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 June 29, 2024

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

For the transition period from __________ to __________

Commission file number: 001-32598

Entegris, Inc.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**41-1941551** **(I.R.S. Employer Identification No.)**
129 Concord Road, Billerica, Massachusetts **(Address of principal executive offices)**	**01821** **(Zip Code)**

(978) 436-6500
(Registrant's telephone number, including area code)

None
(Former name, former address and former fiscal year, if changed since last report)

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, $0.01 par value per share	**ENTG**	**The Nasdaq Stock Market LLC**

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 ☒

As of July 29, 2024, there were 150,978,385 shares of the registrant's common stock outstanding.

ENTEGRIS, INC. AND SUBSIDIARIES
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FOR THE QUARTER ENDED June 29, 2024

Cautionary Statements

This Quarterly Report on Form 10-Q (this "Quarterly Report") contains "forward-looking statements." The words "believe," "expect," "anticipate," "intend," "estimate," "forecast," "project," "should," "may," "will," "would" or the negative thereof and similar expressions are intended to identify such forward-looking statements. These forward-looking statements may include statements about fluctuations in demand for semiconductors; global economic uncertainty and the risks inherent in operating a global business; supply chain matters; inflationary pressures; future period guidance or projections; the Company's performance relative to its markets, including the drivers of such performance; market and technology trends, including the duration and drivers of any growth trends; the development of new products and the success of their introductions; the focus of the Company's engineering, research and development projects; the Company's ability to obtain, protect and enforce intellectual property rights; information technology risks; the Company's ability to execute on our business strategies, including the Company's expansion of its manufacturing presence in Taiwan and in Colorado Springs; the Company's capital allocation strategy, which may be modified at any time for any reason, including with respect to share repurchases, dividends, debt repayments and potential acquisitions; the impact of the acquisitions and divestitures the Company has made and commercial partnerships the Company has established, including the acquisition of CMC Materials, Inc. (now known as CMC Materials LLC) ("CMC Materials"); the amount of goodwill we carry on our balance sheets; key employee retention; future capital and other expenditures, including estimates thereof; the Company's expected tax rate; the impact, financial or otherwise, of any organizational changes or changes in the legal and regulatory environment in which we operate; the impact of accounting pronouncements; quantitative and qualitative disclosures about market risk; climate change and our environmental, social and governance commitments; and other matters. These forward-looking statements are based on current management expectations and assumptions only as of the date of this Quarterly Report, are not guarantees of future performance and involve substantial risks and uncertainties that are difficult to predict and that could cause actual results to differ materially from the results expressed in, or implied by, these forward-looking statements. These risks and uncertainties include, but are not limited to, weakening of global and/or regional economic conditions, generally or specifically in the semiconductor industry, which could decrease the demand for the Company's products and solutions; the level of, and obligations associated with, the Company's indebtedness, including the debts incurred in connection with the acquisition of CMC Materials; risks related to the acquisition and integration of CMC Materials, including the ability to achieve the anticipated value-creation contemplated by the acquisition of CMC Materials; raw material shortages, supply and labor constraints, price increases, inflationary pressures and rising interest rates; operational, political and legal risks of the Company's international operations; the Company's dependence on sole source and limited source suppliers; the Company's ability to meet rapid demand shifts; the Company's ability to continue technological innovation and introduce new products to meet customers' rapidly changing requirements; substantial competition; the Company's concentrated customer base; the Company's ability to identify, complete and integrate acquisitions, joint ventures, divestitures or other similar transactions; the Company's ability to effectively implement any organizational changes; the Company's ability to protect and enforce intellectual property rights; the impact of regional and global instabilities, hostilities and geopolitical uncertainty, including, but not limited to, the ongoing conflicts between Ukraine and Russia and between Israel and Hamas and other tensions in the Middle East, as well as the global responses thereto; the increasing complexity of certain manufacturing processes; changes in government regulations of the countries in which the Company operates, including the imposition of tariffs, export controls and other trade laws, restrictions and changes to national security and international trade policy, especially as they relate to China; fluctuation of currency exchange rates; fluctuations in the market price of the Company's stock; and other risk factors and additional information described in the Company's filings with the Securities and Exchange Commission (the "SEC"), including under the heading "Risk Factors" in Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed on February 15, 2024 (the "Annual Report"), and in the Company's other SEC filings. Except as required under the federal securities laws and the rules and regulations of the SEC, the Company undertakes no obligation to update publicly any forward-looking statements or information contained herein, which speak as of their respective dates.

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PART 1. FINANCIAL INFORMATION
Item 1. Financial Statements

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

(In thousands, except per share data)		June 29, 2024		December 31, 2023
ASSETS				
Current assets:				
Cash and cash equivalents	$	320,008	$	456,929
Trade accounts receivable, net of allowance for credit losses of $5,509 and $6,412		457,107		457,052
Inventories, net		633,373		607,051
Deferred tax charges and refundable income taxes		52,690		63,879
Assets held-for-sale		6,195		278,753
Other current assets		107,413		113,663
Total current assets		1,576,786		1,977,327
Property, plant and equipment, net of accumulated depreciation of $983,070 and $908,089		1,495,098		1,468,043
Right-of-use assets - Operating lease		61,396		57,990
Right-of-use assets - Finance lease		22,314		22,409
Goodwill		3,943,893		3,945,860
Intangible assets, net of accumulated amortization of $906,496 and $808,298		1,184,955		1,281,969
Deferred tax assets and other noncurrent tax assets		24,059		31,432
Other assets		28,085		27,561
Total assets	$	8,336,586	$	8,812,591
LIABILITIES AND EQUITY				
Current liabilities:				
Accounts payable		141,579		134,211
Accrued payroll and related benefits		90,303		109,559
Accrued interest payable		24,360		24,759
Liabilities held-for-sale		662		19,223
Other accrued liabilities		120,538		148,840
Income taxes payable		62,416		77,403
Total current liabilities		439,858		513,995
Long-term debt, net of unamortized discount and debt issuance costs of $72,767 and $91,633		4,122,233		4,577,141
Pension benefit obligations and other liabilities		53,789		53,733
Deferred tax liabilities and other noncurrent tax liabilities		146,516		190,142
Long term lease liability - Operating lease		52,332		49,719
Long term lease liability - Finance lease		19,468		19,267
Equity:				
Preferred stock, par value $0.01; 5,000 shares authorized; none issued and outstanding as of June 29, 2024 and December 31, 2023		—		—
Common stock, par value $0.01; 400,000 shares authorized; issued and outstanding shares as of June 29, 2024: 151,029 and 150,827, respectively; issued and outstanding shares as of December 31, 2023: 150,566 and 150,364, respectively		1,510		1,506
Treasury stock, at cost: 202 shares held as of June 29, 2024 and December 31, 2023		(7,112)		(7,112)
Additional paid-in capital		2,335,321		2,305,367
Retained earnings		1,234,487		1,151,765
Accumulated other comprehensive loss		(61,816)		(42,932)
Total equity		3,502,390		3,408,594
Total liabilities and equity	$	8,336,586	$	8,812,591

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

(In thousands, except per share data)	Three months ended June 29, 2024	Three months ended July 1, 2023	Six months ended June 29, 2024	Six months ended July 1, 2023
Net sales	$ 812,652	$ 901,000	$ 1,583,677	$ 1,823,396
Cost of sales	436,833	516,834	856,038	1,037,545
Gross profit	375,819	384,166	727,639	785,851
Selling, general and administrative expenses	116,315	145,596	228,508	315,463
Engineering, research and development expenses	81,885	71,030	153,761	142,936
Amortization of intangible assets	47,513	54,680	97,672	112,254
Goodwill impairment	—	—	—	88,872
Gain on termination of alliance agreement	—	(154,754)	—	(154,754)
Operating income	130,106	267,614	247,698	281,080
Interest expense	53,687	80,908	111,060	167,054
Interest income	(1,160)	(2,303)	(4,154)	(3,628)
Other expense, net	2,977	7,724	17,262	3,066
Income before income tax expense (benefit)	74,602	181,285	123,530	114,588
Income tax expense (benefit)	6,689	(16,491)	10,145	4,978
Equity in net loss of affiliates	217	130	423	130
Net income	$ 67,696	$ 197,646	$ 112,962	$ 109,480
Basic earnings per common share	$ 0.45	$ 1.32	$ 0.75	$ 0.73
Diluted earnings per common share	$ 0.45	$ 1.31	$ 0.74	$ 0.73
Weighted average shares outstanding:				
Basic	150,801	149,825	150,675	149,626
Diluted	151,819	150,837	151,769	150,609

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

(In thousands)	Three months ended		Six months ended	
	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Net income	$ 67,696	$ 197,646	$ 112,962	$ 109,480
Other comprehensive loss, net of tax				
Foreign currency translation adjustments	(5,140)	(38,011)	(14,791)	(14,277)
Pension liability adjustments	—	—	(379)	37
Interest rate swap - cash flow hedge, change in fair value - (loss) gain, net of tax (benefit) expense of $(770) and $(1,083) for the three and six months ended June 29, 2024, respectively, and $2,834 and $(69) for the three and six months ended July 1, 2023 respectively	(2,641)	9,716	(3,714)	(239)
Other comprehensive loss	(7,781)	(28,295)	(18,884)	(14,479)
Comprehensive income	$ 59,915	$ 169,351	$ 94,078	$ 95,001

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY
(Unaudited)

(In thousands)	Common shares issued	Treasury shares	Common shares outstanding	Common stock	Treasury stock	Additional paid-in capital	Retained earnings	Foreign currency translation adjustments	Defined benefit pension adjustments	Interest rate swap - cash flow hedge	Total
Balance at December 31, 2022	149,339	(202)	149,137	$ 1,493	$ (7,112)	$ 2,205,325	$ 1,031,391	$ (49,083)	$ (83)	$ 36,069	$ 3,218,000
Shares issued under stock plans	530	—	530	6	—	8,981	—	—	—	—	8,987
Share-based compensation expense	—	—	—	—	—	30,678	—	—	—	—	30,678
Dividends declared ($0.10 per share)	—	—	—	—	—	—	(15,092)	—	—	—	(15,092)
Interest rate swap - cash flow hedge	—	—	—	—	—	—	—	—	—	(9,955)	(9,955)
Pension liability adjustment	—	—	—	—	—	—	—	—	37	—	37
Foreign currency translation	—	—	—	—	—	—	—	23,734	—	—	23,734
Net loss	—	—	—	—	—	—	(88,166)	—	—	—	(88,166)
Balance at April 1, 2023	149,869	(202)	149,667	$ 1,499	$ (7,112)	$ 2,244,984	$ 928,133	$ (25,349)	$ (46)	$ 26,114	$ 3,168,223
Shares issued under stock plans	439	—	439	4	—	18,130	—	—	—	—	18,134
Share-based compensation expense	—	—	—	—	—	11,458	—	—	—	—	11,458
Dividends declared ($0.10per share)	—	—	—	—	—	—	(14,961)	—	—	—	(14,961)
Interest rate swap - cash flow hedge	—	—	—	—	—	—	—	—	—	9,716	9,716
Foreign currency translation	—	—	—	—	—	—	—	(38,011)	—	—	(38,011)
Net income	—	—	—	—	—	—	197,646	—	—	—	197,646
Balance at July 1, 2023	150,308	(202)	150,106	$ 1,503	$ (7,112)	$ 2,274,572	$ 1,110,818	$ (63,360)	$ (46)	$ 35,830	$ 3,352,205

