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

FORM 10-Q

(Mark One)

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

For the quarterly period ended July 1, 2023

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 31, 2023, there were 150,108,285 shares of the registrant’s common stock outstanding.

ENTEGRIS, INC. AND SUBSIDIARIES
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FOR THE QUARTER ENDED JULY 1, 2023

Cautionary Statements

This Quarterly Report on Form 10-Q 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 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 execute on our business strategies, including with respect to 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 share repurchases, dividends, debt repayments and potential acquisitions; the impact of the acquisitions 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 closing of any announced divestitures and the termination of strategic partnerships, including the timing thereof; trends relating to the fluctuation of currency exchange rates; future capital and other expenditures, including estimates thereof; the Company's expected tax rate; the impact, financial or otherwise, of any organizational changes; the impact of accounting pronouncements; quantitative and qualitative disclosures about market risk; 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 unanticipated difficulties or expenditures relating thereto, the ability to achieve the anticipated synergies and value-creation contemplated by the acquisition of CMC Materials and the diversion of management time on transaction-related matters; 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 consummate pending transactions on a timely basis or at all and the satisfaction of the conditions precedent to consummation of such pending transactions, including the satisfaction of regulatory conditions on the terms expected, at all or in a timely manner; the Company's ability to effectively implement any organizational changes; the Company's ability to protect and enforce intellectual property rights; the ongoing conflict in Ukraine and the global response 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 and 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, 2022, filed on February 23, 2023, 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 share and per share data)	July 1, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 565,878	$ 561,559
Restricted cash	1,139	1,880
Trade accounts and notes receivable, net of allowance for credit losses of $4,384 and $5,443	435,973	535,485
Inventories, net	740,351	812,815
Deferred tax charges and refundable income taxes	55,461	47,618
Assets held-for-sale	1,051,947	246,531
Other current assets	117,799	129,297
Total current assets	2,968,548	2,335,185
Property, plant and equipment, net of accumulated depreciation of $830,906 and $770,093	1,364,760	1,393,337
Other assets:		
Right-of-use assets	81,048	94,940
Goodwill	3,970,247	4,408,331
Intangible assets, net of accumulated amortization of $720,336 and $636,872	1,421,710	1,841,955
Deferred tax assets and other noncurrent tax assets	66,682	28,867
Other	40,029	36,242
Total assets	$ 9,913,024	$ 10,138,857
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt, including current portion of long-term debt	$ —	$ 151,965
Accounts payable	132,157	172,488
Accrued payroll and related benefits	92,994	142,340
Accrued interest payable	24,939	25,571
Liabilities held-for-sale	115,784	10,637
Other accrued liabilities	193,851	160,873
Income taxes payable	86,564	98,057
Total current liabilities	646,289	761,931
Long-term debt, excluding current maturities, net of unamortized discount and debt issuance costs of $121,488 and $140,107	5,492,011	5,632,928
Pension benefit obligations and other liabilities	52,046	54,090
Deferred tax liabilities and other noncurrent tax liabilities	301,068	391,192
Long-term lease liability	69,405	80,716
Equity:		
Preferred stock, par value $.01; 5,000,000 shares authorized; none issued and outstanding as of July 1, 2023 and December 31, 2022	—	—
Common stock, par value $.01; 400,000,000 shares authorized; issued and outstanding shares as of July 1, 2023: 150,308,245 and 150,105,845, respectively; issued and outstanding shares as of December 31, 2022: 149,339,486 and 149,137,086, respectively	1,503	1,493
Treasury stock, at cost: 202,400 shares held as of July 1, 2023 and December 31, 2022	(7,112)	(7,112)
Additional paid-in capital	2,274,572	2,205,325
Retained earnings	1,110,818	1,031,391
Accumulated other comprehensive loss	(27,576)	(13,097)
Total equity	3,352,205	3,218,000
Total liabilities and equity	$ 9,913,024	$ 10,138,857

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 July 1, 2023	Three months ended July 2, 2022	Six months ended July 1, 2023	Six months ended July 2, 2022
Net sales	$ 901,000	$ 692,489	$ 1,823,396	$ 1,342,135
Cost of sales	516,834	382,092	1,037,545	721,918
Gross profit	384,166	310,397	785,851	620,217
Selling, general and administrative expenses	145,596	90,685	315,463	177,793
Engineering, research and development expenses	71,030	49,248	142,936	95,963
Amortization of intangible assets	54,680	12,494	112,254	25,145
Goodwill impairment	—	—	88,872	—
Gain on termination of alliance agreement	(154,754)	—	(154,754)	—
Operating income	267,614	157,970	281,080	321,316
Interest expense	80,908	32,001	167,054	44,877
Interest income	(2,303)	(658)	(3,628)	(670)
Other expense, net	7,724	9,619	3,066	14,521
Income before income tax (benefit) expense	181,285	117,008	114,588	262,588
Income tax (benefit) expense	(16,491)	17,517	4,978	37,392
Equity in net loss of affiliates	130	—	130	—
Net income	$ 197,646	$ 99,491	$ 109,480	$ 225,196
Basic earnings per common share	$ 1.32	$ 0.73	$ 0.73	$ 1.66
Diluted earnings per common share	$ 1.31	$ 0.73	$ 0.73	$ 1.65
Weighted shares outstanding:				
Basic	149,825	135,895	149,626	135,783
Diluted	150,837	136,454	150,609	136,503

See the accompanying notes to condensed consolidated financial statements.

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

	Three months ended		Six months ended	
(In thousands)	**July 1, 2023**	**July 2, 2022**	**July 1, 2023**	**July 2, 2022**
Net income	$ 197,646	$ 99,491	$ 109,480	$ 225,196
Other comprehensive (loss) income, net of tax				
Foreign currency translation adjustments	(38,011)	(9,014)	(14,277)	(11,142)
Pension liability adjustments	—	—	37	73
Interest rate swap - cash flow hedge, change in fair value - income (loss), net of tax expense (benefit) of $2,834 and $(69) for the three and six months ended, respectively.	9,716	—	(239)	—
Other comprehensive (loss) income	(28,295)	(9,014)	(14,479)	(11,069)
Comprehensive income	$ 169,351	$ 90,477	$ 95,001	$ 214,127

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF EQUITY

(Unaudited)

(In thousands)	Common shares outstanding	Common stock	Treasury shares	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, 2021	135,719	$ 1,357	202	$ (7,112)	$ 879,845	$ 879,776	$ (38,863)	$ (1,222)	$ —	$ 1,713,781
Shares issued under stock plans	366	4	—	—	(12,742)	—	—	—	—	(12,738)
Share-based compensation expense	—	—	—	—	9,285	—	—	—	—	9,285
Dividends declared ($0.10 per share)	—	—	—	—	—	(13,660)	—	—	—	(13,660)
Pension liability adjustment	—	—	—	—	—	—	—	73	—	73
Foreign currency translation	—	—	—	—	—	—	(2,128)	—	—	(2,128)
Net income	—	—	—	—	—	125,705	—	—	—	125,705
Balance at April 2, 2022	136,085	1,361	202	(7,112)	876,388	991,821	(40,991)	(1,149)	—	1,820,318
Shares issued under stock plans	88	1		—	5,397	—	—	—	—	5,398
Share-based compensation expense	—	—	—	—	10,182	—	—	—	—	10,182
Dividends declared ($0.10 per share)	—	—	—	—	—	(13,661)	—	—	—	(13,661)
Foreign currency translation	—	—	—	—	—	—	(9,014)	—	—	(9,014)
Net income	—	—	—	—	—	99,491	—	—	—	99,491
Balance at July 2, 2022	136,173	$ 1,362	202	$ (7,112)	$ 891,967	$ 1,077,651	$ (50,005)	$ (1,149)	—	$ 1,912,714

