and subject to the terms and conditions thereof and the terms and conditions hereinafter set forth, the Corporation hereby confirms to the Grantee the grant of (1) a targeted number of _____ performance-based Restricted Stock Units to be earned, if at all, on the basis of the achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period (as defined below) (the "ROIC PRSUs"), and (2) a targeted number of _____ performance-based Restricted Stock Units to be earned, if at all, on the basis of the achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period (the "RTSR PRSUs" and, together with the ROIC PRSUs, the "PRSUs"), effective on _____, 20__ (the "Date of Grant"). Subject to the attainment of the Management Objectives described in Section 3 of Article II of this Agreement and the Statement of Management Objectives as approved by the Compensation Committee with respect to the PRSUs on the Date of Grant (the "Statement of Management Objectives"), the Grantee may earn from 0% and

200% of the ROIC PRSUs and from 0% and 200% of the RTSR PRSUs. The award evidenced hereby is not a Qualified Performance-Based Award.

ARTICLE I

DEFINITIONS

All terms used but not defined herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan, and the following terms, when used herein with initial capital letters, shall have the following meanings:

1. "Committee Determination Date" means the date following the end of the Performance Period on which the Committee determines the level of attainment of the Management Objectives for the Performance Period.

2. "Management Objectives" means the threshold, target and maximum goals established by the Committee for the Performance Period with respect to both ROIC and RTSR as described in the Statement of Management Objectives.

3. "Performance Period" means the three-year period commencing January 1, 20__ and ending on December 31, 20__.

4. "Relative Total Shareholder Return" or "RTSR" has the meaning as set forth in the Statement of Management Objectives.

5. "Return on Invested Capital" or "ROIC" has the meaning as set forth in the Statement of Management Objectives.

ARTICLE II

CERTAIN TERMS OF PRSUs

1. Payment of PRSUs. The PRSUs covered by this Agreement shall become payable to the Grantee if they become nonforfeitable in accordance with Sections 3, 4, 5 or 6 of Article II.

2. PRSUs Non-Transferable. The PRSUs covered by this Agreement and any interest therein may be transferred or assigned only by will or pursuant to the laws of descent and distribution prior to payment therefor.

3. Normal Vesting of PRSUs. Subject to the terms and conditions of Sections 4, 5 and 6 of Article II, the Grantee's right to receive Common Shares for the ROIC PRSUs and/or Common Shares for the RTSR PRSUs, as applicable, shall become nonforfeitable with respect to (a) 0% to 200% of the ROIC PRSUs on the basis of the achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period, and (b) 0% and 200% of the RTSR PRSUs on the basis of the achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period, in each case as set forth in the Statement of Management Objectives. Except as otherwise provided herein, the Grantee's right to receive Common Shares for the ROIC PRSUs and/or Common Shares for the RTSR PRSUs, as applicable, is contingent upon his or her remaining in the continuous employ of the Company or a Subsidiary until the end of the Performance Period.

4. Effect of Termination due to Death or Disability. Notwithstanding the provisions of Section 3 of Article II, 100% of the PRSUs shall immediately become nonforfeitable and payable at the time described in Section 8 of Article II if the Grantee dies or becomes permanently disabled while in the employ of the Corporation or a

Subsidiary before the Committee Determination Date. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term disability plan of the Corporation in effect for, or applicable to, the Grantee and is "disabled" within the meaning of Section 409A(a)(2)(C) of the Code.

5. Effect of Termination due to Retirement. Notwithstanding the continuous employment provision of Section 3 of Article II above, but subject to the provisions of Section 6 of Article II below, if the Grantee is at the time of such termination (a) at least age 65 or (b) at least age 55 and has completed at least 10 years of continuous employment with the Corporation or a Subsidiary, the PRSUs covered by this Agreement shall continue to be eligible to become nonforfeitable in accordance with Section 3 of this Article (and payable in accordance with Section 8 of Article II) as if the Grantee continued to be employed until the end of the Performance Period.

6. Change in Control. Notwithstanding Sections 3 and 5 of Article II above, the following alternative non-forfeitability provisions will apply to the PRSUs in the event of a Change in Control occurring after the Date of Grant and prior to the PRSUs becoming nonforfeitable in accordance with Section 3 of Article II:

(a) Upon the Change in Control, 100% of the PRSUs shall become nonforfeitable and payable in accordance with Section 8 of Article II, except to the extent that an award meeting the requirements of Section 6(b) of Article II (a "Replacement Award") is provided to the Grantee in accordance with Section 6(b) of Article II to replace or adjust the award of PRSUs covered by this Agreement (the "Replaced Award").

(b) For purposes of this Agreement, a "Replacement Award" means an award (i) of the same type (e.g., performance-based restricted stock units) as the Replaced Award, (ii) that has a value at least equal to the value of the Replaced Award, (iii) that relates to publicly traded equity securities of the Corporation or its successor in the Change in Control or another entity that is affiliated with the Corporation or its successor following the Change in Control, (iv) if the Grantee holding the Replaced Award is subject to U.S. federal income tax under the Code, the tax consequences of which to such Grantee under the Code are not less favorable to such Grantee than the tax consequences of the Replaced Award, and (v) the other terms and conditions of which are not less favorable to the Grantee holding the Replaced Award than the terms and conditions of the Replaced Award (including the provisions that would apply in the event of a subsequent change in control). A Replacement Award may be granted only to the extent it does not result in the Replaced Award or Replacement Award failing to comply with or be exempt from Section 409A of the Code. Without limiting the generality of the foregoing, the Replacement Award may take the form of a continuation of the Replaced Award if the requirements of the two preceding sentences are satisfied. The determination of whether the conditions of this Section 6(b) of Article II are satisfied will be made by the Committee, as constituted immediately before the Change in Control, in its sole discretion.

(c) If, upon receiving a Replacement Award, the Grantee's employment with the Corporation or a Subsidiary (or any of their successors) (as applicable, the "Successor") is terminated by the Grantee as a Termination for Good Cause or by the Successor other than as a Termination for Cause, in each case within a period of two years after the Change in Control, 100% of the Replacement Award will

become nonforfeitable and payable in accordance with Section 8 of Article II with respect to the performance-based restricted stock units covered thereby.

(d) "Termination for Cause" means a termination of Grantee's employment by the Successor for "Cause" (as defined in Section 10(f) of Article II).