(In thousands)	Common shares issued	Treasury shares	Common shares outstanding	Common stock	Treasury stock	Additional paid-in capital	Retained earnings	Foreign currency translation adjustments	Defined benefit pension adjustments	Interest rate swap - cash flow hedge	Total
Balance at December 31, 2023	150,566	(202)	150,364	$ 1,506	$ (7,112)	$ 2,305,367	$ 1,151,765	$ (61,880)	$ 314	$ 18,634	$ 3,408,594
Shares issued under stock plans	405		405	4	—	(5,459)	—	—	—	—	(5,455)
Share-based compensation expense	—	—	—	—	—	7,908	—	—	—	—	7,908
Dividends declared ($0.10per share)	—	—	—	—	—	—	(15,040)	—	—	—	(15,040)
Interest rate swap - cash flow hedge	—	—	—	—	—	—	—	—	—	(1,073)	(1,073)
Pension liability adjustment	—	—	—	—	—	—	—	—	(379)	—	(379)
Foreign currency translation	—	—	—	—	—	—	—	(9,651)	—	—	(9,651)
Net income	—	—	—	—	—	—	45,266	—	—	—	45,266
Balance at March 30, 2024	150,971	(202)	150,769	$ 1,510	$ (7,112)	$ 2,307,816	$ 1,181,991	$ (71,531)	$ (65)	$ 17,561	$ 3,430,170
Shares issued under stock plans	58	—	58	—	—	616	—	—	—	—	616
Share-based compensation expense	—	—	—	—	—	26,889	—	—	—	—	26,889
Dividends declared ($0.10 per share)	—	—	—	—	—	—	(15,200)	—	—	—	(15,200)
Interest rate swap - cash flow hedge	—	—	—	—	—	—	—	—	—	(2,641)	(2,641)
Foreign currency translation	—	—	—	—	—	—	—	(5,140)	—	—	(5,140)
Net income	—	—	—	—	—	—	67,696	—	—	—	67,696
Balance at June 29, 2024	151,029	(202)	150,827	$ 1,510	$ (7,112)	$ 2,335,321	$ 1,234,487	$ (76,671)	$ (65)	$ 14,920	$ 3,502,390

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(In thousands)	Six months ended June 29, 2024	Six months ended July 1, 2023
Operating activities:		
Net income	$ 112,962	$ 109,480
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	92,750	90,494
Amortization	97,672	112,254
Share-based compensation expense	34,797	42,136
Provision for deferred income taxes	(24,088)	(66,814)
Impairment of goodwill	—	88,872
Loss on extinguishment of debt	11,385	7,269
(Gain) loss from sale of businesses and held-for-sale assets, net	(4,311)	28,577
Gain on termination of alliance agreement	—	(154,754)
Charge for excess and obsolete inventory	21,122	23,287
Impairment of long-lived assets	12,967	—
Amortization of debt issuance costs and original issuance discounts	7,797	11,668
Other	6,378	14,571
Changes in operating assets and liabilities:		
Trade accounts receivable	(11,908)	17,941
Inventories	(50,659)	(5,009)
Accounts payable and accrued liabilities	(42,634)	(23,595)
Other current assets	3,112	(1,534)
Income taxes payable and refundable income taxes	(16,923)	(15,570)
Other	7,979	(384)
Net cash provided by operating activities	258,398	278,889
Investing activities:		
Acquisition of property, plant and equipment	(125,889)	(250,043)
Proceeds from sale of businesses, net	249,600	134,286
Proceeds from termination of alliance agreement	—	169,251
Other	(1,917)	366
Net cash provided by investing activities	121,794	53,860
Financing activities:		
Proceeds from revolving credit facility and short-term debt	30,000	—
Payments of revolving credit facility and short-term debt	(30,000)	(135,000)
Proceeds from long-term debt	224,537	117,170
Payments of long-term debt	(698,311)	(293,671)
Payments for debt issuance costs	—	(3,475)
Payments for dividends	(30,355)	(30,150)
Issuance of common stock	10,467	36,767
Taxes paid related to net share settlement of equity awards	(15,306)	(9,646)
Other	(902)	(578)
Net cash used in financing activities	(509,870)	(318,583)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(7,243)	(10,588)
(Decrease) increase in cash, cash equivalents and restricted cash	(136,921)	3,578
Cash, cash equivalents and restricted cash at beginning of period	456,929	563,439
Cash, cash equivalents and restricted cash at end of period	$ 320,008	$ 567,017

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
(Unaudited)

Supplemental Cash Flow Information *(In thousands)*	**Six months ended June 29, 2024**	**Six months ended July 1, 2023**
Non-cash transactions:		
Due from buyer on sale of business	$ 1,189	$ —
Equipment purchases in accounts payable	23,708	22,607
Dividend payable	613	557
Schedule of interest and income taxes paid:		
Interest paid, net of capitalized interest	107,034	260,282
Income taxes paid, net of refunds received	53,002	85,913

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations Entegris, Inc. (“Entegris”, the “Company”, “us”, “we”, or “our”) is a leading supplier of advanced materials and process solutions for the semiconductor and other high-technology industries.

Principles of Consolidation The condensed consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries. Intercompany profits, transactions and balances have been eliminated in consolidation.

Use of Estimates The preparation of condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, particularly receivables, inventories, property, plant and equipment, right-of-use assets, goodwill, intangibles, accrued expenses, short-term and long-term lease liability, income taxes and related accounts, and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Basis of Presentation The condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States and contain all adjustments considered necessary, and are of a normal recurring nature, to present fairly the Company’s financial position as of June 29, 2024 and December 31, 2023, the results of operations and comprehensive income for the three and six months ended June 29, 2024 and July 1, 2023, the equity statements as of and for the three and six months ended June 29, 2024 and July 1, 2023, and cash flows for the six months ended June 29, 2024 and July 1, 2023.

The condensed consolidated financial statements and accompanying notes are presented as permitted by Form 10-Q and do not contain certain information included in the Company’s annual consolidated financial statements and notes. The information included in this Quarterly Report should be read in conjunction with Management’s Discussion and Analysis and consolidated financial statements and notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2023. The results of operations for the three and six months ended June 29, 2024 are not necessarily indicative of the results to be expected for the full year.

Recently Adopted Accounting Pronouncements The Company currently has no material recently adopted accounting pronouncements.

Recently Issued Accounting Pronouncements In November 2023, the Financial Accounting Standards Board (the “FASB”) issued Accounting Standards Update (“ASU”) 2023-07, “Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures,” which expands annual and interim disclosure requirements for reportable segments, primarily through enhanced disclosures about significant segment expenses. The updated standard is effective for our annual periods beginning in fiscal year 2024 and interim periods beginning in the first quarter of fiscal year 2025. Early adoption is permitted. We are currently evaluating the impact that the updated standard will have on our financial statement disclosures.

In December 2023, the FASB issued ASU No. 2023-09, “Income Taxes (Topic 740): Improvements to Income Tax Disclosures,” that requires entities to disclose additional information about federal, state, and foreign income taxes primarily related to the income tax rate reconciliation and income taxes paid. The new standard also eliminates certain existing disclosure requirements related to uncertain tax positions and unrecognized deferred tax liabilities. The guidance is effective for our annual periods beginning in fiscal year 2025. The guidance does not affect recognition or measurement in our condensed consolidated financial statements.

2. REVENUES

The following table provides information about current contract liabilities from contracts with customers. The contract liabilities are included in Other accrued liabilities in the condensed consolidated balance sheets.

(In thousands)	June 29, 2024	July 1, 2023
Balance at beginning of period	$ 69,051	$ 60,476
Revenue recognized that was included in the contract liability balance at the beginning of the period	(47,511)	(43,905)
Increases due to cash received, excluding amounts recognized as revenue during the period	31,640	79,621
Contract liabilities included as part of dispositions and held-for-sale	—	(6,226)
Balance at end of period	$ 53,180	$ 89,966

3. GOODWILL AND LONG-LIVED ASSET IMPAIRMENT

Electronic Chemicals

During the first quarter of 2023, while the criteria to classify the reporting unit as held-for-sale had not been met, the Company was exploring market interest in a potential sale of the Electronic Chemicals (“EC”) reporting unit within the Materials Solutions (“MS”) segment. In connection with the sale process, management determined that certain impairment indicators were present and evaluated goodwill, intangible assets, and long-lived assets for impairment in connection with the quarter ended April 1, 2023. The Company completed the divestiture of the EC business on October 2, 2023.

Long-lived assets, including finite-lived intangible assets
During the first quarter of 2023, the Company compared the estimated undiscounted future cash flows generated by the asset group to the carrying amount of the asset group for the reporting unit and determined that the undiscounted cash flows were expected to exceed the carrying value on a held and used basis. Therefore, no impairment was recorded on the long-lived assets or finite-lived intangible assets. The Company considered if the triggering event would cause a potential change to the useful life of the assets and determined no modification to the useful life of the assets was necessary.

Goodwill
The Company compared the reporting unit’s fair value to its carrying amount, including goodwill as of April 1, 2023. As the reporting unit’s carrying amount, including goodwill, exceeded its fair value, the Company determined the goodwill was impaired and recorded an impairment of $88.9 million during the quarter ended April 1, 2023. The impairment was classified as Goodwill impairment in the Company’s condensed consolidated statements of operations. The goodwill impairment was non taxable. The fair value of the reporting unit was determined using a market-based approach, which was aligned to the expected selling price of approximately $700.0 million. We consider this a Level 3 measurement in the fair value hierarchy. There was no goodwill impairment charge recorded during the three and six months ended June 29, 2024.

Other business

The Company recorded an impairment charge of $13.0 million related to the long-lived assets of a small, industrial specialty chemicals business that reports within the MS segment due to a change in the fair value of the reporting unit for the three months ended March 30, 2024. The impairment is classified as Selling, general and administrative expenses in the Company’s condensed consolidated statements of operations. No further impairment charge was recorded in the three months ended June 29, 2024. The fair value of the reporting unit was determined using a market-based approach. We consider this a Level 3 measurement in the fair value hierarchy. This business remains classified as an asset held-for-sale as of June 29, 2024; see Note 4 for further discussion.

4. ASSET HELD-FOR-SALE AND DIVESTITURE

Asset Held-For-Sale - Other

During the fourth quarter of 2023, the Company began the process to sell a small, industrial specialty chemicals business that reports within the MS segment. The related assets and liabilities of the business were classified as held-for-sale in the Company’s condensed consolidated balance sheets and measured at the lower of their carrying amount or fair value less cost to sell. The assets and liabilities continue to be marketed for sale and are classified as held-for-sale at June 29, 2024.

The proposed disposition of the business did not meet the criteria to be classified as a discontinued operation in the Company's financial statements since the disposition did not represent a strategic shift that had, or will have, a major effect on the Company's operations and financial results.

Assets held-for-sale and liabilities held-for-sale recorded on the balance sheet were $6.2 million and $0.7 million, respectively, as of June 29, 2024. The loss before income taxes attributable to the business was not significant for the three and six months ended June 29, 2024, respectively, except for the impairment charge of $13.0 million as noted in Note 3 for the six months ended June 29, 2024.

Divestiture - Pipeline and Industrial Materials

During the first quarter of 2024, the Company completed the sale of its Pipeline and Industrial Materials ("PIM") business, which became part of the Company with the acquisition of CMC Materials, to SCF Partners, Inc. The PIM business specializes in the manufacture and sale of drag reducing agents and a range of valve maintenance products and services for the oil and gas industry, and reported into the MS segment of the Company.

The Company received gross cash proceeds of $263.2 million, or expected net proceeds of $256.2 million, which remains subject to customary final post-closing adjustment and up to $25.0 million in cash earn-out payments contingent upon the performance of the PIM business in 2025 and 2026.

The Company's policy is to account for the contingent consideration arrangement in accordance with ASC 450, Contingencies (Subtopic 450-30). Under this approach, the Company recognizes the contingent consideration receivable in earnings after the contingency is resolved. Accordingly, to determine the initial gain on the sale of the PIM business, the Company did not include an amount related to the contingent consideration arrangement as part of the consideration received.

The following table summarizes the fair value of the sale proceeds received in connection with the divestiture, which are subject to final post-closing adjustment:

(In thousands)		**March 1, 2024**
Cash proceeds received, gross	$	263,208
Preliminary working capital adjustment		1,189
Cash transferred to the buyer on the closing balance sheet		(230)
Direct costs to sell		(8,005)
Fair value of sale consideration	$	256,162

The disposition of the PIM business did not meet the criteria to be classified as a discontinued operation in the Company's financial statements since the disposition did not represent a strategic shift that had, or will have, a major effect on the Company's operations and financial results.