(In thousands)	Common shares outstanding	Common stock	Treasury shares	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	$ 1,493	202	$ (7,112)	$ 2,205,325	$ 1,031,391	$ (49,083)	$ (83)	$ 36,069	$ 3,218,000
Shares issued under stock plans	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	1,499	202	(7,112)	2,244,984	928,133	(25,349)	(46)	26,114	3,168,223
Shares issued under stock plans	439	4	—	—	18,130	—	—	—	—	18,134
Share-based compensation expense	—	—	—	—	11,458	—	—	—	—	11,458
Dividends declared ($0.10 per 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	$ 1,503	202	$ (7,112)	$ 2,274,572	$ 1,110,818	$ (63,360)	$ (46)	$ 35,830	$ 3,352,205

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 July 1, 2023	Six months ended July 2, 2022
Operating activities:		
Net income	$ 109,480	$ 225,196
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	90,494	48,286
Amortization	112,254	25,145
Share-based compensation expense	42,136	19,467
Provision for deferred income taxes	(66,814)	(23,472)
Impairment of goodwill	88,872	—
Loss on extinguishment of debt	7,269	—
Loss from sale of business and held-for-sale	28,577	—
Gain on termination of alliance agreement	(154,754)	—
Charge for excess and obsolete inventory	23,287	13,916
Other	26,239	18,243
Changes in operating assets and liabilities:		
Trade accounts and notes receivable	17,941	(57,309)
Inventories	(5,009)	(124,941)
Accounts payable and accrued liabilities	(23,595)	27,145
Other current assets	(1,534)	(2,592)
Income taxes payable and refundable income taxes	(15,570)	(3,548)
Other	(384)	9,162
Net cash provided by operating activities	278,889	174,698
Investing activities:		
Acquisition of property, plant and equipment	(250,043)	(192,097)
Proceeds from sale of business	134,286	—
Proceeds from termination of alliance agreement	169,251	—
Other	366	1,123
Net cash provided by (used in) investing activities	53,860	(190,974)
Financing activities:		
Proceeds from revolving credit facility and short-term debt	—	201,000
Payments of revolving credit facility and short-term debt	(135,000)	(193,000)
Proceeds from long-term debt	117,170	2,405,314
Payments of long-term debt	(293,671)	—
Payments for debt issuance costs	(3,475)	(10,579)
Payments for dividends	(30,150)	(27,484)
Issuance of common stock	36,767	8,977
Taxes paid related to net share settlement of equity awards	(9,646)	(16,317)
Other	(578)	(587)
Net cash (used in) provided by financing activities	(318,583)	2,367,324
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(10,588)	(10,382)
Increase in cash, cash equivalents and restricted cash	3,578	2,340,666
Cash, cash equivalents and restricted cash at beginning of period	563,439	402,565
Cash, cash equivalents and restricted cash at end of period	$ 567,017	$ 2,743,231

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 (unaudited) *(In thousands)*	Six months ended July 1, 2023	Six months ended July 2, 2022
Non-cash transactions:		
Original issue discount credit due from lender	$ —	$ 65,389
Equipment purchases in accounts payable	22,607	23,394
Dividend payable	557	495
Schedule of interest and income taxes paid:		
Interest paid less capitalized interest	260,282	15,699
Income taxes paid, net of refunds received	85,913	62,168

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 financial position as of July 1, 2023 and December 31, 2022, and the results of operations and comprehensive income for the three and six months ended July 1, 2023 and July 2, 2022, the equity statements as of and for the three and six months ended July 1, 2023 and July 2, 2022, and cash flows for the six months ended July 1, 2023 and July 2, 2022.

Our recently acquired subsidiary, CMC Materials LLC (formerly known as CMC Materials, Inc.) (“CMC Materials”), follows a monthly reporting calendar. The second quarter of 2023 for CMC Materials ended on June 30, 2023, whereas the Company’s second quarter ended on July 1, 2023. The Company believes that use of the different fiscal periods for this entity has not had a material impact on the Company’s condensed consolidated financial position, results of operations, or liquidity. All significant intercompany balances and transactions have been eliminated in consolidation.

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 on Form 10-Q 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, 2022. The results of operations for the three and six months ended July 1, 2023 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 The Company currently has no material recent accounting pronouncements yet to be adopted.

2. REVENUES

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

(In thousands)	July 1, 2023	July 2, 2022
Balance at beginning of period	$ 60,476	$ 23,050
Revenue recognized that was included in the contract liability balance at the beginning of the period	(43,905)	(15,585)
Increases due to cash received, excluding amounts recognized as revenue during the period	79,621	25,770
Contract liabilities included as part of disposition	(6,226)	—
Balance at end of period	$ 89,966	$ 33,235

3. GOODWILL IMPAIRMENT

During the first quarter of 2023, while the criteria had not been met to classify the reporting unit as held for sale, the Company was exploring market interest in a potential sale of the Electronic Chemicals (“EC”) reporting unit within the Advanced Planarization Solutions 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 ending April 1, 2023.

Long-lived assets, including finite-lived intangible assets
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 are expected to exceed the carrying value on a held and used basis, therefore no impairment was recorded on the long-lived asset 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 did not consider a modification to the useful life 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 first quarter of 2023. The impairment is classified as goodwill impairment in the Company's condensed consolidated statement of operations. The goodwill impairment is 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.

During the second quarter of 2023, the EC reporting unit met the classification for held for sale, see Note 5. There was no goodwill impairment related to the EC reporting unit in the second quarter of 2023.

4. ACQUISITION

CMC Materials

On July 6, 2022 (the “Closing Date”), the Company completed its acquisition of CMC Materials for approximately $6.0 billion in cash and stock (the “Acquisition”) pursuant to an Agreement and Plan of Merger dated as of December 14, 2021 (the “Acquisition Agreement”). As a result of the Acquisition, CMC Materials became a wholly owned subsidiary of the Company. The Acquisition was accounted for under the acquisition method of accounting and the results of operations of CMC Materials are included in the Company's condensed consolidated financial statements as of and since July 6, 2022. CMC Materials reports into the Advanced Planarization Solutions and Specialty Chemicals and Engineered Materials segments of the Company. Direct costs of $39.5 million associated with the acquisition of CMC Materials, consisting primarily of professional and consulting fees, were expensed as incurred in fiscal year 2022. These costs are classified as selling, general and administrative expense in the Company's condensed consolidated statement of operations.

CMC Materials is a global supplier of consumable materials, primarily to semiconductor manufacturers. The Company's products play a critical role in the production of advanced semiconductor devices, helping to enable the manufacture of smaller, faster and more complex devices by its customers. The acquisition broadened the Company’s solutions set and enables the Company to bring to market a broader array of innovative and high-value solutions, at a faster pace, to help customers improve productivity, performance and total cost of ownership.

The purchase price of CMC Materials consisted of the following:

(In thousands):		
Cash paid to CMC Materials' shareholders	$	3,836,983
Stock paid to CMC Materials' shareholders		1,265,690
Repayment of CMC Materials' indebtedness		918,578
Total purchase price		6,021,251
Less cash and cash equivalents acquired		280,636
Total purchase price, net of cash acquired	$	5,740,615

Under the terms of the Acquisition Agreement, the Company paid $133.00 per share for all outstanding shares of CMC Materials (excluding treasury shares). In addition, the Company settled all outstanding share-based compensation awards held by CMC Materials' employees at the same per share price except for certain unvested performance units that were replaced by the Company's restricted share units. The acquisition method of accounting requires the Company to include the amount associated with pre-combination service as purchase price for the acquisition, reflected in the table immediately above.

The Acquisition was funded with existing cash balances as well as funds raised by the Company through the issuance of debt in the form of a new term loan facility in the aggregate principal amount of $2,495.0 million, senior secured notes due 2029 in an aggregate principal amount of $1,600.0 million, senior unsecured notes due 2030 in an aggregate principal amount of $895.0 million, and a 364-Day Bridge Credit Facility in the aggregate principal amount of $275.0 million.