(e) "Termination for Good Cause" shall mean the Grantee's termination of the Grantee's employment with the Successor as a result of the occurrence of any of the following:

(i) a change in the Grantee's principal location of employment that is greater than 50 miles from such location as of the date of this Agreement without the Grantee's consent; provided, however, that the Grantee hereby acknowledges that the Grantee may be required to engage in travel in connection with the performance of the Grantee's duties hereunder and that such travel shall not constitute a change in the Grantee's principal location of employment for purposes hereof;

(ii) a material diminution in the Grantee's base compensation;

(iii) a change in the Grantee's position with the Successor without the Grantee's consent such that there is a material diminution in the Grantee's authority, duties or responsibilities; or

(iv) any other action or inaction that constitutes a material breach by the Successor of the agreement, if any, under which the Grantee provides services to the Successor or its subsidiaries.

Notwithstanding the foregoing, the Grantee's termination of employment with the Successor as a result of the occurrence of any of the foregoing shall not constitute a "Termination for Good Cause" unless (A) the Grantee gives the Successor written

notice of such occurrence within 90 days of such occurrence and such occurrence is not cured by the Successor within 30 days of the date on which such written notice is received by the Successor and (B) the Grantee actually terminates his or her employment with the Successor prior to the 365th day following such occurrence.

(f) If a Replacement Award is provided, notwithstanding anything in this Agreement to the contrary, any outstanding PRSUs which at the time of the Change in Control are not subject to a "substantial risk of forfeiture" (within the meaning of Section 409A of the Code) will be deemed to be nonforfeitable at the time of such Change in Control and will be paid as provided for in Section 8(b) of Article II.

7. Forfeiture of PRSUs. The PRSUs shall be forfeited to the extent they fail to become nonforfeitable as of the Committee Determination Date and, except as otherwise provided in Sections 4, 5 or 6 of Article II, if the Grantee ceases to be employed by the Corporation or a Subsidiary at any time prior to such PRSUs becoming nonforfeitable, or to the extent they are forfeited as provided in Section 9 of Article II.

8. Form and Time of Payment of PRSUs.

(a) General. Except as otherwise provided for in Section 2 of Article III, and subject to Section 7 and Section 8(b) of Article II, payment for the PRSUs that have become nonforfeitable in accordance with Sections 3, 4, 5 or 6 of Article II shall be made in the form of Common Shares between January 1, 20__ and March 15, 20__.

(b) Alternative Payment Events. Notwithstanding Section 8(a) of Article II, and except as otherwise provided for in Section 2 of Article III, to the extent that PRSUs have become nonforfeitable, then any issuance of the Common Shares underlying such PRSUs (or payment of any other form of consideration into which the

Common Shares underlying such PRSUs may have been converted) will be made on an earlier date as follows:

(i) Death. To the extent that PRSUs are nonforfeitable on the date of Grantee's death, payment for the PRSUs will be made on the date of Grantee's death;

(ii) Disability. To the extent that PRSUs are nonforfeitable on the date the Grantee becomes "disabled" within the meaning of Section 409A(a)(2)(C) of the Code, payment for the PRSUs will be made on the date the Grantee becomes disabled;

(iii) Separation from Service. To the extent that PRSUs are nonforfeitable on the date of Grantee's "separation from service" (determined in accordance with Section 409A of the Code), payment for the PRSUs will be made on the date of Grantee's "separation from service"; provided, however, that if the Grantee on the date of separation from service is a "specified employee" (within the meaning of Section 409A of the Code determined using the identification methodology selected by the Company from time to time), payment for the PRSUs will be made on the tenth day of the seventh month after the date of Grantee's separation from service or, if earlier, the date of Grantee's death; and

(iv) Change of Control. To the extent that PRSUs are nonforfeitable on the date of a Change in Control, payment for the PRSUs will be made on the date of the Change of Control; provided, however, that if such Change in Control would not qualify as a permissible date of distribution under Section 409A(a)(2)(A) of the Code, and the regulations

thereunder, and where Section 409A of the Code applies to such distribution, payment will be made on the date that would have otherwise applied pursuant to Section 8.

9. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary (other than Section 11 of Article III), if the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity (as defined in Section 10 below) and the Board shall so find, then the Grantee shall, upon notice of such finding:

(a) Forfeit all PRSUs held by the Grantee.

(b) With respect to any PRSUs that became nonforfeitable and were paid pursuant to this Agreement, return to the Corporation any and all Common Shares that were paid out under this Agreement that the Grantee has not then disposed of.

(c) With respect to any and all Common Shares subject to the PRSUs covered by this Agreement that (i) became nonforfeitable and were paid pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity and (ii) the Grantee has disposed of, pay to the Corporation the cash value of such Common Shares on the date the respective PRSUs were paid.

(d) To the extent that such amounts are not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason, except that no such set-off shall be permitted against any amount that constitutes “deferred compensation” within the meaning of Section 409A of the Code.

10. Definition of Detrimental Activity. For purposes of this Agreement, the term "Detrimental Activity" shall include:

(a) (i) Engaging in any activity in violation of the section entitled "Competitive Activity; Confidentiality; Non-solicitation" in the Severance Agreement between the Corporation and the Grantee, if any such agreement is in effect on the date of this Agreement, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date of this Agreement providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect as of the date of this Agreement, or if such severance agreement does not contain a section corresponding to "Competitive Activity; Confidentiality; Non-solicitation":

A. Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(1) entering into or engaging in any business which competes with the business of the Corporation;

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

B. Following Termination. For a period of one year following the Grantee's termination date:

(1) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 10(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly

as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

C. The "Corporation." For the purposes of this Section 10(a)(ii) of Article II, the "Corporation" shall include all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

D. The "Corporation's business." For the purposes of this Section 10 of Article II inclusive, the Corporation's business is defined to be the integrated production of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications serving the consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any

other products or services substantially similar to or readily substitutable for any such described products and services.

E. "Restricted Territory." For the purposes of Section 10(a)(ii)(B) of Article II, the "Restricted Territory" shall be defined as and limited to:

(1) the geographic area(s) within a one hundred mile radius of any and all Corporation location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(2) all of the specific customer accounts, whether within or outside of the geographic area described in (1) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

F. "Extension." If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 10(a)(ii)(B) of Article II of this Agreement, then the period applicable to each obligation that the Grantee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or

maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 10(c)(i) of Article II.