The carrying amount of net assets associated with the PIM business was approximately $252.8 million. The major classes of assets and liabilities sold consisted of the following:

(In thousands)		
Assets:		**March 1, 2024**
Current assets	$	58,684
Property, plant and equipment, net		118,146
Intangible assets, net		76,692
Goodwill		12,707
Other assets		2,500
Total assets held-for-sale	$	268,729
Liabilities:		
Accounts payable	$	9,485
Accrued expenses		4,672
Long-term liabilities		1,737
Total liabilities held-for-sale	$	15,894

As a result of the sale of the PIM business, the Company recognized a pre-tax loss (gain) of $0.5 million and $(4.3) million, inclusive of a $1.0 million gain reclassified from Accumulated other comprehensive loss for foreign currency translation, presented in Selling, general and administrative expenses in the condensed consolidated statements of operations for the three and six months ended June 29, 2024, respectively. The Company recorded an income tax (benefit) expense associated with the PIM divestiture of approximately $(0.1) million and $1.0 million for the three and six months ended June 29, 2024, respectively.

5. INVENTORIES

Inventories consisted of the following:

(In thousands)		June 29, 2024		December 31, 2023
Raw materials	$	253,642	$	248,656
Work-in-process		55,124		49,704
Finished goods [(1)]		324,607		308,691
Total inventories, net	$	633,373	$	607,051

(1) Includes consignment inventories held by customers of $22.7 million and $20.8 million at June 29, 2024 and December 31, 2023, respectively.

6. GOODWILL AND INTANGIBLE ASSETS

Goodwill activity for each of the Company's reportable segments that carry goodwill, Material Solutions ("MS"), Microcontamination Control ("MC"), and Advanced Materials Handling ("AMH"), was as follows at June 29, 2024 and December 31, 2023:

(In thousands)	MS	MC	AMH	Total
December 31, 2023	$ 3,631,350	$ 240,408	$ 74,102	$ 3,945,860
Foreign currency translation	(43)	(1,924)	—	(1,967)
June 29, 2024	$ 3,631,307	$ 238,484	$ 74,102	$ 3,943,893

Identifiable intangible assets at June 29, 2024 and December 31, 2023 consisted of the following:

	June 29, 2024		
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 1,256,795	$ 528,808	$ 727,987
Trademarks and trade names	171,979	43,320	128,659
Customer relationships	630,532	312,591	317,941
In-process research and development [1]	6,600	—	6,600
Other	25,545	21,777	3,768
	$ 2,091,451	$ 906,496	$ 1,184,955

	December 31, 2023		
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 1,256,469	$ 455,720	$ 800,749
Trademarks and trade names	172,031	37,877	134,154
Customer relationships	630,743	293,782	336,961
In-process research and development [1]	7,100	—	7,100
Other	23,924	20,919	3,005
	$ 2,090,267	$ 808,298	$ 1,281,969

[1] Intangible assets acquired in a business combination that are in-process and used in research and development activities are considered indefinite-lived until the completion or abandonment of the research and development efforts. Once the research and development efforts are completed, we determine the useful life and begin amortizing the assets.

Future amortization expense relating to intangible assets currently recorded in the Company's condensed consolidated balance sheets is estimated to be the following at June 29, 2024:

(In thousands)	Remaining 2024	2025	2026	2027	2028	Thereafter	Total
Future amortization expense	$ 93,178	185,572	182,505	178,789	176,379	368,532	$ 1,184,955

7. DEBT

The Company's debt as of June 29, 2024 and December 31, 2023 consisted of the following:

(In thousands)	June 29, 2024	December 31, 2023
Senior secured term loans B due 2029 at 4.71% (1)	900,000	1,373,774
Senior secured notes due 2029 at 4.75%	1,600,000	1,600,000
Senior unsecured notes due 2030 at 5.95%	895,000	895,000
Senior unsecured notes due 2029 at 3.625%	400,000	400,000
Senior unsecured notes due 2028 at 4.375%	400,000	400,000
Revolving facility due 2027 at 7.08% (2)	—	—
Total debt (par value)	4,195,000	4,668,774
Unamortized discount and debt issuance costs	72,767	91,633
Total debt, net	4,122,233	4,577,141
Less short-term debt, including current portion of long-term debt	—	—
Total long-term debt, net	$ 4,122,233	$ 4,577,141

Annual maturities of long-term debt, excluding unamortized discount and debt issuance costs, due as of June 29, 2024 were as follows:

(In thousands)	Remaining 2024	2025	2026	2027	2028	Thereafter	Total
Contractual debt obligation maturities*	$ —	—	—	—	400,000	3,795,000	4,195,000

* Senior secured term loans B subject to Excess Cash Flow payments to the lenders.

(1) The Company entered into a floating-to-fixed swap contract on its variable rate debt under our senior secured term loan facility due 2029. The effective interest rate after consideration of this floating-to-fixed swap contract was 4.71%. Refer to Note 9 for a description of our interest rate swap contract.

(2) Our senior secured revolving credit facility due 2027 (the "Revolving Facility") bears interest at a rate per annum equal to SOFR, plus an applicable margin of 1.75%. The Revolving Facility has commitments of $575.0 million.

Senior secured term loans B due 2029

On March 28, 2024, the Company and certain of its subsidiaries entered into Amendment No. 3 (the "Third Amendment"), with the lenders party thereto and Morgan Stanley Senior Funding, Inc., as administrative agent, which amended the Credit and Guaranty Agreement, dated as of November 6, 2018 (as amended and restated as of July 6, 2022 and as subsequently amended on each of March 10, 2023 and September 11, 2023, the "Existing Credit Agreement" and, the Existing Credit Agreement as amended by the Third Amendment, the "Amended Credit Agreement"), by and among the Company, as borrower, certain subsidiaries of the Company party thereto, as guarantors, the lenders party thereto and Morgan Stanley Senior Funding, Inc., as administrative agent and collateral agent.

The Third Amendment provides for, among other things, the reduction of the applicable rate of the Company's outstanding senior secured term loans B under the Existing Credit Agreement. After giving effect to the Third Amendment, such outstanding term loans B bear interest, at a rate per annum equal to, at the Company's option, either (i) Term SOFR plus an applicable margin of 1.75% or (ii) a base rate plus an applicable margin of 0.75%. Other than as described herein (and more fully described in the Third Amendment), the terms of the Amended Credit Agreement are substantially similar to the terms of the Existing Credit Agreement. In connection with the Third Amendment, the Company made a prepayment of $354.5 million on the term loans B.

During the three and six months ended June 29, 2024, the Company repaid a total of $55.0 million and $473.8 million of the outstanding borrowings under the term loans B. In connection with these repayments and entry into the Third Amendment, the Company incurred a pre-tax loss on extinguishment and modification of debt of $0.8 million and $12.3 million for the three and six months ended June 29, 2024, respectively, which is included in Other expense, net in the condensed consolidated statements of operations.

8. FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company is required to record certain assets and liabilities at fair value. The valuation methods used for determining the fair value of these financial instruments by hierarchy are as follows:

Level 1 Cash and cash equivalents consist of various bank accounts used to support our operations and investments in institutional money-market funds that are traded in active markets.

Level 2 Derivative financial instruments include an interest rate swap contract. The fair value of our derivative instruments is estimated using standard valuation models and market-based observable inputs over the contractual term, including the prevailing SOFR-based yield curves for the interest rate swap, and forward rates. The fair value of our debt is estimated
based on independent broker/dealer bids or by comparison to other debt securities having similar durations, yields and credit
ratings.

Level 3 No Level 3 financial instruments.

The following table presents financial instruments, other than debt, that we measure at fair value on a recurring basis. See Note 7 to our condensed consolidated financial statements for a discussion of our debt. In instances where the inputs used to measure the fair value of an asset fall into more than one level of the hierarchy, we have classified it based on the lowest level input that is significant to the determination of the fair value.

	Fair Value Measurements at Reporting Date Using							
(In thousands):	Level 1		Level 2		Level 3		Total	
Assets:	June 29, 2024	December 31, 2023	June 29, 2024	December 31, 2023	June 29, 2024	December 31, 2023	June 29, 2024	December 31, 2023
Cash and cash equivalents	$ 320,008	$ 456,929	$ —	$ —	$ —	$ —	$ 320,008	$ 456,929
Derivative financial instruments - Interest rate swap - cash flow hedge	—	—	19,273	24,069	—	—	19,273	24,069
Total	$ 320,008	$ 456,929	$ 19,273	$ 24,069	$ —	$ —	$ 339,281	$ 480,998

Other Fair Value Disclosures

The estimated fair value and carrying value of our debt as of June 29, 2024 and December 31, 2023 were as follows:

	June 29, 2024		December 31, 2023	
(In thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
Total debt, net	$ 4,122,233	$ 4,045,931	$ 4,577,141	$ 4,536,238

9. DERIVATIVE INSTRUMENTS

The Company is exposed to various market risks, including risks associated with interest rates and foreign currency exchange rates. One objective of the Company’s risk management program is to mitigate these risks using derivative instruments.

Cash Flow Hedges - Interest Rate Swap Contract

In July 2022, the Company entered into a floating-to-fixed swap agreement on its variable rate debt under our senior secured term loan facility due 2029 (the “Term Loan Facility”). The interest rate swap was designated specifically to the Term Loan Facility and qualifies as a cash flow hedge. The notional amount is scheduled to decrease quarterly and will expire on December 30, 2025. As with cash flow hedges, unrealized gains are recognized as assets and unrealized losses are recognized as liabilities. Unrealized gains and losses are designated as effective or ineffective based on a comparison of the changes in fair value of the interest rate swaps and changes in fair value of the underlying exposures being hedged. The effective portion is recorded as a component of Accumulated other comprehensive loss in the condensed consolidated balance sheets and will be reflected in earnings during the period the hedged transaction effects earnings, while the ineffective portion is recorded as a component of Interest expense in the condensed consolidated statements of operations.

Foreign Currency Contracts Not Designated as Hedges

The Company enters into foreign exchange contracts in an effort to mitigate the risks associated with currency fluctuations on certain foreign currency balance sheet exposures. These foreign exchange contracts do not qualify for hedge accounting. The Company recognizes the change in fair value of its foreign currency forward contracts in the condensed consolidated statements of operations.

The notional amounts of our derivative instruments were as follows:

(In thousands)

Derivatives designated as hedging instruments:	June 29, 2024	December 31, 2023
Interest rate swap contract - cash flow hedge	$ 900,000	$ 1,350,000

The fair values of our derivative instruments included in the condensed consolidated balance sheets were as follows:

(In thousands)

Condensed Consolidated Balance Sheets Location	Derivative Assets	
Derivatives designated as hedging instruments - Interest rate swap contract - cash flow hedge	June 29, 2024	December 31, 2023
Other current assets	$ 16,578	$ 21,451
Other assets	2,695	2,618

The following table summarizes the effects of our derivative instruments on our condensed consolidated statements of operations:

(In thousands)		Gain Recognized in Condensed Consolidated Statements of Operations			
		Three months ended		Six months ended	
Derivatives designated as hedging instruments:	Condensed Consolidated Statements of Operations Location	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Interest rate swap contract - cash flow hedge	Interest expense	$ (6,353)	$ (9,638)	$ (17,654)	$ (17,551)
Derivatives not designated as hedging instruments:					
Foreign exchange contracts	Other expense, net	$ —	$ (245)	$ —	$ (374)

The following table summarizes the effects of our derivative instruments on Accumulated other comprehensive los*s*:

(In thousands)	(Loss) Gain recognized in Other comprehensive loss			
	Three months ended		Six months ended	
Derivatives designated as hedging instruments:	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Interest rate swap contract - cash flow hedge	$ (2,641)	$ 9,716	$ (3,714)	$ (239)

We expect approximately $16.6 million to be reclassified from Accumulated other comprehensive loss into Interest expense, net during the next twelve months related to our interest rate swap based on projected rates of the SOFR forward curve as of June 29, 2024.

10. INCOME TAXES

The Company's tax provision or benefit from income taxes for interim periods is determined using an estimate of the annual effective tax rate, adjusted for discrete items, if any, that are taken into account in the relevant period. Each quarter, the Company updates an estimate of the annual effective tax rate, and if the estimated tax rate changes, we make a cumulative adjustment.