The following table summarizes the allocation of the purchase price to the fair values assigned to the assets acquired and liabilities assumed at the date of the Acquisition:

(In thousands):		July 6, 2022
Cash and cash equivalents	$	280,636
Accounts receivable and other current assets		207,472
Inventory		256,598
Property, plant and equipment		537,387
Identifiable intangible assets		1,736,219
Other noncurrent assets		39,725
Current liabilities		(211,417)
Deferred tax liabilities and other noncurrent liabilities		(452,805)
Net assets acquired		2,393,815
Goodwill		3,627,436
Total purchase price	$	6,021,251

The final valuation of assets acquired and liabilities assumed in connection with the Acquisition was completed in the second quarter of 2023.

The fair value of acquired inventories was $256.6 million and was valued at the estimated selling price less the cost of disposal and reasonable profit for the selling effort. The fair value write-up of acquired finished goods inventory was $61.9 million. This amount was recorded as an incremental cost of sales charge, amortized over the expected turn of the acquired inventory, during the year ended December 31, 2022.

The fair value of acquired property, plant and equipment of $537.4 million is valued at its fair value assuming held and used, unless market data was available supporting the fair value.

The Company recognized the following intangible assets as part of the acquisition of CMC Materials and finite-lived assets are amortized on a straight-line basis:

(In thousands)	Amount	Weighted average life in years
Developed technology	$ 1,043,000	7.3
Trademarks and trade names	236,600	14.9
Customer relationships	414,300	18.3
In-process research and development [(1)]	31,400	
Other	10,919	1.0
	$ 1,736,219	11.0

(1) In-process research and development assets are treated as indefinite-lived until the completion or abandonment of the associated research and development project, at which time the appropriate useful lives would be determined.

The fair value of acquired identifiable finite intangible assets was determined using an income method, which utilizes discounted cash flows to identify the fair value of each of the identifiable intangible assets. The Company normally utilizes the “income method,” which starts with a forecast of all of the expected future net cash flows attributable to the subject intangible asset. These cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams. Depending on the asset valued, the key assumptions included one or more of the following: (1) future revenue growth rates, (2) future gross margin, (3) future selling, general and administrative expenses, (4) royalty rates, and (5) discount rates. The valuations were based on the information that was available as of the acquisition date and the expectations and assumptions that have been deemed reasonable by the Company’s management. There are inherent uncertainties and management judgment required in these determinations. The fair value measurements of the assets acquired and liabilities assumed were based on valuations involving significant unobservable inputs, or Level 3 in the fair value hierarchy.

The purchase price of CMC Materials exceeded the fair value of the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed by $3,627.4 million. Cash flows used to determine the purchase price included strategic and synergistic benefits (investment value) specific to the Company, which resulted in a purchase price in excess of the fair value of identifiable net assets. The purchase price also included the fair values of other assets that were not identifiable, not separately recognizable under accounting rules (e.g., assembled workforce) or of immaterial value in addition to a going-concern element that represents the Company's ability to earn a higher rate of return on the group of assets than would be expected on the separate assets as determined during the valuation process. This additional investment value resulted in goodwill. No amount of goodwill is expected to be deductible for tax purposes.

Pro Forma Results (Unaudited)

The following unaudited pro forma financial information presents the combined results of operations of the Company as if the acquisition of CMC Materials had occurred January 1, 2021. The unaudited pro forma financial information is not necessarily indicative of what the Company’s condensed consolidated results of operations actually would have been had the acquisition occurred at the beginning of each year. In addition, the unaudited pro forma financial information does not attempt to project the future results of operations of the combined company. The pro forma information does not include any potential revenue enhancements, cost synergies or other operating efficiencies that could result from the acquisition.

(In thousands, except share data)	Three months ended July 2, 2022	Six months ended July 2, 2022
Net sales	$ 1,011,862	$ 1,980,953
Net income	70,417	170,681
Per share amounts:		
Net income per common share - basic	$ 0.47	$ 1.15
Net income per common share - diluted	$ 0.47	$ 1.13

The unaudited pro forma financial information above gives effect to the following:

- The elimination of transactions between Entegris and CMC Materials, which upon completion of the Acquisition would be considered intercompany. This reflects the elimination of intercompany sales and associated intercompany accounts.
- Incremental amortization and depreciation expense related to the estimated fair value of identifiable intangible assets and property, plant and equipment from the purchase price allocation.
- Interest expense on the new debt raised to fund in part the consideration paid to effect the Acquisition using the effective interest rates.
- The elimination of interest expense associated with the repayment of the $145.0 million senior secured term loan facility due 2025.
- The amortization of deferred financing costs and original issue discount associated with the aggregate new debt facilities.
- Transaction and integration costs directly attributable to the Acquisition were reclassed as of the beginning of the comparable prior annual reporting period.
- The income tax effect of the transaction accounting adjustments related to the Acquisition calculated using a blended statutory income tax rate of 22.5%.
-

5. ASSET HELD-FOR-SALE AND DIVESTITURE

Asset Held-For-Sale - PIM

On October 11, 2022, the Company announced entry into a definitive agreement to sell its Pipeline and Industrials Materials ("PIM") business, which became part of the Company with the acquisition of CMC Materials, to Infineum USA L.P. ("Infineum"). The PIM business specializes in the manufacture and sale of drag reducing agents and a range of valve maintenance products and services, and reports into the Specialty Chemicals and Engineered Materials segment of the Company. Effective February 10, 2023, the Company terminated the definitive agreement. In accordance with the terms of the agreement, the Company received a $12.0 million termination fee from Infineum in the first quarter of 2023 and incurred a transaction adviser fee of $1.1 million. The net amount of $10.9 million is recorded in Other expense, net in the condensed consolidated statement of operations. At the time of the termination, the transaction had not received clearance under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (the "HSR Act").

During the fourth quarter of 2022, the related assets and liabilities were classified as held-for-sale in the Company's consolidated balance sheet and measured at the lower of their carrying amount or fair value less cost to sell. The assets and liabilities continue to be classified as held-for-sale at July 1, 2023.

The planned 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.

PIM Assets-held-for sale comprise the following as of July 1, 2023:

(In thousands)

Assets:		July 1, 2023
Current assets	$	51,612
Property, Plant and Equipment, net		110,944
Intangible assets, net		76,692
Goodwill		12,707
Other assets		1,352
Total assets-held-for sale	$	253,307
Liabilities:		
Accounts payable	$	6,628
Accrued expenses		6,584
Long-term liabilities		1,235
Total liabilities-held-for sale	$	14,447

Income before income taxes attributable to the PIM business was $12.7 million and $21.3 million for the three and six months ended July 1, 2023, respectively.

Asset held-for-sale - EC Business

On May 10, 2023, the Company announced entry into a definitive agreement to sell its Electronic Chemicals (“EC”) business, which became part of the Company with the acquisition of CMC Materials, to FUJIFILMS Holdings America Corporation for $700.0 million, subject to customary adjustments with respect to cash, working capital, indebtedness and transaction expenses. The EC business specializes in purification, formulation, blending, packaging and distribution of high-purity process chemicals used within the semiconductor and microelectronic manufacturing processes. The divestiture is currently expected to close before the end of 2023, subject to receipt of required regulatory approvals and other customary closing conditions. The EC business reports into the Advanced Planarization Solutions segment of the Company. The Company recognized a loss on the assets held-for-sale of $13.6 million on the sale for the EC business for the three and six months ended July 1, 2023. The loss is included in Selling, general and administrative expenses in the condensed consolidated statement of operations.

The planned disposition of the EC 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.

EC Assets-held-for sale comprise the following as of July 1, 2023:

(In thousands)

	July 1, 2023
Assets:	
Current assets	$ 106,063
Property, Plant and Equipment, net	170,180
Intangible assets, net	263,686
Goodwill	250,775
Other assets	7,936
Total assets-held-for sale	$ 798,640
Liabilities:	
Accounts payable	$ 16,706
Accrued expenses	14,449
Long-term liabilities	70,182
Total liabilities-held-for sale	$ 101,337

Loss before income taxes attributable to the EC business was $3.1 million and $86.6 million for the three and six months ended July 1, 2023. The loss before income taxes attributed to the EC business for the three and six months ended July 1, 2023 included the $13.6 million loss on held for sale as noted above and the six months ended included the $88.9 million goodwill impairment, see Note 5.