(d) Discoveries and Inventions. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any

way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefor, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will

contain all proper copyright notices, e.g., "(creation date) [Corporation Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 10(a)(i) of Agreement, Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section 10, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation;

and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 10 of Article II of this Agreement are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

(i) Acknowledgement. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement prevents the Grantee from providing, without prior notice to the Corporation, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

11. Dividend Equivalents. From and after the Date of Grant and until the earlier of (a) the time when the PRSUs become nonforfeitable and are paid in accordance with Sections 3 and 8 of Article II or (b) the time when the Grantee's right to receive Common Shares in payment of the PRSUs is forfeited in accordance with Section 7 of Article II, on the date that the Corporation pays a cash dividend (if any) to holders of Common Shares generally, the Grantee shall be entitled to a number of additional whole PRSUs (rounded up or down to the nearest whole PRSU) determined by dividing (i) the product of (A) the dollar amount of the cash dividend paid per Common Share on such date and (B) the total number of PRSUs covered by this

Agreement (including dividend equivalents credited with respect thereto) previously credited to the Grantee as of such date, by (ii) the Market Value per Share on such date. Such dividend equivalents (if any) shall be subject to the same terms and conditions and shall be paid or forfeited in the same manner and at the same time as the PRSUs to which the dividend equivalents were credited.

12. Relation to Severance Agreement. Sections 6 and 8 of Article II shall supersede the provisions of any severance agreement between the Grantee and the Corporation in effect on the Date of Grant that provide for earlier vesting or payment of the PRSUs covered by this Agreement in the event of a Change in Control.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law. The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of this Agreement, the Corporation shall not be obligated to issue any Common Shares pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

2. Adjustments. The PRSUs and the number of Common Shares issuable for each PRSU and the other terms and conditions of the grant evidenced by this Agreement are subject to adjustment as provided in Section 11 of the Plan.

3. Withholding Taxes. If the Corporation or any Subsidiary shall be required to withhold any federal, state, local or foreign tax or other amounts in connection with any issuance, vesting or payment of Common Shares or other securities pursuant to this Agreement, the Grantee shall pay the tax or make arrangements that are satisfactory to the Corporation or such Subsidiary for the payment thereof. With respect

to the PRSUs, the Grantee shall satisfy such withholding obligation by surrendering to the Corporation or such Subsidiary a portion of the Common Shares subject to the PRSUs that are covered by this Agreement and the Common Shares so surrendered by the Grantee shall be credited against any such withholding obligation at the fair market value per Common Share on the date of such surrender. In no event shall the fair market value of the Common Shares to be withheld and delivered pursuant to this Section 3 of Article III to satisfy applicable withholding taxes exceed the minimum amount required to be withheld, unless (a) an additional amount can be withheld or delivered, and not result in adverse accounting or other consequences as reasonably determined by the Committee (it being understood that the failure of such reasonable determination to be correct shall not constitute a violation of the terms of the Plan), and (b) it is permitted by the Committee.

4. Continuous Employment. For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

5. No Employment Contract; Right to Terminate Employment. The grant of the PRSUs covered by this Agreement to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the PRSUs under this Agreement and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by

law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent (provided, however, that the Grantee's consent shall not be required to an amendment that is deemed necessary by the Corporation to comply with Section 409A of the Code or Section 10D of the Exchange Act).

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This Agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

10. Compliance with Section 409A of the Code. To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent. Reference to Section 409A of the Code is to Section 409A of the Internal Revenue Code of 1986, as amended, and will also include any proposed, temporary or final regulations, or any other guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

11. Subject to Clawback Policy. Notwithstanding anything in this Agreement to the contrary, subject to any contrary determination by the Committee, the Grantee acknowledges and agrees that this Agreement and the PRSUs covered by this Agreement are subject to the terms and provisions of the Corporation's clawback policy (if any) as may be in effect from time to time to the extent provided for under such policies, including specifically to implement Section 10D of the Exchange Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Common Shares may be traded) (the "Compensation Recovery Policy"), and that Section 9 of Article II and this Section 11 of Article III shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof.

12. Electronic Delivery. The Corporation may, in its sole discretion, deliver any documents related to the PRSUs and the Grantee's participation in the Plan, or future awards that may be granted under the Plan, by electronic means or request the Grantee's consent to participate in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and, if requested, agrees to participate in the Plan through an on-line or electronic system established and maintained by the Corporation or another third party designated by the Corporation.

13. Acknowledgement. The Grantee acknowledges that the Grantee (a) has received a copy of the Plan, (b) has had an opportunity to review the terms of this Agreement and the Plan, (c) understands the terms and conditions of this Agreement and the Plan and (d) agrees to such terms and conditions.

14. Successors and Assigns. Without limiting Section 2 of Article II hereof, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, administrators, heirs, legal representatives and assigns of the Grantee, and the successors and assigns of the Corporation.

15. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same agreement.

[SIGNATURES ON NEXT PAGE]

The undersigned Grantee hereby accepts the awards covered by this Performance-Based Restricted Stock Units Agreement on the terms and conditions set forth herein.

Dated: _____ _____

Grantee

Executed in the name of and on behalf of the Corporation at Mayfield Heights, Ohio as of this __ day of _____ 20__.

MATERION CORPORATION

By _____

Statement of Management Objectives

This Statement of Management Objectives applies to the performance-based Restricted Stock Units granted to the Grantee on the Date of Grant and applies with respect to the Performance-Based Restricted Stock Units Agreement between the Company and the Grantee (the "Agreement"). Capitalized terms used in the Agreement that are not specifically defined in this Statement of Management Objectives have the meanings assigned to them in the Agreement or in the Plan, as applicable.

Section 1. Definitions. For purposes hereof:

(a) "Peer Group" means, of a benchmark group of __ entities, the names of which are attached hereto as Annex A, those entities that remain in the Peer Group as of the end of the Performance Period after application of the Peer Group Adjustment Protocol.

(b) "Peer Group Adjustment Protocol" means: (i) if an entity listed in Annex A files for bankruptcy and/or liquidation, is operating under bankruptcy protection, or is delisted from its primary stock exchange because it fails to meet the exchange listing requirement, then such entity will remain in the Peer Group, but RTSR for the Performance Period will be calculated as if such entity achieved Total Shareholder Return placing it at the bottom (chronologically, if more than one such entity) of the Peer Group; (ii) if, by the last day of the Performance Period, an entity listed in Annex A has been acquired and/or is no longer existing as a public company that is traded on its primary stock exchange (other than for the reasons as described in subsection (i) above), then such entity will not remain in the Peer Group and RTSR for the Performance Period will be calculated as if such entity had never been a member of the Peer Group; and (iii) except as otherwise described in subsection (i) and (ii) above, for purposes of this Statement of Management Objectives, for each of the entities listed in Annex A, such entity shall be deemed to include any successor to all or substantially all of the primary business of such entity at end of the Performance Period.