Income tax expense was $6.7 million and $10.1 million in the three and six months ended June 29, 2024, respectively, compared to income tax (benefit) expense of $(16.5) million and $5.0 million in the three and six months ended July 1, 2023, respectively. The Company's year-to-date effective income tax rate was 9.0% and 8.2% for the three and six months ended June 29, 2024, respectively, compared to (9.1)% and 4.3% for the three and six months ended July 1, 2023, respectively.

The changes in the effective tax rate for the three months ended June 29, 2024 compared to the prior year primarily relate to discrete divestiture activity recorded during the quarter ended July 1, 2023 and the integration of the CMC Materials acquisition. The year-to-date income tax expense in 2024 and 2023 included a discrete benefit of $3.1 million and discrete expense of $0.3 million, respectively, recorded in connection with share-based compensation.

The Organization for Economic Co-operation and Development introduced Base Erosion and Profit Shifting Pillar 2 rules that seek to impose a global minimum income tax rate of 15%. Numerous countries have enacted legislation in connection therewith that is effective on January 1, 2024. We have evaluated the impact of this legislation based on Entegris' current global operations and it is not expected to have a material impact on the annual effective tax rate and there was not a material impact to the three and six months ended June 29, 2024. We will continue to update our analysis and monitor the ongoing legislation throughout the year.

11. EARNINGS PER COMMON SHARE

Basic earnings per common share ("EPS") is calculated based on the weighted average number of shares of common stock outstanding during the applicable period. Diluted EPS is calculated based on the weighted average number of shares of common stock outstanding plus potentially dilutive shares of common stock outstanding during the applicable period. The following table presents a reconciliation of the share amounts used in the computation of basic and diluted EPS:

	Three months ended		Six months ended	
(In thousands)	**June 29, 2024**	**July 1, 2023**	**June 29, 2024**	**July 1, 2023**
Basic—weighted average common shares outstanding	150,801	149,825	150,675	149,626
Weighted average common shares assumed upon exercise of stock options and vesting of restricted common stock	1,018	1,012	1,094	983
Diluted—weighted average common shares and common shares equivalent outstanding	151,819	150,837	151,769	150,609

The Company excluded the following shares underlying stock-based awards from the calculations of diluted EPS because their inclusion would have been anti-dilutive for the three and six months ended June 29, 2024 and July 1, 2023:

	Three months ended		Six months ended	
(In thousands)	**June 29, 2024**	**July 1, 2023**	**June 29, 2024**	**July 1, 2023**
Shares excluded from calculations of diluted EPS	506	580	280	791

12. OTHER EXPENSE, NET

Other expense, net for the three and six months ended June 29, 2024 and July 1, 2023 consisted of the following:

	Three months ended		Six months ended	
(In thousands)	**June 29, 2024**	**July 1, 2023**	**June 29, 2024**	**July 1, 2023**
Infineum termination fee, net	$ —	$ —	$ —	$ (10,876)
Loss on foreign currency transactions	2,653	3,885	4,295	6,286
Loss on extinguishment of debt and modification	796	4,481	12,347	8,361
Other, net	(472)	(642)	620	(705)
Other expense, net	$ 2,977	$ 7,724	$ 17,262	$ 3,066

Infineum termination fee, net

On October 11, 2022, the Company and Infineum USA L.P. ("Infineum") entered into a definitive agreement for the sale of the Company's PIM business. On February 10, 2023, the Company terminated the definitive agreement. In accordance with the terms of the definitive agreement, the Company received a $12.0 million termination fee from Infineum in the first quarter of 2023 and incurred a transaction fee of $1.1 million to the third-party financial adviser it had engaged to assist with the transaction.

13. SEGMENT REPORTING

The Company's financial segment reporting reflects an organizational alignment intended to align with the key elements of the advanced semiconductor manufacturing ecosystem. While these segments have separate products and technical know-how, they share common business systems and processes, technology centers and technology roadmaps. With the complementary capabilities across these segments, the Company believes it is uniquely positioned to create new, co-optimized and increasingly integrated solutions for its customers, which should translate into improved device performance, lower cost of ownership and faster time to market. The Company reports its financial performance in the following segments:

- **Materials Solutions:** MS provides materials-based solutions, such as chemical mechanical planarization slurries and pads, deposition materials, process chemistries and gases, formulated cleans, etchants and other specialty materials that enable our customers to achieve better device performance and faster time to yield, while providing for lower total cost of ownership.
- **Microcontamination Control:** MC offers advanced solutions that improve customers' yield, device reliability and cost by filtering and purifying critical liquid chemistries and gases used in semiconductor manufacturing processes and other high-technology industries.
- **Advanced Materials Handling:** AMH develops solutions that improve customers' yields by protecting critical materials during manufacturing, transportation, and storage, including products that monitor, protect, transport and deliver critical liquid chemistries, wafers, and other substrates for a broad set of applications in the semiconductor, life sciences and other high-technology industries.

The Company accounts for inter-segment sales similar to third-party transactions and the sales price reflects current market prices. Inter-segment sales are eliminated in consolidation and are not included in consolidated sales on the financial statements.

In the third quarter of 2023, in order to align its segment financial reporting with a change in its business structure, the Company realigned its segments. All prior period amounts related to the segment change have been recast for comparability.

Summarized financial information for the Company's reportable segments is shown in the following tables.

	Three months ended		Six months ended	
(In thousands)	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Net sales				
MS	$ 342,333	$ 440,634	$ 692,369	$ 888,964
MC	293,769	283,614	561,633	552,911
AMH	188,225	190,356	351,079	409,209
Inter-segment elimination	(11,675)	(13,604)	(21,404)	(27,688)
Total net sales	$ 812,652	$ 901,000	$ 1,583,677	$ 1,823,396

	Three months ended		Six months ended	
(In thousands)	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Segment profit				
MS [(1)]	$ 70,268	$ 215,738	$ 137,392	$ 186,216
MC	93,709	100,661	180,264	196,658
AMH	28,980	35,830	53,586	83,995
Total segment profit	$ 192,957	$ 352,229	$ 371,242	$ 466,869

[(1)] MS segment profit is inclusive of a $154.8 million gain, net on termination of alliance agreement for the three and six months ended July 1, 2023, a $14.9 million and $28.6 million loss on sale of business and held-for-sale assets for the three and six months ended July 1, 2023, respectively, a $88.9 million goodwill impairment charge relating to the EC reporting unit for the six months ended July 1, 2023 and a $13.0 million long-lived asset impairment charge for the six months ended June 29, 2024.

The following table reconciles total segment profit to income before income tax expense (benefit):

(In thousands)	Three months ended June 29, 2024	Three months ended July 1, 2023	Six months ended June 29, 2024	Six months ended July 1, 2023
Total segment profit	$ 192,957	$ 352,229	$ 371,242	$ 466,869
Less:				
Amortization of intangible assets	47,513	54,680	97,672	112,254
Unallocated general and administrative expenses	15,338	29,935	25,872	73,535
Operating income	130,106	267,614	247,698	281,080
Interest expense	53,687	80,908	111,060	167,054
Interest income	(1,160)	(2,303)	(4,154)	(3,628)
Other expense, net	2,977	7,724	17,262	3,066
Income before income tax expense (benefit)	$ 74,602	$ 181,285	$ 123,530	$ 114,588

In the following tables, revenue is disaggregated by customers' country or region based on the ship to location of the customer for the three and six months ended June 29, 2024 and July 1, 2023, respectively.

Three months ended June 29, 2024

(In thousands)	MS	MC	AMH	Inter-segment	Total
North America	$ 78,830	$ 52,907	$ 61,230	$ (11,675)	$ 181,292
Taiwan	58,594	72,715	28,718	—	160,027
China	63,783	60,333	45,038	—	169,154
South Korea	50,461	31,127	21,056	—	102,644
Japan	28,624	36,195	8,031	—	72,850
Europe	27,864	24,160	17,072	—	69,096
Southeast Asia	34,177	16,332	7,080	—	57,589
	$ 342,333	$ 293,769	$ 188,225	$ (11,675)	$ 812,652

Three months ended July 1, 2023

(In thousands)	MS	MC	AMH	Inter-segment	Total
North America	$ 140,881	$ 45,947	$ 56,275	$ (13,604)	$ 229,499
Taiwan	57,126	53,987	28,780	—	139,893
China	50,703	54,701	35,213	—	140,617
South Korea	55,885	29,824	27,184	—	112,893
Japan	25,714	57,789	11,768	—	95,271
Europe	65,805	24,647	21,902	—	112,354
Southeast Asia	44,520	16,719	9,234	—	70,473
	$ 440,634	$ 283,614	$ 190,356	$ (13,604)	$ 901,000

(In thousands)	Six months ended June 29, 2024 MS	MC	AMH	Inter-segment	Total
North America	$ 175,574	$ 88,366	$ 112,015	$ (21,404)	$ 354,551
Taiwan	113,468	141,806	59,882	—	315,156
China	118,953	124,021	75,929	—	318,903
South Korea	97,316	62,262	42,687	—	202,265
Japan	59,053	67,521	15,736	—	142,310
Europe	62,172	47,967	32,245	—	142,384
Southeast Asia	65,833	29,690	12,585	—	108,108
	$ 692,369	$ 561,633	$ 351,079	$ (21,404)	$ 1,583,677

(In thousands)	Six months ended July 1, 2023 MS	MC	AMH	Inter-segment	Total
North America	$ 288,210	$ 87,713	$ 131,873	$ (27,688)	$ 480,108
Taiwan	115,320	108,222	65,442	—	288,984
China	98,663	110,372	67,013	—	276,048
South Korea	112,256	59,653	61,640	—	233,549
Japan	55,070	107,542	23,084	—	185,696
Europe	129,232	51,651	43,886	—	224,769
Southeast Asia	90,213	27,758	16,271	—	134,242
	$ 888,964	$ 552,911	$ 409,209	$ (27,688)	$ 1,823,396

14. SUBSEQUENT EVENTS

Dividend

On July 17, 2024, the Company's board of directors declared a quarterly cash dividend of $0.10 per share to be paid on August 21, 2024 to shareholders of record on the close of business on July 31, 2024.

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

The following discussion and analysis of the Company’s condensed consolidated financial condition and results of operations should be read along with the condensed consolidated financial statements and the accompanying notes thereto included elsewhere in this Quarterly Report on Form 10-Q (this “Quarterly Report”). The information, except for historical information, contained in this discussion and analysis or set forth elsewhere in this Quarterly Report includes forward-looking statements that involve risks and uncertainties. You should review the section entitled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2023 (the “Annual Report”) as well as in our other U.S. Securities and Exchange Commission (“SEC”) filings for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis or set forth elsewhere in this Quarterly Report. The Company assumes no obligation to publicly release the results of any revision or updates to these forward-looking statements to reflect future events or unanticipated occurrences.

Overview

The Company is a leading supplier of mission-critical advanced materials and process solutions for the semiconductor and other high-technology industries. We leverage our unique breadth of capabilities to help our customers improve their productivity, performance and technology in the most advanced manufacturing environments.

Our business is organized and operated in three operating segments, which align with the key elements of the advanced semiconductor manufacturing ecosystem.

- **Materials Solutions:** MS provides materials-based solutions, such as chemical mechanical planarization (“CMP”) slurries and pads, deposition materials, process chemistries and gases, formulated cleans, etchants and other specialty materials that enable our customers to achieve better device performance and faster time to yield, while providing for lower total cost of ownership.
- **Microcontamination Control:** MC offers advanced solutions that improve customers’ yield, device reliability and cost by filtering and purifying critical liquid chemistries and gases used in semiconductor manufacturing processes and other high-technology industries.
- **Advanced Materials Handling:** AMH develops solutions that improve customers’ yields by protecting critical materials during manufacturing, transportation, and storage, including products that monitor, protect, transport and deliver critical liquid chemistries, wafers, and other substrates for a broad set of applications in the semiconductor, life sciences and other high-technology industries.

These segments share common business systems and processes, technology centers and technology roadmaps. With the complementary capabilities within and across these segments, we believe we are uniquely positioned to create new, co-optimized and increasingly integrated solutions for our customers. For example, we offer complementary solutions for our customers consisting of advanced deposition materials products, CMP slurries, pads and post-CMP cleaning chemistries from our MS segment, CMP slurry filters from our MC segment, and CMP slurry high-purity packaging and fluid monitoring systems from our AMH segment.