Divestiture - QED

During the first quarter of 2023, the Company announced entry into a definitive agreement to sell QED Technologies International, Inc. (“QED”), which offers magnetorheological finishing polishing and subaperture stitching interferometry metrology manufacturing solutions. to Quad-C Management, Inc. QED was a part of the Specialty Chemicals and Engineered Materials segment and became part of the Company with the acquisition of CMC Materials.

The Company completed the divestiture of QED on March 1, 2023 and received proceeds of $134.3 million after adjustments with respect to cash, working capital, indebtedness and transaction expenses. The disposition of QED 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 a major effect on the Company’s operations and financial results. The following table summarizes the fair value of the sale proceeds received in connection with the divestiture, which are subject to further post-closing adjustment:

(In thousands)		March 1, 2023
Fair value of sale consideration	$	137,500
Final working capital adjustment		1,031
Cash transferred to the buyer on the closing balance sheet		(1,465)
Direct costs to sell		(2,780)
Fair value of sale consideration	$	134,286

The carrying amount of net assets associated with the QED business was approximately $149.2 million. The major classes of assets and liabilities sold consisted of the following:

(In thousands)		March 1, 2023
Assets:		
Current assets	$	19,219
Property, plant and equipment, net		2,663
Goodwill		90,005
Intangible assets, net		48,661
Other assets		842
Total assets	$	161,390
Liabilities:		
Accounts payable	$	1,340
Accrued expenses		8,750
Long-term liabilities		2,067
Total liabilities	$	12,157

As a result of the QED divestiture, the Company recognized a pre-tax loss of $1.3 million and $14.9 million presented in selling, general and administrative expenses on the condensed consolidated statements of operations for the three and six months ended July 1, 2023, respectively. The Company recorded an income tax benefit associated with the QED divestiture of approximately $6.8 million.

Termination - Alliance Agreement

On June 5, 2023, the Company announced the termination of an Alliance Agreement (the “Alliance Agreement”) between the Company and MacDermid Enthone Inc., a global business unit of Element Solutions Inc (“MacDermid Enthone”). Under the Alliance Agreement, Entegris had been granted the exclusive right to distribute MacDermid Enthone's Viaform products, subject to certain conditions. In connection with the termination of the Alliance Agreement, Entegris will receive a payment of $200.0 million, subject to certain adjustments, with $170.0 million that was paid on June 2, 2023 upon the termination of the alliance agreement and $30.0 million payable upon completion of customer transitions. The Company recognized a pre-tax gain of $154.8 million presented in gain on termination of alliance agreement on the condensed consolidated statements of operations for the three and six months ended July 1, 2023.

6. RESTRICTED CASH

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheet that sum to the total of the same amounts shown in the condensed consolidated statement of cash flows.

(In thousands)	July 1, 2023	December 31, 2022
Cash and cash equivalents	$ 565,878	$ 561,559
Restricted cash	1,139	1,880
Total cash, cash equivalents and restricted cash	$ 567,017	$ 563,439

The restricted cash represents cash held in a “Rabbi” trust. Prior to the acquisition of CMC Materials, CMC Materials’ change in control severance protection agreements required CMC Materials to establish a Rabbi trust prior to a change in control and fully fund the trust to cover all the severance benefits that may become payable under the agreements.

7. INVENTORIES

Inventories consist of the following:

(In thousands)	July 1, 2023	December 31, 2022
Raw materials	$ 315,616	$ 337,576
Work-in-process	55,978	60,182
Finished goods [(1)]	368,757	415,057
Total inventories, net	$ 740,351	$ 812,815

[(1)] Includes consignment inventories held by customers of $23.9 million and $46.2 million at July 1, 2023 and December 31, 2022, respectively.

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill activity for each of the Company’s reportable segments that carry goodwill, Specialty Chemicals and Engineered Materials (“SCEM”), Advanced Planarization Solutions (“APS”), Microcontamination Control (“MC”), and Advanced Materials Handling (“AMH”), and was as follows at December 31, 2022 and July 1 2023:

(In thousands)	SCEM	APS	MC	AMH	Total
December 31, 2022	$ 561,328	$ 3,530,813	$ 242,088	$ 74,102	$ 4,408,331
Goodwill impairment	—	(88,872)	—	—	(88,872)
Disposition of business	(90,005)	—	—	—	(90,005)
Purchase accounting adjustments	3,409	(4,430)	—	—	(1,021)
Assets held-for-sale	(3,885)	(250,775)	—	—	(254,660)
Foreign currency translation	(33)	—	(3,493)	—	(3,526)
July 1, 2023	$ 470,814	$ 3,186,736	$ 238,595	$ 74,102	$ 3,970,247

The changes in our goodwill balance of $438.1 million reflect (1) the goodwill impairment of our EC reporting unit of $88.9 million, as described in Note 3, (2) the sale of the QED business and related goodwill of that business of $90.0 million, see Note 5, (3) purchase accounting adjustments of $1.0 million, (4) goodwill reclassified to asset held-for-sale of $254.7 million as described in Note 5 and (5) foreign currency translation of $3.5 million.

Identifiable intangible assets at July 1, 2023 and December 31, 2022 consist of the following:

July 1, 2023			
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 1,262,685	$ 384,845	$ 877,840
Trademarks and trade names	172,272	32,610	139,662
Customer relationships	673,765	282,644	391,121
In-process research and development [1]	9,400	—	9,400
Other	23,924	20,237	3,687
	$ 2,142,046	$ 720,336	$ 1,421,710

December 31, 2022			
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 1,302,101	$ 313,876	$ 988,225
Trademarks and trade names	250,473	29,565	220,908
Customer relationships	863,947	273,039	590,908
In-process research and development [1]	31,100	—	31,100
Other	31,206	20,392	10,814
	$ 2,478,827	$ 636,872	$ 1,841,955

[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 July 1, 2023:

(In thousands)	Remaining 2023	2024	2025	2026	2027	Thereafter	Total
Future amortization expense	$ 102,710	194,774	188,318	185,381	181,694	568,833	$ 1,421,710

9. DEBT

The Company’s debt as of July 1, 2023 and December 31, 2022 consists of the following:

(In thousands)	July 1, 2023	December 31, 2022
Senior secured term loan facility due 2029	2,318,499	2,495,000
Senior secured notes due 2029	1,600,000	1,600,000
Senior unsecured notes due 2030	895,000	895,000
Senior unsecured notes due 2029	400,000	400,000
Senior unsecured notes due 2028	400,000	400,000
Bridge credit facility due 2023	—	135,000
Revolving facility due 2027	—	—
Total debt (par value)	5,613,499	5,925,000
Unamortized discount and debt issuance costs	121,488	140,107
Total debt, net	$ 5,492,011	$ 5,784,893
Less short-term debt, including current portion of long-term debt	—	151,965
Total long-term debt, net	$ 5,492,011	$ 5,632,928

Annual maturities of long-term debt, excluding unamortized discount and debt issuance costs, due as of July 1, 2023 are as follows:

(In thousands)	Remaining 2023	2024	2025	2026	2027	Thereafter	Total
Contractual debt obligation maturities(1)	$ —	—	—	—	—	5,613,499	$ 5,613,499

(1) Subject to Excess Cash Flow payments to the lenders.

On March 10, 2023, the Company and certain of its subsidiaries entered into Amendment No. 1 (the “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 further amended, restated, amended and restated, supplemented, modified and otherwise in effect prior to the effectiveness of the Amendment, the “Existing Credit Agreement” and, the Existing Credit Agreement as amended by the 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 Amendment provides for, among other things, the refinancing of the Company’s outstanding term B loans under the Existing Credit Agreement in an aggregate principal amount of $2.495 billion (the “Original Tranche B Term Loans”) with a new tranche of term B loans under the Amended Credit Agreement in an aggregate principal amount of $2.495 billion (the “New Tranche B Term Loans”). The New Tranche B Term Loans will bear interest under the Amended Credit Agreement at a rate per annum equal to, at the Company’s option, either (i) Term SOFR plus an applicable margin of 2.75% or (ii) a base rate plus an applicable margin of 1.75%. Consistent with the Original Tranche B Term Loans, the new Tranche B Term Loans will mature on July 6, 2029. Other than as described herein (and more fully described in the Amendment), the terms of the Amended Credit Agreement are substantially similar to the terms of the Existing Credit Agreement. Additionally, as of July 1, 2023, during the fiscal year 2023, the Company has repaid $176.5 million of the outstanding borrowings under the New Tranche B Term Loans. In connection with this repayment and entry into the Amendment, the Company incurred a pre-tax loss on extinguishment and modification of debt of $3.8 million and $7.6 million for the three and six months ended July 1, 2023, which is included in Other expense, net on the condensed consolidated statements of operations.