(c) "Relative Total Shareholder Return" or "RTSR" means the percentile rank of the Corporation's Total Shareholder Return among the Total Shareholder Returns of all members of the Peer Group, ranked in descending order, at the end of the Performance Period. Percentile will be calculated using the Microsoft Excel Percentile Function method.

(d) "***Return on Invested Capital***" or ***"ROIC"*** means the Corporation's annual adjusted operating profit before tax divided by the sum of short- and long-term net debt (minus cash) plus equity. "Equity" excludes the items within other comprehensive income (namely, pension valuation adjustment, derivative valuation adjustment and the cumulative translation adjustment). The measurement of the 20__ ROIC will be the average ROIC for 20__, 20__, and 20__ using the beginning (December 31 of the revious year) and ending (December 31 of the current year) invested capital.

(e) "Total Shareholder Return" means, with respect to each of the Common Shares and the common stock of each of the members of the Peer Group, a rate of return reflecting stock price appreciation, plus the reinvestment of dividends in additional shares of stock, from the beginning of the Performance Period through the end of the Performance Period. For purposes of calculating Total Shareholder Return for each of the Company and the members of the Peer Group, the beginning stock price will be based on the average closing stock price for the 30 calendar days immediately preceding January 1, 20__ on the principal stock exchange on which the stock then traded and the ending stock price will be based on the average closing stock price for the 30 calendar days immediately preceding January 1, 20__ on the principal stock exchange on which the stock then trades.

Section 2. Performance Matrices.

From 0% to 200% of the ROIC PRSUs will be earned based on achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period, and from 0% to 200% of the RTSR PRSUs will be earned based on achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period, in each case as follows:

Performance Level	Return on Invested Capital	ROIC PRSUs Earned
Below Threshold	Below __%	0%
Threshold	__%	50%
Target	__%	100%
Maximum	__% or greater	200%

Performance Level	Relative Total Shareholder Return	RTSR PRSUs Earned
Below Threshold	Ranked below __th percentile	0%
Threshold	Ranked at __th percentile	50%
Target	Ranked at __th percentile	100%
Maximum	Ranked at or above __th percentile	200%

Section 3. Number of PRSUs Earned. Following the Performance Period, on the Committee Determination Date, the Committee shall determine whether and to what extent the goals relating to the Management Objectives have been satisfied for the Performance Period and shall determine the number of PRSUs that shall become nonforfeitable hereunder and under the Agreement on the basis of the following:

(a) Below Threshold. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period falls below the threshold level, as set forth in the Performance Matrices, no ROIC PRSUs shall become

nonforfeitable and (ii) RTSR for the Performance Period falls below the threshold level, as set forth in the Performance Matrices, no RTSR PRSUs shall become nonforfeitable.

(b) Threshold. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals the threshold level, as set forth in the Performance Matrices, 50% of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period equals the threshold level, as set forth in the Performance Matrices, 50% of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.

(c) Between Threshold and Target. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period exceeds the threshold level, but is less than the target level, as set forth in the Performance Matrices, a percentage between 50% and 100% (determined on the basis of straight-line mathematical interpolation) of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period exceeds the threshold level, but is less than the target level, as set forth in the Performance Matrices, a percentage between 50% and 100% (determined on the basis of straight-line mathematical interpolation) of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.

(d) Target. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals the target level, as set forth in the Performance Matrices, 100% of the ROIC PRSUs shall become nonforfeitable, and (ii) RTSR for the Performance Period equals the target level, as set forth in the Performance Matrices, 100% of the RTSR PRSUs shall become nonforfeitable.

(e) Between Target and Maximum. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period exceeds the target level, but is less than the maximum level, as set forth in the Performance Matrices, a percentage between 100% and 200% (determined on the basis of straight-line mathematical interpolation) of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period exceeds the target level, but is less than the maximum level, as set forth in the Performance Matrices, a percentage between 100% and 200% (determined on the basis of straight-line mathematical interpolation) of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.

(f) Equals or Exceeds Maximum. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals or exceeds the maximum level, as set forth in the Performance Matrices, 200% of the

ROIC PRSUs shall become nonforfeitable, and (ii) RTSR for the Performance Period equals or exceeds the maximum level, as set forth in the Performance Matrices, 200% of the RTSR PRSUs shall become nonforfeitable.

Annex A

2020 Peer Group

Company Name	Ticker Symbol

EXHIBIT A

MATERION CORPORATION

BENEFICIARY DESIGNATIONS

In accordance with the terms and conditions of the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the "Plan"), I hereby designate the person(s) indicated below as my beneficiary(ies) to receive any amounts payable under said Plan after my death.

Name _____

Address _____

_____

_____

Social Sec. Nos. of Beneficiary(ies) _____

Relationship(s) _____

Date(s) of Birth _____

In the event that the above-named beneficiary(ies) predecease(s) me, I hereby designate the following person as beneficiary(ies);

Name _____

Address _____

_____

_____

Social Sec. Nos. of Beneficiary(ies) _____

Relationship(s) _____

Date(s) of Birth _____

I hereby expressly revoke all prior designations of beneficiary(ies), reserve the right to change the beneficiary(ies) herein designated and agree that the rights of said beneficiary(ies) shall be subject to the terms of the Plan. In the event that there is no beneficiary living at the time of my death, I understand that the amounts payable under the Plan will be paid to my estate

_____ _____

Date (Signature)

_____

(Print or type name

Exhibit 10.3

MATERION CORPORATION

Appreciation Rights Agreement

WHEREAS, _____ (the "Grantee") is an employee of Materion Corporation (the "Corporation") or a Subsidiary.

WHEREAS, the execution of an agreement in the form hereof (this "Agreement") has been authorized by a resolution of the Compensation Committee (the "Committee") of the Board of Directors (the "Board") of the Corporation that was duly adopted on _____ __, 2020.

NOW, THEREFORE, the Corporation hereby confirms to the Grantee the grant, effective _____, 20__ (the "Date of Grant"), pursuant to the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the "Plan"), of _____ Free-standing Appreciation Rights ("SARs"), subject to the terms and conditions of the Plan and the terms and conditions described below.

1. Definitions

As used in this Agreement:

(A) "Base Price" means **$**_____ which was the Market Value per Share on the Date of Grant.

(B) "Detrimental Activity" shall have the meaning set forth in Section 7 of this Agreement.

(C) "Spread" means the excess of the Market Value per Share on the date when a SAR is exercised over the Base Price.

(D) Capitalized terms without definition shall have the meanings assigned to them in the Plan.