The Company’s fiscal year is the calendar period ending each December 31. The Company’s fiscal quarters consist of 13-week or 14-week periods that end on a Saturday. The Company’s fiscal quarters in 2024 end on March 30, 2024, June 29, 2024, September 28, 2024 and December 31, 2024.

Impact of Conflict Between Israel and Hamas

The military conflict between Israel and militant groups led by Hamas, the current conflict in the Red Sea and other tensions in the Middle East have caused uncertainty in the global markets, including, but not limited to, disruptions to shipping routes. Revenue relating to products manufactured from raw materials or components sourced from or through this region does not constitute a material portion of our business and historically we have not had significant revenue in this region. There continues to be uncertainty regarding the ultimate impact these conflicts will have on the global economy, supply chains, logistics, fuel prices, raw material pricing and our business.

Recent Events

On March 1, 2024, the Company completed the sale of its PIM business. The Company received cash proceeds of $263.2 million, or net proceeds of $256.2 million. See Note 4 to our condensed consolidated financial statements for further discussion.

On March 28, 2024, the Company and certain of its subsidiaries entered into Amendment No. 3 (the “Third Amendment”), with the lenders party thereto and Morgan Stanley Senior Funding, Inc., as administrative agent, which amended the Credit and

Guaranty Agreement, dated as of November 6, 2018 (as amended and restated as of July 6, 2022 and as subsequently amended on each of March 10, 2023 and September 11, 2023, the "Existing Credit Agreement"), by and among the Company, as borrower, certain subsidiaries of the Company party thereto, as guarantors, the lenders party thereto, and Morgan Stanley Senior Funding, Inc., as administrative agent and collateral agent.

The Third Amendment provides for, among other things, the refinancing of the Company's outstanding term loans B under the senior secured term loan facility due 2029 (the "Term Loan Facility") in an aggregate principal amount of $955.0 million with a new tranche of term loans B in an aggregate principal amount of $955.0 million. The amended loans will bear interest at a rate per annum equal to, at the Company's option, either (i) the Secured Overnight Financing Rate ("SOFR") plus an applicable margin of 1.75%, which is a reduction from the applicable margin of 2.50% prior to the amendment, or (ii) a base rate plus an applicable margin of 0.75%, which is a reduction from the applicable margin of 1.50% prior to the amendment. In connection with the Third Amendment, the Company made a prepayment of $354.5 million of term loans B. See Note 7 to our condensed consolidated financial statements for further discussion.

On June 26, 2024, the Company and the U.S. Department of Commerce announced entry into a non-binding Preliminary Memorandum of Terms, which provides for up to $75 million in proposed direct funding to the Company under the CHIPS and Science Act. This funding would support the development of a facility in Colorado Springs, Colorado, which will support the Company's AMH and MC divisions.

Critical Accounting Policies and Estimates

Management's discussion and analysis of financial condition and results of operations are based upon the Company's condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these condensed consolidated financial statements requires the Company to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

The critical accounting policies affected most significantly by estimates, assumptions and judgments used in the preparation of the Company's condensed consolidated financial statements are described in Item 7 of our Annual Report for the year ended December 31, 2023, filed with the SEC on February 15, 2024. On an ongoing basis, the Company evaluates the critical accounting policies used to prepare its condensed consolidated financial statements, including, but not limited to, those related to business acquisitions. There have been no material changes in these critical accounting policies and estimates.

Three and Six Months Ended June 29, 2024 Compared to Three and Six Months Ended July 1, 2023

The following table compares operating results for the three and six months ended June 29, 2024 and July 1, 2023, both in dollars and as a percentage of net sales, for each caption.

	Three months ended				Six months ended			
(Dollars in thousands)	June 29, 2024		July 1, 2023		June 29, 2024		July 1, 2023	
Net sales	$ 812,652	100.0 %	$ 901,000	100.0 %	$ 1,583,677	100.0 %	$ 1,823,396	100.0 %
Cost of sales	436,833	53.8	516,834	57.4	856,038	54.1	1,037,545	56.9
Gross profit	375,819	46.2	384,166	42.6	727,639	45.9	785,851	43.1
Selling, general and administrative expenses	116,315	14.3	145,596	16.2	228,508	14.4	315,463	17.3
Engineering, research and development expenses	81,885	10.1	71,030	7.9	153,761	9.7	142,936	7.8
Amortization of intangible assets	47,513	5.8	54,680	6.1	97,672	6.2	112,254	6.2
Goodwill impairment	—	—	—	—	—	—	88,872	4.9
Gain on termination of alliance agreement	—	—	(154,754)	(17.2)	—	—	(154,754)	(8.5)
Operating income	130,106	16.0	267,614	29.7	247,698	15.6	281,080	15.4
Interest expense	53,687	6.6	80,908	9.0	111,060	7.0	167,054	9.2
Interest income	(1,160)	(0.1)	(2,303)	(0.3)	(4,154)	(0.3)	(3,628)	(0.2)
Other expense, net	2,977	0.4	7,724	0.9	17,262	1.1	3,066	0.2
Income before income tax expense (benefit)	74,602	9.2	181,285	20.1	123,530	7.8	114,588	6.3
Income tax expense (benefit)	6,689	0.8	(16,491)	(1.8)	10,145	0.6	4,978	0.3
Equity in net loss of affiliates	217	—	130	—	423	—	130	—
Net income	$ 67,696	8.3 %	$ 197,646	21.9 %	$ 112,962	7.1 %	$ 109,480	6.0 %

Net sales For the three months ended June 29, 2024, net sales decreased by 9.8% to $812.7 million, compared to $901.0 million for the three months ended July 1, 2023. An analysis of the factors underlying the decrease in net sales is presented in the following table:

(In thousands)	
Net sales in the quarter ended July 1, 2023	$ 901,000
Decrease associated with divestitures	(135,225)
Decrease associated with effect of foreign currency translation	(9,751)
Increase associated with volume	56,628
Net sales in the quarter ended June 29, 2024	$ 812,652

As described in the table above, the decrease in net sales was primarily attributable to (i) the absence of sales totaling $135.2 million associated with divested businesses and (ii) a reduction of $9.8 million of sales attributable to unfavorable foreign currency translations, primarily related to the weakening of the Japanese yen relative to the U.S. dollar compared to the quarter ended July 1, 2023. These sales declines were partially offset by $56.6 million of sales due to increased semiconductor market demand.

On a geographic basis, sales percentage by customers' country or region for the three months ended June 29, 2024 and July 1, 2023 and the percentage increase (decrease) in sales for the three months ended June 29, 2024 compared to the sales for the three months ended July 1, 2023 were as follows:

	Three months ended		
	June 29, 2024	July 1, 2023	Percentage increase (decrease) in sales
North America	22 %	25 %	(21 %)
Taiwan	20 %	16 %	14 %
China	21 %	16 %	20 %
South Korea	13 %	13 %	(9 %)
Japan	9 %	11 %	(24 %)
Europe	9 %	12 %	(39 %)
Southeast Asia	7 %	8 %	(18 %)

The decreases in sales to customers in North America primarily relate to the absence of sales from divested businesses. The increase in sales to customers in Taiwan primarily relates to increased demand of our MC products. The increase in sales to customers in China primarily relates to increased demand for products from each of our segments. The decrease in sales to customers in South Korea primarily relates to decreased demand of our AMH and MS products. The decrease in sales to customers in Japan primarily relates to decreased demand of our MC products. The decreases in sales to customers in Europe primarily relate to the absence of sales from divested businesses and lower sales demand for products of our AMH products. The decrease in sales to customers in Southeast Asia primarily relates to the absence of sales from divested businesses.

Net sales for the six months ended June 29, 2024 were $1,583.7 million, compared to $1,823.4 million for the six months ended July 1, 2023. An analysis of the factors underlying the decrease in net sales is presented in the following table:

(In thousands)	
Net sales in the six months ended July 1, 2023	$ 1,823,396
Decrease associated with divestitures	(255,147)
Decrease associated with effect of foreign currency translation	(18,095)
Increase associated with volume	33,523
Net sales in the six months ended June 29, 2024	$ 1,583,677

As described in the table above, the decrease in net sales was primarily attributable to (i) the absence of sales totaling $255.1 million associated with divested businesses and (ii) a reduction of $18.1 million of sales attributable to unfavorable foreign currency translation effects, primarily due to the weakening of the Japanese yen relative to the U.S. dollar compared to the six-month period ended July 1, 2023. These sales were partially offset by $33.5 million of sales due to increased semiconductor market demand.

On a geographic basis, sales percentage by customers' country or region for the six months ended June 29, 2024 and July 1, 2023 and the percentage increase (decrease) in sales for the six months ended June 29, 2024 compared to the sales for the six months ended July 1, 2023 were as follows:

	Six months ended		
	June 29, 2024	July 1, 2023	Percentage increase (decrease) in sales
North America	22 %	26 %	(26 %)
Taiwan	20 %	16 %	9 %
China	20 %	15 %	16 %
South Korea	13 %	13 %	(13 %)
Japan	9 %	10 %	(23 %)
Europe	9 %	12 %	(37 %)
Southeast Asia	7 %	7 %	(19 %)

The decreases in sales to customers in North America primarily relate to the absence of sales from divested businesses. The increase in sales to customers in Taiwan primarily relates to increased demand of our MC products. The increase in sales to customers in China primarily relates to increased demand for products from each of our segments. The decrease in sales to customers in South Korea primarily relates to decreased demand of our AMH and MS products. The decrease in sales to customers in Japan primarily relates to decreased demand of our MC products. The decrease in sales to customers in Europe primarily relate to the absence of sales from divested businesses and lower sales demand of our AMH products. The decrease in sales to customers in Southeast Asia primarily relates to the absence of sales from divested businesses.

Gross margin The following table sets forth gross margin (gross profit as a percentage of net revenues):

	Three months ended			Six months ended		
	June 29, 2024	**July 1, 2023**	**Percentage point change**	**June 29, 2024**	**July 1, 2023**	**Percentage point change**
Gross margin:	46.2 %	42.6 %	3.6	45.9 %	43.1 %	2.8

Gross margin increased by 3.6 percentage points for the three months ended June 29, 2024, compared to the same period in the prior year. Gross margin increased primarily due to positive impact of the divested businesses and improved plant utilization.

Gross margin increased by 2.8 percentage points for the six months ended June 29, 2024, compared to the same period in the prior year. Gross margin increased primarily due to positive impact of the divested businesses and improved plant utilization.

Selling, general and administrative expenses Selling, general and administrative ("SG&A") expenses were $116.3 million in the three months ended June 29, 2024, compared to $145.6 million in the year-ago period. The factors underlying the change in SG&A expenses are presented in the following table:

(In thousands)	
Selling, general and administrative expenses in the quarter ended July 1, 2023	145,596
Integration, deal and transaction costs	(17,716)
Absence of loss on sale of QED business and asset held-for-sale	(14,937)
Depreciation expense	(3,465)
Employee costs, increase primarily due to timing of annual equity award grant, partially offset by divested business	6,228
Other increases, net	609
Selling, general and administrative expenses in the quarter ended June 29, 2024	116,315

SG&A expenses were $228.5 million in the six months ended June 29, 2024, compared to $315.5 million in the year-ago period. The factors underlying the change in SG&A expenses are presented in the following table:

(In thousands)	
Selling, general and administrative expenses in the six months ended July 1, 2023	315,463
Integration, deal and transaction costs	(35,474)
Absence of loss on sale of QED business and asset held-for-sale	(28,579)
Employee costs, mainly driven by divested businesses and share-based compensation	(21,510)
Depreciation expense	(7,103)
Gain on sale of business - PIM	(4,311)
Long-lived asset impairment	12,967
Other decreases, net	(2,945)
Selling, general and administrative expenses in the six months ended June 29, 2024	228,508

Engineering, research and development expenses The Company's engineering, research and development ("ER&D") efforts focus on the support or extension of current product lines and the development of new products and manufacturing technologies. ER&D expenses were $81.9 million in the three months ended June 29, 2024 compared to $71.0 million in the year-ago period. The factors underlying ER&D expenses are presented in the following table:

(In thousands)		
Engineering, research and development expenses in the quarter ended July 1, 2023	$	71,030
Employee costs		6,750
Project related expenses		1,939
Depreciation expense		2,123
Other increases, net		43
Engineering, research and development expenses in the quarter ended June 29, 2024	$	81,885

ER&D expenses were at $153.8 million in the six months ended June 29, 2024 compared to $142.9 million in the year-ago period. The factors underlying ER&D expenses are presented in the following table:

(In thousands)		
Engineering, research and development expenses in the six months ended July 1, 2023	$	142,936
Employee costs		2,769
Project related expenses		3,485
Depreciation expense		3,686
Other increases, net		885
Engineering, research and development expenses in the six months ended June 29, 2024	$	153,761

Amortization expenses Amortization of intangible assets was $47.5 million in the three months ended June 29, 2024, compared to $54.7 million for the three months ended July 1, 2023. The decrease primarily reflects the absence of amortization for certain identifiable intangible assets acquired in previous acquisitions that became fully amortized and the intangibles disposed of as part of the Electronic Chemicals (“EC”) disposition.