On April 20, 2023, the Company repaid the principal amount of the $135.0 million bridge credit facility. In connection with the repayment of this debt, the Company incurred a pre-tax loss on extinguishment of debt of $0.7 million for the three and six months ended July 1, 2023, which is included in Other expense, net on the condensed consolidated statements of operations.

10. 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. The restricted cash represents cash held in a "Rabbi" trust, further described in Note 6.

Level 2 Derivative financial instruments include an interest rate swap contract and foreign exchange contracts. 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 and/or the Overnight Index Swap curve for forward foreign exchange contracts, among others.

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 9 of this Report on Form 10-Q 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:	July 1, 2023	December 31, 2022	July 1, 2023	December 31, 2022	July 1, 2023	December 31, 2022	July 1, 2023	December 31, 2022
Cash and cash equivalents	$ 565,878	$ 561,559	$ —	$ —	$ —	$ —	$ 565,878	$ 561,559
Restricted cash	1,139	1,880	—	—	—	—	1,139	1,880
Derivative financial instruments - Interest rate swap - cash flow hedge	—	—	46,281	46,589	—	—	46,281	46,589
Derivative financial instruments - Forward exchange contracts	—	—	—	726	—	—	—	726
Total Assets	$ 567,017	$ 563,439	$ 46,281	$ 47,315	$ —	$ —	$ 613,298	$ 610,754
Liabilities:								
Derivative financial instruments - Forward exchange contracts	$ —	$ —	$ —	$ 193	$ —	$ —	$ —	$ 193
Total Liabilities	$ —	$ —	$ —	$ 193	$ —	$ —	$ —	$ 193

Other Fair Value Disclosures

The estimated fair value and carrying value of our debt as of July 1, 2023 and December 31, 2022 were as follows:

	July 1, 2023		December 31, 2022	
(In thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
Total debt, net	$ 5,492,011	$ 5,223,304	$ 5,784,893	$ 5,428,900

11. 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 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 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 income (loss) 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.

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 statement of operations.

The notional amounts of our derivative instruments are as follows:

(In thousands)	July 1, 2023	December 31, 2022
Derivatives designated as hedging instruments:		
Interest rate swap contract - cash flow hedge	$ 1,650,000	$ 1,950,000
Derivatives not designated as hedging instruments:		
Foreign exchange contracts to purchase U.S. dollars	$ —	$ 3,995
Foreign exchange contracts to sell U.S. dollars	—	26,225

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

(In thousands)	Derivative Assets		Derivative Liabilities	
Condensed Consolidated Balance Sheet Location	July 1, 2023	December 31, 2022	July 1, 2023	December 31, 2022
Derivatives designated as hedging instruments - Interest rate swap contract -cash flow hedge				
Other current assets	$ 34,382	$ 32,481	$ —	$ —
Other assets - long-term	11,899	14,108	—	—
Derivatives not designated as hedging instruments -Foreign exchange contracts				
Other current assets	$ —	726	$ —	$ —
Other accrued liabilities	—	—	—	193

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

		Gain Recognized in Condensed Consolidated Statements of Income			
(In thousands)	Condensed Consolidated Statements of Operations Location	Three months ended		Six months ended	
Derivatives designated as hedging instruments:		July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Interest rate swap contract-cash flow hedge	Interest expense, net	$ (9,638)	$ —	$ (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 Income:

(In thousands)	Gain (Loss) recognized in Other Comprehensive Income (Loss)			
	Three months ended		Six months ended	
Derivatives designated as hedging instruments:	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Interest rate swap contract - Cash flow hedge	$ 9,716	$ —	$ (239)	$ —

We expect approximately $34.4 million to be reclassified from accumulated other comprehensive income 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 July 1, 2023.

12. 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.

The Company recorded income tax (benefit) expense of $(16.5) million and $5.0 million for the three and six months ended July 1, 2023, respectively, compared to income tax expense of $17.5 million and $37.4 million for the three and six months ended July 2, 2022, respectively. The Company's effective income tax rate was (9.1)% and 4.3% for the three and six months ended July 1, 2023, respectively, compared to 15.0% and 14.2% for the three and six months ended July 2, 2022, respectively.

The changes in our effective tax rate for the three and six months ended July 1, 2023 compared to the prior year are primarily driven by changes to income mix post-acquisition of CMC, and a discrete net benefit of $4.4 million related to incremental expense on completed divestitures offset by a tax benefit on the classification of assets as held-for-sale in the three and six month periods ended July 1, 2023.

13. 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 earnings per common share 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 earnings per common share:

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Basic—weighted common shares outstanding	149,825	135,895	149,626	135,783
Weighted common shares assumed upon exercise of stock options and vesting of restricted common stock	1,012	559	983	720
Diluted—weighted common shares and common shares equivalent outstanding	150,837	136,454	150,609	136,503

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 July 1, 2023 and July 2, 2022:

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Shares excluded from calculations of diluted EPS	580	595	791	519

14. OTHER EXPENSE, NET

Other expense, net for the three and six months ended July 1, 2023 and July 2, 2022 consists of the following:

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Infineum termination fee, net	$ —	$ —	$ (10,876)	$ —
Loss on foreign currency transactions	3,885	10,046	$ 6,286	$ 14,623
Loss on extinguishment of debt and modification	4,481	—	8,361	—
Other, net	(642)	(427)	(705)	(102)
Other expense, net	$ 7,724	$ 9,619	$ 3,066	$ 14,521

Infineum termination fee, net

On October 11, 2022, the Company and 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.

15. SEGMENT REPORTING

The Company's financial segment reporting reflects an organizational alignment intended to leverage the Company's unique breadth of capabilities to create mission-critical specialty chemicals, chemical mechanical planarization solutions, microcontamination control products, specialty chemicals and advanced materials handling solutions that maximize manufacturing yields, reduce manufacturing costs and enable higher device performance for its customers. While these segments have separate products and technical know-how, they share common business systems and processes, technology centers, and strategic and technology roadmaps. The Company leverages its expertise from these four segments to create new and increasingly integrated solutions for its customers. The Company reports its financial performance in the following segments:

- **Specialty Chemicals and Engineered Materials:** SCEM provides high-performance and high-purity process chemistries, gases and materials, and safe and efficient materials delivery systems to support semiconductor and other advanced manufacturing processes.
- **Advanced Planarization Solutions:** APS provides complementary chemical mechanical planarization solutions, advanced materials and high-purity wet chemicals; including CMP slurries, pads, formulated cleans and other electronic chemicals.
- **Microcontamination Control:** MC offers solutions to filter and purify critical liquid and gaseous chemistries used in semiconductor manufacturing processes and other high-technology industries.
- **Advanced Materials Handling:** AMH develops solutions to monitor, protect, transport and deliver critical liquid chemistries, wafers and other substrates for a broad set of applications in the semiconductor industry, life sciences and other high-technology industries.