2. Grant of SARs.

The Corporation hereby grants to the Grantee the number of SARs set forth above. The SARs are a right to receive Common Shares in an amount equal in value (as described herein) to 100% of the Spread at the time of exercise.

3. Vesting of SARs.

(A) The SARs granted hereby shall become exercisable in three substantially equal installments on each of the first three anniversaries of the Date of Grant, provided, except as otherwise provided in this Section 3, that the Grantee shall have remained in the continuous employ of the Corporation or any Subsidiary through each such date.

(B) Notwithstanding Section 3(A) above, the SARs granted hereby shall (to the extent not already forfeited or exercisable) become immediately exercisable in full if (i)

the Grantee should die while in the employ of the Corporation or any Subsidiary, or (ii) the Grantee should become permanently disabled (as hereinafter defined) while in the employ of the Corporation or any Subsidiary. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term disability plan of the Corporation in effect for, or applicable to, the Grantee and is "disabled" within the meaning of Section 409A(a)(2)(C) of the Code.

(C) (i) Notwithstanding Section 3(A) above, the SARs granted hereby shall (to the extent not already forfeited or exercisable) become immediately exercisable in full if at any time during the employment of the Grantee and prior to the termination of the SARs:

(a) a Change in Control shall occur after the Date of Grant; and

(b) within two years following the Change in Control, the Grantee's employment with the Corporation or a Subsidiary is terminated by the Grantee as a Termination for Good Cause (as defined in Section 3(E) below) or the Grantee is terminated by the Corporation other than as a Termination for Cause (as defined in Section 3(D) below).

(ii) Notwithstanding anything in this Section 3(C) to the contrary, in connection with a Business Combination, the result of which is that the Outstanding Company Voting Securities are exchanged for or become exchangeable for securities of another entity, cash or a combination thereof, if the entity resulting from such Business Combination does not assume the SARs evidenced hereby and the Corporation's obligations hereunder, or replace the SARs evidenced hereby with a substantially equivalent security of the entity resulting from such Business Combination, then the SARs evidenced hereby shall (to the extent not already forfeited or exercisable) become immediately exercisable in full as of immediately prior to such Business Combination.

(D) "Termination for Cause" means a termination of Grantee's employment by the Corporation for "Cause" (as defined in Section 7(F) of this Agreement).

(E) "Termination for Good Cause" shall mean the Grantee's termination of the Grantee's employment with the Corporation or a Subsidiary as a result of the occurrence of any of the following:

(i) a change in the Grantee's principal location of employment that is greater than 50 miles from its location as of the date hereof without the Grantee's consent; provided, however, that the Grantee hereby acknowledges that the Grantee may be required to engage in travel in connection with the performance of the Grantee's duties hereunder and that such travel shall not constitute a change in the Grantee's principal location of employment for purposes hereof;

(ii) a material diminution in the Grantee's base compensation;

(iii) a change in the Grantee's position with the Corporation without the Grantee's consent such that there is a material diminution in the Grantee's authority, duties or responsibilities; or

(iv) any other action or inaction that constitutes a material breach by the Corporation of the agreement under which the Grantee provides services.

Notwithstanding the foregoing, the Grantee's termination of the Grantee's employment with the Corporation as a result of the occurrence of any of the foregoing shall not constitute a "Termination for Good Cause" unless (a) the Grantee gives the Corporation written notice of such occurrence within 90 days of such occurrence and such occurrence is not cured by the Corporation within 30 days of the date on which such written notice is received by the Corporation and (b) the Grantee actually terminates his or her employment with the Corporation prior to the 365th day following such occurrence.

4. Exercise of SARs.

(A) To the extent exercisable as provided in Section 3 of this Agreement, SARs may be exercised in whole or in part by giving notice to the Corporation specifying the number of SARs to be exercised.

(B) The Corporation will issue to the Grantee the number of Common Shares that equals the Market Value per Share divided into the aggregate Spread of the SARs exercised on the date of exercise rounded down to the nearest whole Common Share.

5. Termination of SARs.

The SARs granted hereby shall terminate upon the earliest to occur of the following:

(A) 190 days after the Grantee ceases to be an employee of the Corporation or a Subsidiary, unless he ceases to be such employee by reason of death or in a manner described in clause (B), (C) or (F) below;

(B) One year after the Grantee ceases to be an employee of the Corporation or a Subsidiary if at the time of termination of employment the Grantee is disabled (as defined above);

(C) Seven years from the Date of Grant if the Committee, at its discretion, allows continued vesting of unvested SARs following termination of employment due to retirement when the Grantee is (i) at least age 65 or (ii) at least age 55 and has completed at least 10 years of continuous employment with the Corporation or a Subsidiary;

(D) One year after the death of the Grantee, if the Grantee dies while an employee of the Corporation or a subsidiary or within the period specified in (A) or (B) above which is applicable to the Grantee;

(E) Seven years from the Date of Grant; and

(F) Immediately if the Grantee engages in any Detrimental Activity (as hereinafter defined).

6. Effect of Detrimental Activity.

If the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity, and the Board shall so find:

(A) All SARs held by the Grantee, whether or not exercisable, shall be forfeited to the Corporation;

(B) The Grantee shall return to the Corporation all Common Shares that the Grantee has not disposed of that were acquired pursuant to this Agreement; and

(C) With respect to any Common Shares that the Grantee received upon exercise of the SARs that have been disposed of, pay to the Corporation in cash the amount equal to the Spread applicable to such Common Shares on the date of exercise of such SARs.

To the extent that such amounts are not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason, except that no set-off shall be permitted against any amount that constitutes "deferred compensation" within the meaning of Section 409A of the Code.

7. Definition of Detrimental Activity.

For purposes of this Agreement, the term "Detrimental Activity" shall include:

(A) (i) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Grantee, if such agreement is in effect on the date hereof, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date hereof providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect or if a severance agreement does not contain a section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation" as of the date hereof:

(a) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(1) entering into or engaging in any business which competes with the business of the Corporation;

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(b) Following Termination. For a period of one year following the Grantee's termination date:

(1) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;

(3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 7(A)(ii)(a) and (b) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(c) "The Corporation." For the purposes of this Section 7(A)(ii), the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(d) "The Corporation's business." For the purposes of this Section 7 inclusive, the Corporation's business is defined to be the integrated production of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications serving the consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(e) "Restricted Territory." For the purposes of Section 7(A)(ii)(b), the Restricted Territory shall be defined as and limited to:

(1) the geographic area(s) within a one hundred mile radius of any and all Corporation location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(2) all of the specific customer accounts, whether within or outside of the geographic area described in (1) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(f) Extension. If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 7(A)(ii)(b), then the period applicable to each obligation that the Grantee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(B) Non-Solicitation. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(C) Further Covenants. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making

available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 7(C)(i) of this Agreement.