Amortization of intangible assets was $97.7 million in the six months ended June 29, 2024, compared to $112.3 million for the six months ended July 1, 2023. The decrease primarily reflects the absence of amortization for certain identifiable intangible assets acquired in previous acquisitions that became fully amortized and the intangibles disposed of as part of the EC disposition.

Goodwill impairment The Company recorded a goodwill impairment charge of none and $88.9 million in the three and six months ended July 1, 2023, respectively. See Note 3 to our condensed consolidated financial statements for further discussion.

Gain on termination of alliance agreement On June 5, 2023, the Company announced the termination of an alliance agreement between the Company and MacDermid Enthone. The Company recognized a pre-tax gain, net of $154.8 million in the three and six months ended July 1, 2023.

Interest expense Interest expense includes interest associated with debt outstanding and the amortization of debt issuance costs and original issuance discounts associated with such borrowings. Interest expense was $53.7 million in the three months ended June 29, 2024, compared to $80.9 million in the three months ended July 1, 2023. The decrease primarily reflects lower interest expense related to lower average debt balances for the period due to repayments on the Company’s outstanding debt.

Interest expense was $111.1 million in the six months ended June 29, 2024, compared to $167.1 million in the six months ended July 1, 2023. The decrease primarily reflects lower interest expense related to lower average debt balances for the period due to repayments on the Company’s outstanding debt.

Other expense, net Other expense, net was $3.0 million in the three months ended June 29, 2024 and consisted mainly of foreign currency transaction losses of $2.7 million and a loss of extinguishment of debt of $0.8 million associated with debt prepayments on the senior secured term loan facility. Other expense, net was $7.7 million in the three months ended July 1, 2023 and consisted mainly of a loss of extinguishment of debt of $4.5 million associated with the repayments on the Company’s bridge credit facility and senior secured term loan facility and foreign currency transaction losses of $3.9 million.

Other expense, net was $17.3 million in the six months ended June 29, 2024 and consisted mainly of a loss of extinguishment and modification of debt of $12.3 million associated with debt prepayments and the Third Amendment (see Note 7 to the Company’s condensed consolidated financial statements) and foreign currency transaction losses of $4.3 million. Other expense, net was $3.1 million in the six months ended July 1, 2023 and consisted mainly of loss of extinguishment and modification of debt of $8.4 million associated with the repayments on the Company’s bridge credit facility and senior secured term loan facility and the amendment of the Company’s Existing Credit Agreement and foreign currency transaction losses of

$6.3 million, partially offset by net proceeds received of $10.9 million resulting from the termination of the definitive agreement with Infineum.

Income tax expense Income tax expense was $6.7 million and $10.1 million in the three and six months ended June 29, 2024, respectively, compared to income tax (benefit) expense of $(16.5) million and $5.0 million in the three and six months ended July 1, 2023, respectively. The Company’s effective income tax rate was 9.0% and 8.2% for the three and six months ended June 29, 2024, respectively, compared to (9.1)% and 4.3% for the three and six months ended July 1, 2023, respectively.

The changes in the effective tax rate for the three and six months ended June 29, 2024 compared to the prior year primarily relate to discrete divestiture activity recorded during the quarter ended July 1, 2023 and the integration of the CMC Materials acquisition. The year-to-date income tax expense in 2024 and 2023 includes a discrete benefit of $3.1 million and discrete expense of $0.3 million, respectively, recorded in connection with share-based compensation.

Net income Due to the factors noted above, the Company recorded net income of $67.7 million, or $0.45 per diluted share, in the three months ended June 29, 2024, compared to net income of $197.6 million, or $1.31 per diluted share, in the three months ended July 1, 2023.

In the six months ended June 29, 2024, the Company recorded net income of $113.0 million, or $0.74 per diluted share, compared to net income of $109.5 million, or $0.73 per diluted share, in the six months ended July 1, 2023.

Non-GAAP Financial Measures The Company’s condensed consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States (“GAAP”). The Company also utilizes certain non-GAAP financial measures as a complement to financial measures provided in accordance with GAAP in order to better assess and reflect trends affecting the Company’s business and results of operations. See the section entitled “Non-GAAP Information” below for additional detail, including the definition of certain non-GAAP financial measures and the reconciliation of these non-GAAP measures to the Company’s GAAP measures.

The Company’s principal non-GAAP financial measures are Adjusted EBITDA and Adjusted Operating Income, together with related measures thereof, and non-GAAP earnings per share (“Non-GAAP EPS”).

Adjusted EBITDA decreased 7.5% to $226.3 million in the three months ended June 29, 2024, compared to $244.6 million in the three months ended July 1, 2023. In the three months ended June 29, 2024, Adjusted EBITDA, as a percentage of net sales, increased to 27.8% from 27.2% in the year-ago period.

Adjusted EBITDA decreased 9.4% to $449.7 million in the six months ended June 29, 2024, compared to $496.2 million in the three months ended July 1, 2023. In the six months ended June 29, 2024, Adjusted EBITDA, as a percentage of net sales, increased to 28.4% from 27.2% in the year-ago period.

Adjusted Operating Income decreased 11.0% to $178.9 million in the three months ended June 29, 2024, compared to $200.9 million in the three months ended July 1, 2023. Adjusted Operating Income, as a percentage of net sales, decreased to 22.0% from 22.3% in the year-ago period.

Adjusted Operating Income decreased 12.0% to $357.0 million in the six months ended June 29, 2024, compared to $405.7 million in the six months ended July 1, 2023. Adjusted Operating Income, as a percentage of net sales, increased to 22.5% from 22.2% in the year-ago period.

Non-GAAP EPS increased 7.6% to $0.71 in the three months ended June 29, 2024, compared to $0.66 in the three months ended July 1, 2023. Non-GAAP EPS increased 6.1% to $1.39 in the six months ended June 29, 2024, compared to $1.31 in the six months ended July 1, 2023.

The decrease in Adjusted EBITDA and Adjusted Operating Income for the three months ended June 29, 2024 compared to the year-ago period is generally attributable to the decreases in sales and higher operating expenses. The decrease in Adjusted EBITDA and Adjusted Operating Income for the six months ended June 29, 2024 compared to the year-ago period is generally attributable to the decreases in sales and higher ER&D expenses, partially offset by lower SG&A expenses. The increase in Non-GAAP EPS for the three months ended June 29, 2024 compared to the year-ago period is primarily attributable to lower interest expense, partially offset by decrease in sales and higher operating expenses. The increase in Non-GAAP EPS for the six months ended June 29, 2024 compared to the year-ago period is primarily attributable to lower interest expense and SG&A expenses, partially offset by a decrease in sales and higher ER&D expenses.

Segment Analysis

The Company reports its financial performance based on three reporting segments. The following is a discussion of the results of operations of these three business segments. See Note 13 to the condensed consolidated financial statements for additional information on the Company's three segments.

The following table presents selected net sales and segment profit data for the Company's three reportable segments, along with unallocated general and administrative expenses, for the three and six months ended June 29, 2024 and July 1, 2023.

	Three months ended		Six months ended	
(In thousands)	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Materials Solutions				
Net sales	$ 342,333	$ 440,634	692,369	888,964
Segment profit	70,268	215,738	137,392	186,216
Microcontamination Control				
Net sales	$ 293,769	$ 283,614	$ 561,633	$ 552,911
Segment profit	93,709	100,661	180,264	196,658
Advanced Materials Handling				
Net sales	$ 188,225	$ 190,356	$ 351,079	$ 409,209
Segment profit	28,980	35,830	53,586	83,995
Unallocated general and administrative expenses	$ 15,338	$ 29,935	$ 25,872	$ 73,535

Materials Solutions (MS)

For the second quarter of 2024, MS net sales decreased to $342.3 million, down 22% compared to $440.6 million in the comparable period last year. The sales decrease was driven primarily by the absence of $135.2 million in sales associated with divested businesses included in the prior year sales, partially offset by increased sales from CMP slurries and pads products. MS reported a segment profit of $70.3 million in the second quarter of 2024, down 67% from $215.7 million segment profit in the year-ago period. The segment profit decrease was primarily associated with the absence of a $154.8 million gain resulting from the termination of the alliance agreement with MacDermid Enthone, partially offset by the absence of $14.9 million loss on sale of business and held-for-sale assets in the year-ago period, partially offset by improved plant performance and volume leverage.

For the six months ended June 29, 2024, MS net sales decreased to $692.4 million, down 22% compared to $889.0 million in the comparable period last year. The sales decrease was driven primarily by the absence of $255.1 million in sales associated with divested businesses included in the prior year sales, partially offset by increased sales from CMP slurries and pads products. MS reported a segment profit of $137.4 million for the six months ended June 29, 2024, a decrease of 26.2% from $186.2 million segment profit in the year-ago period. The segment profit decrease was primarily associated with the absence of a $154.8 million gain resulting from the termination of the alliance agreement with MacDermid Enthone in the year-ago period and a $13.0 million long-lived asset impairment charge in the first quarter of 2024, partially offset with the absence of a goodwill impairment charge of $88.9 million related to the EC reporting unit in the year-ago period, the absence of $28.6 million loss on sale of business and held-for-sale in the year-ago period, and $4.3 million gain associated with sale of the PIM business, partially offset by improved plant performance and volume leverage.

Microcontamination Control (MC)

For the second quarter of 2024, MC net sales increased to $293.8 million, up 4% compared to $283.6 million in the comparable period last year. The sales increase was mainly due to increased sales primarily from gas purification products. MC reported a segment profit of $93.7 million in the second quarter of 2024, down 7% from $100.7 million in the year-ago period. The segment profit decrease was primarily due to higher ER&D costs and increased costs associated with the ramp up of our new facility in Taiwan.

For the six months ended June 29, 2024, MC net sales increased to $561.6 million, up 2% compared to $552.9 million in the comparable period last year. The sales increase was mainly due to increased sales primarily from gas purification products. MC reported a segment profit of $180.3 million in the six months ended June 29, 2024, down 8% from $196.7 million in the year-ago period. The segment profit decrease was primarily due to higher ER&D costs and increased costs associated with the ramp up of our new facility in Taiwan.

Advanced Materials Handling (AMH)

For the second quarter of 2024, AMH net sales decreased to $188.2 million, down 1% compared to $190.4 million in the comparable period last year. The sales decrease was due to lower sales of our fluid handling products, partially offset by higher sales of our microenvironment solution products. AMH reported a segment profit of $29.0 million in the second quarter of 2024, down 19% from $35.8 million in the year-ago period. The segment profit decrease was primarily due to increased costs associated with the ramp up of our new facility in Taiwan and unfavorable product mix.

For the six months ended June 29, 2024, AMH net sales decreased to $351.1 million, down 14% compared to $409.2 million in the comparable period last year. The sales decrease was due to lower sales across most product lines related to semiconductor market declines. AMH reported a segment profit of $53.6 million in the six months ended June 29, 2024, down 36% from $84.0 million in the year-ago period. The segment profit decrease was primarily due to lower sales volume and increased costs associated with the ramp up of our new facility in Taiwan.