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

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Net sales				
SCEM	$ 200,073	$ 179,412	$ 398,077	$ 345,188
APS	240,561	28,317	490,887	58,962
MC	283,614	274,133	552,911	540,770
AMH	190,356	224,084	409,209	422,197
Inter-segment elimination	(13,604)	(13,457)	(27,688)	(24,982)
Total net sales	$ 901,000	$ 692,489	$ 1,823,396	$ 1,342,135

(In thousands)	Three months ended July 1, 2023	Three months ended July 2, 2022	Six months ended July 1, 2023	Six months ended July 2, 2022
Segment profit				
SCEM [1]	$ 173,319	$ 35,539	$ 176,587	$ 73,231
APS [2]	42,419	10,179	9,629	21,338
MC	100,661	100,107	196,658	198,725
AMH	35,830	46,926	83,995	93,616
Total segment profit	$ 352,229	$ 192,751	$ 466,869	$ 386,910

1) SCEM segment profit is inclusive of a $154.8 million gain, net on termination of alliance agreement for three and six months ended July 1, 2023. See Note 5 to the Company's condensed consolidated financial statements for further discussion.

2)APS segment loss is inclusive of a $88.9 million goodwill impairment charge for the six months ended July 1, 2023. See Note 3 to the Company's condensed consolidated financial statements for further discussion.

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

(In thousands)	Three months ended July 1, 2023	Three months ended July 2, 2022	Six months ended July 1, 2023	Six months ended July 2, 2022
Total segment profit	$ 352,229	$ 192,751	$ 466,869	$ 386,910
Less:				
Amortization of intangible assets	54,680	12,494	112,254	25,145
Unallocated general and administrative expenses	29,935	22,287	73,535	40,449
Operating income	267,614	157,970	281,080	321,316
Interest expense	80,908	32,001	167,054	44,877
Interest income	(2,303)	(658)	(3,628)	(670)
Other expense, net	7,724	9,619	3,066	14,521
Income before income tax (benefit) expense	$ 181,285	$ 117,008	$ 114,588	$ 262,588

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 July 1, 2023 and July 2, 2022, respectively.

	Three months ended July 1, 2023					
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 83,249	$ 57,632	$ 45,947	$ 56,275	$ (13,604)	$ 229,499
Taiwan	23,947	33,179	53,987	28,780	—	139,893
China	17,697	33,006	54,701	35,213	—	140,617
South Korea	21,037	34,848	29,824	27,184	—	112,893
Japan	16,987	8,727	57,789	11,768	—	95,271
Europe	23,738	42,067	24,647	21,902	—	112,354
Southeast Asia	13,418	31,102	16,719	9,234	—	70,473
	$ 200,073	$ 240,561	$ 283,614	$ 190,356	$ (13,604)	$ 901,000

	Three months ended July 2, 2022					
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 55,024	$ 5,742	$ 35,913	$ 73,279	$ (13,457)	$ 156,501
Taiwan	28,314	5,494	84,132	39,292	—	157,232
China	28,450	4,365	43,720	31,802	—	108,337
South Korea	18,456	6,333	29,443	30,019	—	84,251
Japan	20,582	813	46,939	15,501	—	83,835
Europe	13,376	2,045	21,319	25,329	—	62,069
Southeast Asia	15,210	3,525	12,667	8,862	—	40,264
	$ 179,412	$ 28,317	$ 274,133	$ 224,084	$ (13,457)	$ 692,489

	Six months ended July 1, 2023					
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 164,568	$ 123,642	$ 87,713	$ 131,873	$ (27,688)	$ 480,108
Taiwan	47,982	67,338	108,222	65,442	—	288,984
China	34,044	64,619	110,372	67,013	—	276,048
South Korea	41,682	70,574	59,653	61,640	—	233,549
Japan	37,264	17,806	107,542	23,084	—	185,696
Europe	46,894	82,338	51,651	43,886	—	224,769
Southeast Asia	25,643	64,570	27,758	16,271	—	134,242
	$ 398,077	$ 490,887	$ 552,911	$ 409,209	$ (27,688)	$ 1,823,396

	Six months ended July 2, 2022					
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 105,136	$ 12,934	$ 71,268	$ 137,620	$ (24,982)	$ 301,976
Taiwan	55,577	10,735	162,175	73,010	—	301,497
China	50,993	8,346	84,241	58,630	—	202,210
South Korea	36,861	12,382	63,135	60,028	—	172,406
Japan	43,097	1,597	94,598	28,365	—	167,657
Europe	24,607	4,503	39,693	47,575	—	116,378
Southeast Asia	28,917	8,465	25,660	16,969	—	80,011
	$ 345,188	$ 58,962	$ 540,770	$ 422,197	$ (24,982)	$ 1,342,135

16. SUBSEQUENT EVENTS

Segment Realignment

In the third quarter of 2023, in order to align its segment financial reporting with a change in its business structure, the Company will implement a realignment of its segments. Following the segment realignment, the Company's three reportable segments will be as follows (1) Advanced Materials Handling, (2) Microcontamination Control, and (3) a new division that combines SCEM and APS. The succeeding interim and annual periods will disclose the reportable segments with prior periods recast to reflect the change. The Company will evaluate any impairment implications from the segment changes and related reporting unit changes, if any, during the period in which the changes take effect.

Dividend

On July 19, 2023, the Company's Board of Directors declared a quarterly cash dividend of $0.10 per share to be paid on August 23, 2023 to shareholders of record on the close of business on August 2, 2023.

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. The information, except for historical information, contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q 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, 2022 as well as in our other 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 on Form 10-Q. 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 advanced materials and process solutions for the semiconductor and other high technology industries. We help our customers maximize manufacturing yields, reduce manufacturing costs, and enable higher device performance by leveraging our unique breadth of capabilities to provide mission critical enhanced materials and process solutions for the most advanced manufacturing environments.

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

- The Specialty Chemicals and Engineered Materials segment, or SCEM, provides high-performance and high-purity process chemistries, gases and materials, and safe and efficient materials delivery systems to support semiconductor and other advanced manufacturing processes.
- The Advanced Planarization Solutions segment, or APS, provides complementary chemical mechanical planarization solutions, advanced materials and high-purity wet chemicals including CMP slurries, pads, formulated cleans and other electronic chemicals.
- The Microcontamination Control segment, or MC, offers solutions to filter and purify critical liquid and gaseous chemistries used in semiconductor manufacturing processes and other high-technology industries.
- The Advanced Materials Handling segment, or AMH, develops solutions to monitor, protect, transport and deliver critical liquid chemistries, wafers and other substrates for a broad set of applications in the semiconductor industry, life sciences and other high-technology industries.

These segments share common business systems and processes, technology centers and technology roadmaps. With the complementary capabilities across these segments, we believe we are uniquely positioned to create new, co-optimized and increasingly integrated solutions for our customers. For example, after the acquisition of CMC Materials, we now offer an end- to-end offering for our customers consisting of advanced deposition materials from our SCEM segment, CMP slurries, pads and post-CMP cleaning chemistries from our APS 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 2023 end on April 1, 2023, July 1, 2023, September 30, 2023 and December 31, 2023.

Impact of Export Control Regulations

On October 7, 2022, the U.S Department of Commerce, Bureau of Industry and Security (“BIS”) announced export control regulations that restrict the sale of certain products and services to some companies and domestic fabs in China. These new rules restrict the sale of products and the provision of service to domestic fabs in China operating at or above certain advanced technology nodes. See Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the year ended December 31, 2022 for additional information regarding risk associated with the impact of new export control regulations, including under the caption “Tariffs, export controls and other trade laws and restrictions resulting from international trade disputes, strained international relations and changes to foreign and national security policy, especially as they relate to China, could have an adverse impact on our operations and reduce the competitiveness or availability of our products relative to local and global competitors.”

Recent Events

On February 10, 2023, the Company terminated the definitive agreement with Infineum to sell its PIM business. At the time of the termination, the transaction had not received clearance under the HSR Act. 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. Also in the first quarter of 2023, the Company incurred a fee of $1.1 million to the third-party financial adviser it had engaged to assist with the transaction.

On March 1, 2023, the Company completed its divestiture of the QED business. The Company received proceeds of $134.3 million. See Note 5 to our condensed consolidated financial statements for further discussion.