(D) Discoveries and Inventions. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor,

when so requested, at the expense of the Corporation, but without further or additional consideration.

(E) Work Made For Hire. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefor, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g., "(creation date) [Corporation Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(F) Termination for Cause. Except as otherwise provided in Section 7(A)(i), Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation;

and any such act shall have been demonstrably and materially harmful to the Corporation.

(G) Other Injurious Conduct. Detrimental Activity shall also include any action contributing to a restatement of the Corporation's financials if this award of SARs to the Grantee is favorably affected by such restatement as provided under Section 10D of the Exchange Act and any applicable rules or regulations as may be promulgated from time to time by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Common Shares may be traded, and any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any Subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(H) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 7 are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made

in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

(I) Acknowledgement. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement prevents the Grantee from providing, without prior notice to the Corporation, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

8. Transferability.

No SAR granted hereunder may be transferred by the Grantee other than by will or the laws of descent and distribution and may be exercised during a Grantee's lifetime only by the Grantee or, in the event of the Grantee legal incapacity, by the Grantee's guardian or legal representative acting in a fiduciary capacity on behalf of the Grantee under state law and court supervision.

9. Compliance with Law.

The SARs granted hereby shall not be exercisable if such exercise would involve a violation of any applicable federal or state securities law, and the Corporation hereby agrees to make reasonable efforts to comply with any applicable state securities law. If the Ohio Securities Act shall be applicable to the SARs, they shall not be exercisable unless under said Act at the time of exercise the shares of Common Stock or other securities purchasable hereunder are exempt, are the subject matter of an exempt transaction, are registered by description or by qualification, or at such time are the subject matter of a transaction which has been registered by description.

10. Adjustments.

The SARs and the terms and conditions of the grant evidenced by this Agreement are subject to adjustment as provided in Section 11 of the Plan.

11. Withholding Taxes.

To the extent that the Corporation is required to withhold federal, state, local or foreign taxes or other amounts in connection with the exercise of the SARs, and the amounts available to the Corporation for such withholding are insufficient, it shall be a condition to such exercise that the Grantee make arrangements satisfactory to the Corporation for payment of the balance of such taxes or other amounts required to be withheld. The Grantee shall satisfy such withholding requirement by retention by the Corporation of a portion of the Common Shares to be delivered to the Grantee. The shares so retained shall be credited against such withholding requirement based on the fair market value per Common Share on the date of such exercise. In no event will the fair market value of the Common Shares to be withheld and delivered pursuant to this Section to satisfy applicable withholding taxes exceed the minimum amount required to

be withheld, unless (a) an additional amount can be withheld or delivered, and not result in adverse accounting or other consequences as reasonably determined by the Committee (it being understood that the failure of such reasonable determination to be correct shall not constitute a violation of the terms of the Plan), and (b) it is permitted by the Committee.

12. Continuous Employment.

For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

13. No Employment Contract; Right to Terminate Employment.

The grant of the SARs under this Agreement to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the SARs and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

14. Relation to Other Benefits.

Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

15. Information.

Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

16. Amendments.

Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee with respect to the SARs without the

Grantee's consent. Notwithstanding the foregoing, the limitation requiring the consent of a Grantee to certain amendments shall not apply to any amendment that is deemed necessary by the Corporation to ensure compliance with Section 409A of the Code or Section 10D of the Exchange Act.

17. Severability.

In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

18. Governing Law.

This Agreement is made under, and shall be construed in accordance with the internal substantive laws of the State of Ohio.

19. Relation to Severance Agreement.

Section 3(C) hereof shall supersede the provisions of any Severance Agreement between the Grantee and the Corporation, in effect at the Date of Grant, providing for earlier vesting of the SARs granted hereby in the event of a Change in Control.

20. Electronic Delivery.

The Corporation may, in its sole discretion, deliver any documents related to the SARs and the Grantee's participation in the Plan, or future awards that may be granted under the Plan, by electronic means or request the Grantee's consent to participate in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and, if requested, agrees to participate in the Plan through an on-line or electronic system established and maintained by the Corporation or another third party designated by the Corporation.

21. Acknowledgement.

The Grantee acknowledges that the Grantee (a) has received a copy of the Plan, (b) has had an opportunity to review the terms of this Agreement and the Plan, (c) understands the terms and conditions of this Agreement and the Plan and (d) agrees to such terms and conditions.

22. Acknowledgement.

Without limiting Section 8 hereof, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, administrators, heirs, legal representatives and assigns of the Grantee, and the successors and assigns of the Corporation.

23. Counterparts.

This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same agreement.

The undersigned hereby acknowledges receipt of an executed original of this Appreciation Rights Agreement and accepts the SARs granted thereunder on the terms and conditions set forth herein and in the Plan.

Date: _____ _____

GRANTEE

Executed in the name and on behalf of the Corporation at Mayfield Heights, Ohio as of the __ day of _____, 20__.

MATERION CORPORATION

By:_____

Exhibit 10.4

MATERION CORPORATION

Restricted Stock Units Agreement (Stock-Settled)

WHEREAS, _____ (the "Grantee") is an employee of Materion Corporation, an Ohio corporation (the "Corporation") or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this "Agreement") has been authorized by a resolution of the Compensation Committee (the "Committee") of the Board of Directors of the Corporation that was duly adopted on _____ __, 2020.

NOW, THEREFORE, pursuant to the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the "Plan"), the Corporation hereby confirms to the Grantee the grant, effective on _____, 20__ (the "Date of Grant"), of ___ Restricted Stock Units (as defined in the Plan) ("RSUs"), subject to the terms and conditions of the Plan and the following additional terms, conditions, limitations and restrictions:

ARTICLE I

DEFINITIONS

All terms used but not defined herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan when used herein with initial capital letters.

ARTICLE II

CERTAIN TERMS OF RESTRICTED STOCK UNITS

1. RSUs Not Transferable. The RSUs covered by the Agreement shall not be transferable other than by will or pursuant to the laws of descent and distribution prior to payment.

2. Vesting and Payment of RSUs.

(a) General. Subject to the provisions of Sections 2(b), 2(c) and 2(d) of this Article II, all of the RSUs covered by this Agreement shall become nonforfeitable if the Grantee shall have remained in the continuous employ of the Corporation or a

Subsidiary for three years from the Date of Grant and shall be payable by the issuance of Common Shares to the Grantee on such date.