Unallocated general and administrative expenses

Unallocated general and administrative expenses totaled $15.3 million in the second quarter of 2024, compared to $29.9 million in the comparable period last year. The $14.6 million decrease is primarily due to a $17.7 million decrease in integration, deal and transaction costs related to the acquisition of CMC Materials, partially offset by a $4.8 million increase in share-based compensation expense, primarily due to the timing of the annual equity award grant.

Unallocated general and administrative expenses totaled $25.9 million in the six months ended June 29, 2024, compared to $73.5 million in the comparable period last year. The $47.7 million decrease is primarily due to a $35.5 million decrease in integration, deal and transaction costs related to the acquisition of CMC Materials and a $9.4 million decrease in share-based compensation expense, primarily due to the timing of the annual equity award grant.

Liquidity and Capital Resources

We consider the following when assessing our liquidity and capital resources:

In thousands	June 29, 2024	December 31, 2023
Cash and cash equivalents	$ 320,008	$ 456,929
Working capital	1,136,928	1,463,332
Total debt, net of unamortized discount and debt issuance costs	4,122,233	4,577,141

The Company has historically financed its operations and capital requirements through cash flow from its operating activities, long-term debt, lease financing, revolving credit facility and borrowings under domestic and international short-term lines of credit.

Based on our analysis, we believe our existing balances of domestic cash and cash equivalents and our currently anticipated operating cash flows will be sufficient to meet our cash needs arising in the ordinary course of business for the next twelve months and for the longer term.

We may seek to take advantage of opportunities to raise additional capital through debt financing or through public or private sales of securities. If in the future our available liquidity is not sufficient to meet the Company’s operating and debt service obligations as they come due, management would need to pursue alternative arrangements through additional equity or debt financing in order to meet the Company’s cash requirements. There can be no assurance that any such financing would be available on commercially acceptable terms, or at all. To date, in fiscal year 2024, we have not experienced difficulty accessing capital and credit markets, but future volatility in the capital and credit markets may increase costs associated with issuing debt instruments or affect our ability to access those markets. In addition, it is possible that our ability to access the capital and credit markets could be limited at a time when we would like, or need, to do so, which could have an adverse impact on our ability to refinance maturing debt and/or react to changing economic and business conditions.

In summary, our cash flows for each period were as follows:

	Six months ended	
(in thousands)	June 29, 2024	July 1, 2023
Net cash provided by operating activities	258,398	278,889
Net cash provided by investing activities	121,794	53,860
Net cash used in financing activities	(509,870)	(318,583)
(Decrease) increase in cash, cash equivalents and restricted cash	(136,921)	3,578

Operating activities Cash provided by operating activities is net income adjusted for certain non-cash items and changes in assets and liabilities. Cash provided by operating activities totaled $258.4 million in the six months ended June 29, 2024, compared to $278.9 million in the six months ended July 1, 2023. This decrease was driven by a $82.9 million change in operating assets and liabilities, partially offset by a $62.4 million increase of net income adjusted for non-cash reconciling items.

Changes in operating assets and liabilities for the six months ended June 29, 2024 were driven by changes in trade accounts receivable, inventories, and accounts payable and accrued liabilities. The change in trade accounts receivables was mainly due to increased sales. The change in inventories was mainly due to an increase in business activity. The change in accounts payable and accrued liabilities was primarily driven by lower customer advance payments.

Investing activities Cash flows provided by investing activities totaled $121.8 million in the six months ended June 29, 2024, compared to cash flows used in investing activities of $53.9 million in the six months ended July 1, 2023. The increase resulted primarily from an increase in proceeds from divestitures of $115.3 million and a reduction of cash paid for acquisition of property, plant and equipment of $124.2 million, partially offset by the absence of net proceeds from termination of the alliance agreement with MacDermid Enthone of $169.3 million.

Financing activities Cash used in financing activities totaled $509.9 million during the six months ended June 29, 2024, compared to cash used in financing activities of $318.6 million during the six months ended July 1, 2023. The increase was primarily due to the net debt activity, which was a use of cash of $473.8 million during the six months ended June 29, 2024 compared to $315.0 million during the six months ended July 1, 2023.

Our total dividend payments were $30.4 million in the six months ended June 29, 2024 compared to $30.2 million in the six months ended July 1, 2023. We have paid a cash dividend in each quarter since the fourth quarter of 2017. On July 17, 2024, the Company's board of directors declared a quarterly cash dividend of $0.10 per share to be paid on August 21, 2024 to shareholders of record on the close of business on July 31, 2024.

Other Liquidity and Capital Resources Considerations

Debt

(In thousands)	June 29, 2024	December 31, 2023
Senior secured term loans B due 2029 at 4.71%	$ 900,000	$ 1,373,774
Senior secured notes due 2029 at 4.75%	1,600,000	1,600,000
Senior unsecured notes due 2030 at 5.95%	895,000	895,000
Senior unsecured notes due 2029 at 3.625%	400,000	400,000
Senior unsecured notes due 2028 at 4.375%	400,000	400,000
Revolving Facility due 2027 at 7.08%	—	—
Total debt (par value)	$ 4,195,000	$ 4,668,774

On March 28, 2024, the Company amended its Existing Credit Agreement. The Third Amendment provides for, among other things, the refinancing of the Company's outstanding term loans B under the Term Loan Facility in an aggregate principal amount of $955.0 million with a new tranche of term loans B in an aggregate principal amount of $955.0 million. The amended loans bear interest at a rate per annum equal to, at the Company's option, either (i) the SOFR plus an applicable margin of 1.75%, which is a reduction from the applicable margin of 2.50% prior to the amendment, or (ii) a base rate plus an applicable margin of 0.75%, which is a reduction from the applicable margin of 1.50% prior to the amendment. In connection with the Third Amendment, the Company made a payment of $354.5 million on the term loans B. See Note 7 to our condensed consolidated financial statements for further discussion.

During the six months ended June 29, 2024, the Company repaid $473.8 million, net of borrowings under the term loans B under the Term Loan Facility.

Through June 29, 2024, the Company was in compliance with the financial covenants under its debt arrangements.

The Company has commitments under our senior secured revolving credit facility due 2027 (the "Revolving Facility") of $575.0 million. The Revolving Facility bears interest at a rate per annum equal to, at the Company's option, either a base rate (such as prime rate) or SOFR, plus, in each case, an applicable margin. During the six months ended June 29, 2024, the Company borrowed and repaid $30.0 million under this Revolving Facility and no balance was outstanding at June 29, 2024.

The Company also has a line of credit with one bank that provides for borrowings in Japanese yen for the Company’s Japanese subsidiaries, equivalent to an aggregate of approximately $6.2 million. During the six months ended June 29, 2024, there were no borrowings under this line of credit and no balance was outstanding at June 29, 2024.

Cash and cash equivalents and cash requirements

(In thousands)	June 29, 2024	December 31, 2023
U.S.	$ 54,026	$ 154,015
Non-U.S.	265,982	302,914
Cash and cash equivalents	320,008	456,929

Our cash and cash equivalents include cash on hand and highly liquid debt securities with original maturities of three months or less, which are valued at cost and approximate fair value. We utilize a variety of funding strategies in an effort to ensure that our worldwide cash is available in the locations in which it is needed. We have accrued taxes on any earnings that are not indefinitely reinvested.

Cash requirements

We have cash requirements to support working capital needs, capital expenditures, business acquisitions, contractual obligations, commitments, principal and interest payments on debt and other liquidity requirements associated with our operations. We generally intend to use available cash and funds generated from our operations to meet these cash requirements, but in the event that additional liquidity is required we may also borrow under our Revolving Facility.

There were no material changes to the cash requirements from our Annual Report that were outside the ordinary course of business, except for the principal repayments of $473.8 million made on the Term Loan Facility as discussed above.

Recently adopted accounting pronouncements Refer to Note 1 to the Company’s condensed consolidated financial statements for a discussion of recently adopted accounting pronouncements.

Recently issued accounting pronouncements Refer to Note 1 to the Company’s condensed consolidated financial statements for a discussion of recently issued but not yet adopted accounting pronouncements.

Non-GAAP Information The Company’s condensed consolidated financial statements are prepared in conformity with GAAP.

The Company also utilizes certain non-GAAP financial measures as a complement to financial measures provided in accordance with GAAP in order to better assess and reflect trends affecting the Company’s business and results of operations. These non-GAAP financial measures include Adjusted EBITDA and Adjusted Operating Income, together with related measures thereof, and Non-GAAP EPS, as well as certain other supplemental non-GAAP financial measures included in the discussion of the Company’s financial results.

Adjusted EBITDA is defined by the Company as net income before, as applicable, (1) equity in net loss of affiliate, (2) income tax expense, (3) interest expense, (4) interest income, (5) other expense, net, (6) goodwill impairment, (7) deal and transaction costs, (8) integration costs, (9) restructuring costs, (10) loss (gain) on sale of certain businesses and held-for-sale, net, (11) gain on termination of alliance agreement, (12) impairment of long-lived assets, (13) amortization of intangible assets and (14) depreciation. Adjusted Operating Income is defined by the Company as Adjusted EBITDA exclusive of the depreciation addback noted above. The Company also utilizes non-GAAP financial measures whereby Adjusted EBITDA and Adjusted Operating Income are each divided by the Company’s net sales to derive Adjusted EBITDA Margin and Adjusted Operating Margin, respectively.

Non-GAAP Net Income is defined by the Company as net income before, as applicable, (1) goodwill impairment, (2) deal and transaction costs, (3) integration costs, (4) restructuring costs, (5) loss on extinguishment of debt and modification, (6) loss (gain) on sale of certain businesses and held-for-sale, net, (7) gain on termination of alliance agreement, (8) Infineum termination fee, net, (9) impairment of long-lived assets, (10) amortization of intangible assets, and (11) the tax effect of the foregoing adjustments to net income. Non-GAAP EPS is defined as our Non-GAAP Net Income divided by our diluted weighted-average shares outstanding.

The Company provides supplemental non-GAAP financial measures to help management and investors to better understand our business and believes these measures provide investors and analysts additional meaningful information for the assessment of the Company’s ongoing results. Management also uses these non-GAAP measures to assist in the evaluation of the performance of the Company’s business segments and to make operating decisions.

Management believes the Company’s non-GAAP measures help indicate the Company’s baseline performance before certain gains, losses or other charges that may not be indicative of the Company’s business or future outlook and offer a useful view of business performance in that the measures provide a more consistent means of comparing performance. The Company believes the non-GAAP measures aid investors' overall understanding of the Company's results by providing a higher degree of transparency for such items and providing a level of disclosure that will help investors understand how management plans, measures and evaluates the Company's business performance. Management believes that the inclusion of non-GAAP measures provides greater consistency in its financial reporting and facilitates investors' understanding of the Company's historical operating trends by providing an additional basis for comparisons to prior periods.

Management uses Adjusted EBITDA and Adjusted Operating Income to assist it in evaluations of the Company's operating performance by excluding items that management does not consider as relevant in the results of its ongoing operations. Internally, these non-GAAP measures are used by management for planning and forecasting purposes, including the preparation of internal budgets; for allocating resources to enhance financial performance; for evaluating the effectiveness of operational strategies; and for evaluating the Company's capacity to fund capital expenditures, secure financing and expand our business.

In addition, and as a consequence of the importance of these non-GAAP financial measures in managing our business, the Company's board of directors uses non-GAAP financial measures in the evaluation process to determine management compensation.

The Company believes that certain analysts and investors use Adjusted EBITDA, Adjusted Operating Income and Non-GAAP EPS as supplemental measures to evaluate the overall operating performance of firms in the Company's industry. Additionally, lenders or potential lenders use Adjusted EBITDA measures to evaluate the Company's creditworthiness.

The presentation of non-GAAP financial measures is not meant to be considered in isolation, as a substitute for, or superior to, financial measures or information provided in accordance with GAAP. Management strongly encourages investors to review the Company's condensed consolidated financial statements in their entirety and to not rely on any single financial measure.

Management notes that the use of non-GAAP measures has limitations, including but not limited to:

First, non-GAAP financial measures are not standardized. Accordingly, the methodology used to produce the Company's non-GAAP financial measures may differ notably from the methodology used by other companies and may not be directly comparable to non-GAAP measures reported by other companies.