On March 10, 2023, the Company amended its Existing Credit Agreement. The amendment provides for, among other things, the refinancing of the Company's outstanding term B loans under the Existing Credit Agreement in an aggregate principal amount of $2.495 billion (the "Original Tranche B Term Loans") with a new tranche of term B loans under the Amended Credit Agreement in an aggregate principal amount of $2.495 billion (the "New Tranche B Term Loans"). The New Tranche B Term Loans will bear interest under the Amended Credit Agreement, at a rate per annum equal to, at the Company's option, either (i) Term SOFR plus an applicable margin of 2.75% or (ii) a base rate plus an applicable margin of 1.75%. Consistent with the Original Tranche B Term Loans, the new Tranche B Term Loans will mature on July 6, 2029. See Note 9 to our condensed consolidated financial statements for further discussion.

On May 10, 2023, the Company announced the entry into a definitive agreement to sell its Electronic Chemicals ("EC") business to FUJIFILM Holdings America Corporation for $700.0 million, subject to customary adjustments with respect to cash, working capital, indebtedness and transaction expenses. The EC business was classified as an asset held for sale during the second quarter of 2023. See Note 5 to our condensed consolidated financial statements for further discussion.

On June 5, 2023, the Company announced the termination of an alliance agreement between the Company and MacDermid Enthone Inc., a global business unit of Element Solutions Inc ("MacDermid Enthone"). The proceeds from the transaction are $200.0 million, subject to certain adjustments, with $170.0 million that was paid on June 2, 2023 upon the termination of the alliance agreement and $30.0 million payable upon completion of customer transitions. See Note 5 to our condensed consolidated financial statements for further discussion.

In the third quarter of 2023, in order to align its segment financial reporting with a change in its business structure, the Company will implement a realignment of its segments. Following the segment realignment, the Company's three reportable segments will be as follows (1) Advanced Materials Handling, (2) Microcontamination Control, and (3) a new division that combines SCEM and APS. The succeeding interim and annual periods will disclose the reportable segments with prior periods recast to reflect the change.

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 on Form 10-K for the year ended December 31, 2022, filed with the Securities and Exchange Commission on February 23, 2023. 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 July 1, 2023 Compared to Three and Six Months Ended July 2, 2022

The following table compares operating results for the three and six months ended July 1, 2023 and July 2, 2022, both in dollars and as a percentage of net sales, for each caption.

(Dollars in thousands)	Three months ended				Six months ended			
	July 1, 2023		July 2, 2022		July 1, 2023		July 2, 2022	
Net sales	$ 901,000	100.0 %	$ 692,489	100.0 %	$ 1,823,396	100.0 %	$ 1,342,135	100.0 %
Cost of sales	516,834	57.4	382,092	55.2	1,037,545	56.9	721,918	53.8
Gross profit	384,166	42.6	310,397	44.8	785,851	43.1	620,217	46.2
Selling, general and administrative expenses	145,596	16.2	90,685	13.1	315,463	17.3	177,793	13.2
Engineering, research and development expenses	71,030	7.9	49,248	7.1	142,936	7.8	95,963	7.2
Amortization of intangible assets	54,680	6.1	12,494	1.8	112,254	6.2	25,145	1.9
Goodwill impairment	—	—	—	—	88,872	4.9	—	—
Gain on termination of alliance agreement	(154,754)	(17.2)	—	—	(154,754)	(8.5)	—	—
Operating income	267,614	29.7	157,970	22.8	281,080	15.4	321,316	23.9
Interest expense	80,908	9.0	32,001	4.6	167,054	9.2	44,877	3.3
Interest income	(2,303)	(0.3)	(658)	(0.1)	(3,628)	(0.2)	(670)	—
Other expense, net	7,724	0.9	9,619	1.4	3,066	0.2	14,521	1.1
Income before income tax (benefit) expense	181,285	20.1	117,008	16.9	114,588	6.3	262,588	19.6
Income tax (benefit) expense	(16,491)	(1.8)	17,517	2.5	4,978	0.3	37,392	2.8
Equity in net loss of affiliates	130	—	—	—	130	—	—	—
Net income	$ 197,646	21.9 %	$ 99,491	14.4 %	$ 109,480	6.0 %	$ 225,196	16.8 %

Net sales For the three months ended July 1, 2023, net sales increased by 30% to $901.0 million, compared to $692.5 million for the three months ended July 2, 2022. An analysis of the factors underlying the increase in net sales is presented in the following table:

(In thousands)	
Net sales in the quarter ended July 2, 2022	$ 692,489
Increase associated with CMC acquisition	263,994
Decrease mainly associated with volume exclusive of CMC Materials	(46,608)
Decrease associated with effect of foreign currency translation	(8,875)
Net sales in the quarter ended July 1, 2023	$ 901,000

Included in the sales increase were sales associated with the acquisition of CMC Materials of $264.0 million. In addition, there were unfavorable foreign currency translation effects of $8.9 million, mainly due to the significant weakening of the Japanese yen relative to the U.S. dollar and effects of decreased demand from customers in the semiconductor market resulting in a decrease of $46.6 million compared to the quarter ending July 2, 2022.

On a geographic basis, sales percentage by customers' country or region for the three months ended July 1, 2023 and July 2, 2022 and the percentage increase (decrease) in sales for the three months ended July 1, 2023 compared to the sales for the three months ended July 2, 2022 were as follows:

	Three months ended		
	July 1, 2023	July 2, 2022	Percentage increase (decrease) in sales
North America	25 %	23 %	47 %
Taiwan	16 %	23 %	(11 %)
China	16 %	16 %	30 %
South Korea	13 %	12 %	34 %
Japan	11 %	12 %	14 %
Europe	12 %	9 %	81 %
Southeast Asia	8 %	6 %	75 %

The increases in sales to customers for all countries and regions in the table above, except Taiwan, were principally driven by the inclusion of sales from the CMC Materials acquisition. The decrease in sales in Taiwan primarily relates to lower sales demand of AMH, MC and SCEM products offset by a partial increase in APS sales resulting from the inclusion of sales from the CMC Materials acquisition.

Net sales for the six months ended July 1, 2023 were $1,823.4 million, which represents a 36% increase from $1,342.1 million in the six months ended July 2, 2022. An analysis of the factors underlying the increase in net sales is presented in the following table:

(In thousands)		
Net sales in the six months ended July 2, 2022	$	1,342,135
Increase associated with CMC acquisition		537,837
Decrease associated with effect of foreign currency translation		(26,937)
Decrease mainly associated with volume exclusive of CMC Materials		(29,639)
Net sales in the six months ended July 1, 2023	$	1,823,396

Included in the sales increase were sales associated with the acquisition of CMC Materials of $537.8 million. In addition, there were unfavorable foreign currency translation effects of $26.9 million, mainly due to the significant weakening of the Japanese yen relative to the U.S. dollar and decreased demand from customers in the semiconductor market resulting in a decrease of $29.6 million compared to the six-month period ended July 2, 2022.

On a geographic basis, sales percentage by customers' country or region for the six months ended July 1, 2023 and July 2, 2022 and the percentage increase (decrease) in sales for the six months ended July 1, 2023 compared to the sales for the six months ended July 2, 2022 were as follows:

	Six months ended		
	July 1, 2023	July 2, 2022	Percentage increase (decrease) in sales
North America	26 %	22 %	59 %
Taiwan	16 %	22 %	(4 %)
South Korea	13 %	13 %	35 %
Japan	10 %	12 %	11 %
China	15 %	15 %	37 %
Europe	12 %	9 %	93 %
Southeast Asia	7 %	6 %	68 %

The increases in sales to customers for all countries and regions, except Taiwan, in the table above were principally driven by the inclusion of sales from the CMC Materials acquisition. The decrease in sales in Taiwan primarily relates to lower sales demand of AMH, MC and SCEM products offset by a partial increase in APS sales resulting from the inclusion of sales from the CMC Materials acquisition.

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

	Three months ended			Six months ended		
	July 1, 2023	July 2, 2022	Percentage point change	July 1, 2023	July 2, 2022	Percentage point change
Gross margin as a percentage of net revenues:	42.6 %	44.8 %	(2.2)	43.1 %	46.2 %	(3.1)

Gross margin decreased by 2.2 percentage points for the three months ended July 1, 2023, compared to the same period in the prior year. Gross margin declined primarily due to unfavorable sales mix and lower factory utilization.