(b) Death or Disability. Notwithstanding the provisions of Section 2(a) of this Article II, all of the RSUs covered by this Agreement shall immediately become nonforfeitable and shall be immediately payable if the Grantee dies or becomes permanently disabled (as hereinafter defined) while in the employ of the Corporation or a Subsidiary during the three-year period from the Date of Grant. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term disability plan of the Corporation in effect for, or applicable to, the Grantee and is "disabled" within the meaning of Section 409A(a)(2)(C) of the Code.

(c) Retirement.

(i) If the Grantee should Retire (as hereinafter defined) after the Date of Grant, the RSUs covered by this Agreement shall be forfeited, unless the Committee determines that, notwithstanding the requirement of continuous employment contained in Section 2(a) of this Article II, such RSUs will continue to vest and become payable three years from the Date of Grant, provided that if the Committee makes such a determination, the RSUs will also be paid on any earlier date when payment would otherwise have been made under Section 2 of this Article II if the Grantee had continued employment through such date.

(ii) "Retire" shall mean the Grantee's retirement from the Corporation or a Subsidiary at (A) age 65 or older or (B) at age 55 or older with 10 or more years of continuous employment with the Corporation or a Subsidiary.

(d) Change in Control.

(i) Notwithstanding Section 2(a) of this Article II above, the RSUs granted hereby shall immediately become nonforfeitable if at any time during the employment of the Grantee and prior to the end of the three-year vesting period:

(A) a Change in Control shall occur after the Date of Grant; and

(B) within two years following the Change in Control the Grantee's employment with the Corporation or a Subsidiary is terminated by the Grantee as a Termination for Good Cause (as defined in Section 2(f) of this Article II) or the Grantee is terminated by the Corporation other than as a Termination for Cause (as defined in Section 2(e) of this Article II). If the Change in Control constitutes a "change in control" for purposes of Section 409A of the Code and if the Grantee incurs a "separation from service" for purposes of Section 409A of the Code within two years following such Change in Control, payment for any RSUs which are no longer subject to a substantial risk of forfeiture will be made upon the Grantee's separation from service, provided however, that if at such time the Grantee is a "specified employee" as determined pursuant to the identification methodology adopted by the Corporation in compliance with Section 409A of the Code, the date of payment for the RSUs shall be the tenth business day of the seventh month after the date of the Grantee's separation from service (or if earlier the Grantee's death). If payment is not made pursuant to the preceding sentence because the Change in Control does not constitute a "change in control" for purposes of Section 409A of the Code, then payment shall be made at the

earliest date that payment otherwise would have been made under Section 2 of this Article II if no Change in Control had occurred, assuming continued employment through such date.

(ii) Notwithstanding anything in this Section 2(d) to the contrary, in connection with a Business Combination, the result of which is that the Outstanding Company Voting Securities are exchanged for or become exchangeable for securities of another entity, cash or a combination thereof, if the entity resulting from such Business Combination does not assume the RSUs evidenced hereby and the Corporation's obligations hereunder, or replace the RSUs evidenced hereby with a substantially equivalent security of the entity resulting from such Business Combination, then the RSUs evidenced hereby shall become nonforfeitable as of immediately prior to such Business Combination. Payment for any RSUs which are no longer subject to a substantial risk of forfeiture as determined under the original terms of this award will be upon the Change in Control; provided, however, if the Change in Control does not constitute a "change in control" for purposes of Section 409A(a)(2)(A)(v) of the Code, then payment for the RSUs will be made upon the date that payment otherwise would have been made under Section 2 of this Article II if no Change in Control had occurred, assuming continued employment through such date.

(e) "Termination for Cause" means a termination of Grantee's employment by the Corporation for "Cause" (as defined in Section 7(f) of this Article II).

(f) "Termination for Good Cause" shall mean the Grantee's termination of the Grantee's employment with the Corporation or a Subsidiary as a result of the occurrence of any of the following:

(i) a change in the Grantee's principal location of employment that is greater than 50 miles from its location as of the date hereof without the Grantee's consent; provided, however, that the Grantee hereby acknowledges that the Grantee may be required to engage in travel in connection with the performance of the Grantee's duties hereunder and that such travel shall not constitute a change in the Grantee's principal location of employment for purposes hereof;

(ii) a material diminution in the Grantee's base compensation;

(iii) a change in the Grantee's position with the Corporation without the Grantee's consent such that there is a material diminution in the Grantee's authority, duties or responsibilities; or

(iv) any other action or inaction that constitutes a material breach by the Corporation of the agreement under which the Grantee provides services.

Notwithstanding the foregoing, the Grantee's termination of the Grantee's employment with the Corporation as a result of the occurrence of any of the foregoing shall not constitute a "Termination for Good Cause" unless (A) the Grantee gives the Corporation written notice of such occurrence within 90 days of such occurrence and such occurrence is not cured by the Corporation within 30 days of the date on which such written notice is received by the Corporation and (B) the Grantee actually terminates his or her employment with the Corporation prior to the 365th day following such occurrence.

3. Form and Time of Payment of RSUs/Withholding Taxes. Except as otherwise provided for in Section 2 of Article III, payment for the RSUs that become nonforfeitable as provided herein shall be made in form of Common Shares at the time the RSUs are payable in accordance with Section 2 of this Article II. To the extent that the Corporation is required to withhold federal, state, local or foreign taxes or other amounts in connection with the delivery of Common Shares to the Grantee or any other person under this Agreement, the number of Common Shares to be delivered to the Grantee or such other person

shall be reduced (based on the fair market value per Common Share as of the date the RSUs are reduced) to provide for the taxes required to be withheld with any fractional shares that would otherwise be delivered being rounded up to the next nearest whole share. In no event will the fair market value of the Common Shares to be withheld and delivered pursuant to this Section to satisfy applicable withholding taxes exceed the minimum amount required to be withheld, unless (a) an additional amount can be withheld or delivered, and not result in adverse accounting or other consequences as reasonably determined by the Committee (it being understood that the failure of such reasonable determination to be correct shall not constitute a violation of the terms of the Plan), and (b) it is permitted by the Committee.

4. Forfeiture of RSUs. The RSUs shall be forfeited, except as otherwise provided in Section 2(b), 2(c) or 2(d) of this Article II above, if the Grantee ceases to be employed by the Corporation or a Subsidiary prior to three years from the Date of Grant.