Second, the Company's non-GAAP financial measures exclude items such as amortization and depreciation that are recurring. Amortization of intangibles and depreciation have been, and will continue to be for the foreseeable future, a significant recurring expense with an impact upon the Company's results of operations, notwithstanding the lack of immediate impact upon cash flows.

Third, there is no assurance that the Company will not have future charges for goodwill impairment, restructuring activities, deal costs, integration costs, or similar items and, therefore, may need to record additional charges (or credits) associated with such items, including the tax effects thereon. The exclusion of these items in the Company's non-GAAP measures should not be construed as an implication that these costs are unusual, infrequent or non-recurring.

Management considers these limitations by providing specific information regarding the GAAP amounts excluded from these non-GAAP financial measures and evaluating these non-GAAP financial measures together with their most directly comparable financial measures calculated in accordance with GAAP. The calculations of Adjusted EBITDA, Adjusted Operating Income, Non-GAAP Net Income and Non-GAAP EPS, and reconciliations between these financial measures and their most directly comparable GAAP equivalents, are presented below in the accompanying tables.

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Reconciliation of GAAP Net Income to Adjusted Operating Income and Adjusted EBITDA

(In thousands)	Three months ended June 29, 2024	Three months ended July 1, 2023	Six months ended June 29, 2024	Six months ended July 1, 2023
Net sales	$ 812,652	$ 901,000	$1,583,677	$ 1,823,396
Net income	$ 67,696	$ 197,646	$112,962	$ 109,480
Net income - as a % of net sales	8.3 %	21.9 %	7.1 %	6.0 %
Adjustments to net income:				
Equity in net loss of affiliates	217	130	423	130
Income tax expense (benefit)	6,689	(16,491)	10,145	4,978
Interest expense	53,687	80,908	111,060	167,054
Interest income	(1,160)	(2,303)	(4,154)	(3,628)
Other expense, net	2,977	7,724	17,262	3,066
GAAP – Operating income	130,106	267,614	247,698	281,080
Operating margin - as a % of net sales	16.0 %	29.7 %	15.6 %	15.4 %
Goodwill impairment [1]	—	—	—	88,872
Deal and transaction costs [2]	—	—	—	3,001
Integration costs:				
Professional fees [3]	147	13,324	2,287	25,312
Severance costs [4]	577	965	655	2,327
Retention costs [5]	—	362	—	1,642
Other costs [6]	—	3,789	—	6,134
Restructuring costs [7]	—	—	—	11,242
Loss (gain) on sale of businesses and held-for-sale assets, net[8]	537	14,937	(4,311)	28,579
Gain on termination of alliance agreement [9]	—	(154,754)	—	(154,754)
Impairment of long-lived assets [10]	—	—	12,967	—
Amortization of intangible assets [11]	47,513	54,680	97,672	112,254
Adjusted Operating Income	178,880	200,917	356,968	405,689
Adjusted operating margin - as a % of net sales	22.0 %	22.3 %	22.5 %	22.2 %
Depreciation	47,407	43,719	92,750	90,494
Adjusted EBITDA	$ 226,287	$ 244,636	$ 449,718	$ 496,183
Adjusted EBITDA – as a % of net sales	27.8 %	27.2 %	28.4 %	27.2 %

[1] Non-cash impairment charges associated with goodwill.

[2] Deal and transaction costs associated with the CMC Materials acquisition and completed divestitures.

[3] Represents professional and vendor fees recorded in connection with services provided by consultants, accountants, lawyers and other third-party service providers to assist us in integrating CMC Materials into our operations.

[4] Represents severance charges related to the integration of the CMC Materials acquisition.

[5] Represents retention charges related directly to the CMC Materials acquisition and completed divestitures, and are not part of our normal, recurring cash operating expenses.

[6] Represents other employee-related costs and other costs incurred relating to the CMC Materials acquisition and the completed divestitures. These costs arise outside of the ordinary course of our continuing operations.

[7] Restructuring charges resulting from cost saving initiatives.

[8] Loss (gain) from the sale of certain businesses and held-for-sale assets, net.

[9] Gain on termination of the alliance agreement with MacDermid Enthone.

[10] Impairment of long-lived assets.

[11] Non-cash amortization expense associated with intangibles acquired in acquisitions.

Reconciliation of GAAP Net Income and Earnings per Share to Non-GAAP Net Income and EPS

	Three months ended		Six months ended	
(In thousands, except per share data)	June 29, 2024	July 1, 2023	June 29, 2024	July 1, 2023
Net income	$ 67,696	$ 197,646	$ 112,962	$ 109,480
Adjustments to net income:				
Goodwill impairment [1]	—	—	—	88,872
Deal and transaction costs [2]	—	—	—	3,001
Integration costs:				
Professional fees [3]	147	13,324	2,287	25,312
Severance costs [4]	577	965	655	2,327
Retention costs [5]	—	362	—	1,642
Other costs [6]	—	3,789	—	6,134
Restructuring costs [7]	—	—	—	11,242
Loss on extinguishment of debt and modification [8]	796	4,481	12,347	8,361
Loss (gain) on sale of businesses and held-for-sale assets, net [9]	537	14,937	(4,311)	28,579
Gain on termination of alliance agreement [10]	—	(154,754)	—	(154,754)
Infineum termination fee, net [11]	—	—	—	(10,877)
Impairment of long-lived assets [12]	—	—	12,967	—
Amortization of intangible assets [13]	47,513	54,680	97,672	112,254
Tax effect of adjustments to net income and discrete tax items [14]	(10,157)	(35,825)	(23,698)	(34,186)
Non-GAAP Net Income	$ 107,109	$ 99,605	$ 210,881	$ 197,387
Diluted earnings per common share	$ 0.45	$ 1.31	$ 0.74	$ 0.73
Effect of adjustments to net income	0.26	(0.65)	0.65	0.58
Diluted Non-GAAP EPS	$ 0.71	$ 0.66	$ 1.39	$ 1.31
Diluted weighted averages shares outstanding	151,819	150,837	151,769	150,609

[1] Non-cash impairment charges associated with goodwill.

[2] Deal and transaction costs associated with the CMC Materials acquisition and completed divestitures.

[3] Represents professional and vendor fees recorded in connection with services provided by consultants, accountants, lawyers and other third-party service providers to assist us in integrating CMC Materials into our operations.

[4] Represents severance charges related to the integration of the CMC Materials acquisition.

[5] Represents retention charges related directly to the CMC Materials acquisition and completed divestitures, and are not part of our normal, recurring cash operating expenses.

[6] Represents other employee related costs and other costs incurred relating to the CMC Materials acquisition and the completed divestitures. These costs arise outside of the ordinary course of our continuing operations.

[7] Restructuring charges resulting from cost saving initiatives.

[8] Non-recurring loss on extinguishment of debt and modification of our Credit Amendment.

[9] Loss (gain) from the sale of certain businesses and held-for-sale assets, net.

[10] Gain on termination of the alliance agreement with MacDermid Enthone.

[11] Non-recurring gain from Infineum termination fee.

[12] Impairment of long-lived assets.

[13] Non-cash amortization expense associated with intangibles acquired in acquisitions.

[14] The tax effect of pre-tax adjustments to net income was calculated using the applicable marginal tax rate for each respective year.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to financial market risks, including fluctuations in interest rate and foreign currency exchange rates. For information about our exposure to market risks, see Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risk in our 2023 Annual Report on Form 10-K. There have been no material changes to the market risk disclosures contained therein.

Item 4. Controls and Procedures

(a) Evaluation of disclosure controls and procedures.

The Company's management, including the Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, has conducted an evaluation of the effectiveness of the Company's disclosure controls and procedures (as defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, or the Exchange Act) as of June 29, 2024. The term "disclosure controls and procedures" means controls and other procedures that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on management's evaluation (with the participation of the Company's CEO and CFO), as of June 29, 2024, the Company's CEO and CFO have concluded that the disclosure controls and procedures used by the Company were effective to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and is accumulated and communicated to management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

(b) Changes in internal control over financial reporting.

There have been no significant changes in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) identified in connection with the foregoing evaluation of disclosure controls and procedures that occurred during the most recently completed fiscal quarter 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

We are, from time to time, involved in various claims, proceedings and lawsuits relating to our business, employees, intellectual property and other matters arising in the ordinary course of business. The Company believes the final outcome of these matters will not have a material adverse effect on its condensed consolidated financial statements. The Company expenses legal costs as incurred.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report, you should carefully consider the risk factors and other cautionary statements described in Part I, Item 1A. “Risk Factors” in our Annual Report, which could materially affect our business, financial condition or future results. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially and adversely affect our business, financial condition or future results. There have been no material changes in the risk factors described in our Annual Report.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds, and Issuer Purchases of Equity Securities.

Issuer Purchases of Equity Securities

The Company did not repurchase any of its common stock during the quarter ended June 29, 2024 under a board-authorized common stock repurchase plan.

The Company issues common stock awards under its equity incentive plans. In the condensed consolidated financial statements, the Company treats shares of common stock withheld for tax purposes on behalf of its employees in connection with the vesting or exercise of the awards as common stock repurchases because they reduce the number of shares that would have been issued upon vesting or exercise. These withheld shares of common stock are not considered common stock repurchases pursuant to a board-authorized common stock repurchase plan.

Item 5. Other Information

Rule 10b5-1 Trading Plan Arrangements

During the quarter ended June 29, 2024, no director or officer, as defined in Rule 16a-1 under the Exchange Act, adopted, modified or terminated a “Rule 10b5-1 trading arrangement” or a “non-Rule 10b5-1 trading arrangement,” each as defined in Item 408 of Regulation S-K.

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Item 6. Exhibits

EXHIBIT INDEX

A. The Company hereby incorporates by reference as exhibits to this Quarterly Report on Form 10-Q the following documents:

Reg. S-K Item 601(b) Reference	Document Incorporates	Referenced Document on file with t Commission
3.1	Amended and Restated Certificate of Incorporation of Entegris, Inc., as amended	Exhibit 3.1 to Entegris, Inc. Annual Repo Form 10-K for the fiscal year ended Dece 31, 2011
3.2	By-Laws of Entegris, Inc., as amended December 8, 2022	Exhibit 3.1 to Entegris, Inc. Current Repo Form 8-K filed with the Securities and Exchange Commission on December 9, 2

B. The Company hereby files as exhibits to this Quarterly Report on Form 10-Q the following documents:

Reg. S-K Item 601(b) Reference	Exhibit No.	Document Filed Herewith
(31)	31.1	Certification of Chief Executive Officer Pursuant to Exchange Act Rule 13a-14(a).
(31)	31.2	Certification of Chief Financial Officer Pursuant to Exchange Act Rule 13a-14(a).
(32)	32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(101)	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)	101.SCH	XBRL Taxonomy Extension Schema Document
(101)	101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
(101)	101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
(101)	101.LAB	XBRL Taxonomy Extension Label Linkbase Document
(101)	101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
(104)	104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

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.

ENTEGRIS, INC.

Date: July 31, 2024

/s/ Linda LaGorga

Linda LaGorga
Senior Vice President and Chief Financial Officer (on behalf of the registrant and as principal financial officer)

Exhibit 31.1

CERTIFICATIONS

I, Bertrand Loy, certify that:

1. I have reviewed this Report on Form 10-Q of Entegris, Inc.;

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: July 31, 2024

/s/ Bertrand Loy

Bertrand Loy
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Linda LaGorga, certify that:

1. I have reviewed this Report on Form 10-Q of Entegris, Inc.;

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: July 31, 2024

/s/ Linda LaGorga
Linda LaGorga
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION 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 Quarterly Report on Form 10-Q (the “Report”) of Entegris, Inc, a Delaware corporation (the “Company”), for the period ended June 29, 2024 as filed with the Securities and Exchange Commission on the date hereof, Bertrand Loy, President and Chief Executive Officer of the Company, and Linda LaGorga, Chief Financial Officer of the Company, each hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: July 31, 2024

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer

/s/ Linda LaGorga
Linda LaGorga
Chief Financial Officer