5. Dividend Equivalents. From and after the Date of Grant and until the earlier of (a) the time when the RSUs vest and become nonforfeitable and payable in accordance with Section 2 of this Article II or (b) the time when the Grantee's right to receive Common Shares in payment of the RSUs is forfeited in accordance with Section 4 of this Article II, on the date that the Corporation pays a cash dividend (if any) to holders of Common Shares generally, the Grantee shall be entitled to a number of additional whole RSUs (rounded up or down to the nearest whole RSU) determined by dividing (i) the product of (A) the dollar amount of the cash dividend paid per Common Share on such date and (B) the total number of RSUs covered by this Agreement (including dividend equivalents credited with respect thereto) previously credited to the Grantee as of such date, by (ii) the Market Value per Share on such date. Such dividend equivalents (if any) shall be subject to the same terms and conditions and shall be paid or forfeited in the same manner and at the same time as the RSUs to which the dividend equivalents were credited.

6. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary, if the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity (as hereinafter defined), and the Board shall so find, the Grantee shall:

(a) Forfeit all RSUs held by the Grantee.

(b) Return to the Corporation all Common Shares that the Grantee has not disposed of that were paid out pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity.

(c) With respect to any Common Shares that the Grantee has disposed of that were paid out pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity, pay to the Corporation in cash the value of such Common Shares on the date such Common Shares were paid out.

(d) To the extent that the amounts referred to above in Section 6(b) and 6(c) of this Article II are not paid to the Corporation, the Corporation may set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason, except that no setoff shall be permitted against any amount that constitutes “deferred compensation” within the meaning of Section 409A of the Code.

7. For purposes of this Agreement, the term "Detrimental Activity" shall include:

(a) (i) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Grantee, if such agreement is in effect at the date hereof, or in violation of any corresponding provision in any other agreement between

the Corporation and the Grantee in effect on the date hereof providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect as of the date hereof or if a severance agreement does not contain a Section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation":

(A) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(I) entering into or engaging in any business which competes with the business of the Corporation;

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(B) Following Termination. For a period of one year following the Grantee's termination date:

(I) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business,

wherever located, that competes with, the Corporation's business within the Restricted Territory;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 7(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(C) "The Corporation." For the purposes of this Section 7(a)(ii) of Article II, the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two year period prior to such termination.

(D) "The Corporation's business." For the purposes of this Section 7 of Article II inclusive, the Corporation's business is defined to be the integrated

production of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications serving the consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(E) "Restricted Territory." For the purposes of Section 7(a)(ii)(B) of Article II, the Restricted Territory shall be defined as and limited to:

(I) the geographic area(s) within a one hundred mile radius of any and all of the Corporation's location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(II) all of the specific customer accounts, whether within or outside of the geographic area described in (I) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(F) Extension. If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 7(a)(ii)(B) of Article II, then the period applicable to each obligation that the Grantee shall have been

determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee,

derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 7(c)(i) of Article II of this Agreement.

(d) Discoveries and Inventions. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following

termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefor, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g., "(creation date) [Corporation's Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include activity that results in termination for

Cause. For the purposes of this Section, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation; and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any action contributing to a restatement of the Corporation's financials if this award of RSUs to the Grantee is favorably affected by such restatement as provided under Section 10D of the Exchange Act and any applicable rules or regulations that may be promulgated from time to time by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Common Shares may be traded, and any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 7 of Article II are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Grantee were to violate such obligations. The Grantee further

acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

(i) Acknowledgement. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement prevents the Grantee from providing, without prior notice to the Corporation, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law. The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws.

2. Adjustments. The RSUs and the number of Common Shares issuable for each RSU and the other terms and conditions of the grant evidenced by this Agreement are subject to adjustment as provided in Section 11 of the Plan.

3. Continuous Employment. For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

4. No Employment Contract; Right to Terminate Employment; Clawback Policy. The grant of the RSUs to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant

of the RSUs and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time. Notwithstanding anything in this Agreement to the contrary, the Grantee acknowledges and agrees that this Agreement and the award described herein (and any settlement thereof) are subject to the terms and conditions of the Corporation's clawback policy (if any) as may be in effect from time to time including specifically to implement Section 10D of the Exchange Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Common Shares may be traded) (the "Compensation Recovery Policy"), and that relevant sections of this Agreement shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof.

5. Relation to Other Benefits. Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents

to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent. Notwithstanding the foregoing, the limitation requiring the consent of a Grantee to certain amendments shall not apply to any amendment that is deemed necessary by the Corporation to ensure compliance with Section 409A of the Code or Section 10D of the Exchange Act.

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This Agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

10. Compliance with Section 409A of the Code. To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent. Reference to Section 409A of the Code is to Section 409A of the Internal Revenue Code of 1986, as amended, and will also include any regulations or any other formal guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

11. Relation to Severance Agreement. Section 2(d) of Article II hereof shall supersede the provisions of any Severance Agreement between the Grantee and the

Corporation, in effect at the Date of Grant, providing for earlier vesting of the RSUs granted hereby in the event of a Change in Control.

12. Electronic Delivery. The Corporation may, in its sole discretion, deliver any documents related to the RSUs and the Grantee's participation in the Plan, or future awards that may be granted under the Plan, by electronic means or request the Grantee's consent to participate in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and, if requested, agrees to participate in the Plan through an on-line or electronic system established and maintained by the Corporation or another third party designated by the Corporation.

13. Acknowledgement. The Grantee acknowledges that the Grantee (a) has received a copy of the Plan, (b) has had an opportunity to review the terms of this Agreement and the Plan, (c) understands the terms and conditions of this Agreement and the Plan and (d) agrees to such terms and conditions.

14. Successors and Assigns. Without limiting Section 1 of Article II hereof, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the successors, administrators, heirs, legal representatives and assigns of the Grantee, and the successors and assigns of the Corporation.

15. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same agreement.

[signature page follows]

The undersigned Grantee hereby accepts the award granted pursuant to this Agreement on the terms and conditions set forth herein.

Dated: _____ _____
[NAME]

Executed in the name of and on behalf of the Corporation at Mayfield Heights, Ohio as of this __ day of _____, 20__.

MATERION CORPORATION

By _____

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: April 23, 2020

Jugal K. Vijayvargiya
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Joseph P. Kelley, 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.

Dated: April 23, 2020

/s/ Joseph P. Kelley

Joseph P. Kelley
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 March 27, 2020 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: April 23, 2020

/s/ Jugal K. Vijayvargiya

Jugal K. Vijayvargiya
President and Chief Executive Officer

/s/ Joseph P. Kelley

Joseph P. Kelley
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 March 27, 2020

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 March 27, 2020 (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