Gross margin decreased by 3.1 percentage points for the six months ended July 1, 2023, compared to the same period in the prior year. Gross margin declined primarily due to unfavorable sales mix and lower factory utilization. In addition, the Company had restructuring costs of $7.4 million in the six months ended July 1, 2023.

Selling, general and administrative expenses Selling, general and administrative, or SG&A, expenses were $145.6 million in the three months ended July 1, 2023, compared to $90.7 million in the year-ago period. The factors underlying the change in SG&A expenses is presented in the following table:

(In thousands)

Selling, general and administrative expenses in the quarter ended July 2, 2022	$	90,685
Employee costs, mainly driven by the inclusion of CMC Materials		16,215
Integration costs		8,276
Loss on sale of QED business and asset held for sale		14,937
Depreciation expense, mainly driven by the inclusion of CMC Materials		4,227
Professional fees		5,474
Other increases, net, mainly driven by the inclusion of CMC Materials		5,782
Selling, general and administrative expenses in the quarter ended July 1, 2023	$	145,596

SG&A expenses were $315.5 million for the first six months of 2023, representing a 77% increase compared to SG&A expenses of $177.8 million in the year-ago period. The factors underlying changes in SG&A is presented in the following table:

Selling, general and administrative expenses in the quarter ended July 2, 2022	$	177,793
Employee costs other than share based compensation costs, mainly driven by the inclusion of CMC Materials		36,359
Share based compensation costs		17,810
Integration costs		24,005
Loss on sale of QED business and asset held for sale		28,579
Depreciation expense, mainly driven by the inclusion of CMC Materials		8,800
Professional fees		9,764
Other increases, net, mainly driven by the inclusion of CMC Materials		12,353
Selling, general and administrative expenses in the quarter ended July 1, 2023	$	315,463

Engineering, research and development expenses The Company’s engineering, research and development, or 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 increased 44% to $71.0 million in the three months ended July 1, 2023 compared to $49.2 million in the year-ago period. The factors underlying the increase in ER&D expenses is presented in the following table:

(In thousands)

Engineering, research and development expenses in the quarter ended July 2, 2022	$	49,248
Employee costs, mainly driven by the inclusion of CMC Materials		11,037
Project materials, mainly driven by the inclusion of CMC Materials		3,626
Depreciation expense, mainly driven by the inclusion of CMC Materials		3,931
Other increases, net, mainly driven by the inclusion of CMC Materials		3,188
Engineering, research and development expenses in the quarter ended July 1, 2023	$	71,030

ER&D expenses increased 49% to $142.9 million in the first six months of 2023, compared to $96.0 million in the year-ago period. The factors underlying the increase in ER&D expenses is presented in the following table:

(In thousands)		
Engineering, research and development expenses in the quarter ended July 2, 2022	$	95,963
Employee costs, mainly driven by the inclusion of CMC Materials		27,616
Project materials, mainly driven by the inclusion of CMC Materials		6,399
Depreciation expense, mainly driven by the inclusion of CMC Materials		7,725
Other increases, net, mainly driven by the inclusion of CMC Materials		5,233
Engineering, research and development expenses in the quarter ended July 1, 2023	$	142,936

Amortization expenses Amortization of intangible assets was $54.7 million in the three months ended July 1, 2023, compared to $12.5 million for the three months ended July 2, 2022. The increase primarily reflects additional amortization expense associated with the recent acquisition of CMC Materials.

Amortization of intangible assets was $112.3 million in the six months ended July 1, 2023, compared to $25.1 million for the six months ended July 2, 2022. The increase primarily reflects the additional amortization associated with the recent acquisition of CMC Materials.

Goodwill impairment The Company recorded a goodwill impairment charge of $0.0 million 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. See Note 5 to our condensed financial statements for further discussion.

Interest expense Interest expense includes interest associated with debt outstanding and the amortization of debt issuance costs associated with such borrowings. Interest expense was $80.9 million in the three months ended July 1, 2023, compared to $32.0 million in the three months ended July 2, 2022. The increase primarily reflects higher interest expense related to the debt financing of the CMC Materials acquisition.

Interest expense was $163.4 million in the six months ended July 1, 2023, compared to $44.9 million in the six months ended July 2, 2022. The increase primarily reflects higher interest expense related to the debt financing of the CMC Materials acquisition.

Other expense, net 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 $9.6 million in the six months ended July 2, 2022 and consisted mainly of foreign currency transaction losses of $10.0 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 (see Note 9 to the Company's condensed consolidated financial statements) 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. Other expense, net was $14.5 million in the six months ended July 2, 2022 and consisted mainly of foreign currency transaction losses of $14.6 million.

Income tax (benefit) expense Income tax (benefit) expense was $(16.5) million and $5.0 million in the three and six months ended July 1, 2023, respectively, compared to income tax expense of $17.5 million and $37.4 million in the three and six months ended July 2, 2022, respectively. The Company's effective income tax rate was (9.1)% and 4.3% for the three and six months ended July 1, 2023, respectively, compared to 15.0% and 14.2% for the three and six months ended July 2, 2022, respectively.

The changes in our effective tax rate for the three and six months ended July 1, 2023 compared to the prior year are primarily driven by changes to income mix post-acquisition of CMC, and a discrete net benefit of $4.4 million related to incremental expense on completed divestitures offset by a tax benefit on the classification of assets as held-for-sale in the three and six month periods ended July 1, 2023.

Net income Due to the factors noted above, the Company recorded net income of $197.6 million, or $1.31 per diluted share, in the three months ended July 1, 2023, compared to net income of $99.5 million, or $0.73 per diluted share, in the three months ended July 2, 2022.

In the six months ended July 1, 2023, the Company recorded net income of $109.5 million, or $0.73 per diluted share, compared to net income of $225.2 million, or $1.65 per diluted share, in the six months ended July 2, 2022.

Non-GAAP Financial Measures The Company's condensed consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States, or 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.

Adjusted EBITDA increased 18% to $244.6 million in the three months ended July 1, 2023, compared to $207.4 million in the three months ended July 2, 2022. In the three months ended July 1, 2023, adjusted EBITDA, as a percentage of net sales, decreased to 27% from 30% in the year-ago period.

Adjusted EBITDA increased 20% to $496.2 million in the six months ended July 1, 2023, compared to $413.6 million in the six months ended July 2, 2022. In the six months ended July 1, 2023, adjusted EBITDA, as a percentage of net sales, decreased to 27% from 31% in the year-ago period.

Adjusted operating income increased 10% to $200.9 million in the three months ended July 1, 2023, compared to $183.0 million in the three months ended July 2, 2022. Adjusted operating income, as a percentage of net sales, decreased to 22% from 26% in the year-ago period.

Adjusted operating income increased 11% to $405.7 million in the six months ended July 1, 2023, compared to $365.3 million in the six months ended July 2, 2022. In the six months ended July 2, 2022, adjusted operating income, as a percentage of net sales, decreased to 22% from 27% in the year-ago period.

Non-GAAP earnings per share decreased 34% to $0.66 in the three months ended July 1, 2023, compared to $1.00 in the three months ended July 2, 2022. Non-GAAP earnings per share decreased 37% to $1.31 in the six months ended July 1, 2023, compared to $2.07 in the six months ended July 2, 2022.

The increases in adjusted EBITDA and adjusted operating income for the three and six months ended July 1, 2023 compared to the year-ago period is generally attributable to the increases in sales and gross profit in connection with the CMC acquisition. The decrease in non-GAAP earnings per share for the three and six months ended July 1, 2023 compared to the year-ago period is attributable to higher interest expense associated with debt financing in connection with the CMC acquisition.

Segment Analysis

The Company reports its financial performance based on four reportable segments: Specialty Chemicals and Engineered Materials, Advanced Planarization Solutions, Microcontamination Control and Advanced Material Handling. See Note 15 to the condensed consolidated financial statements for additional information on the Company's four segments. The following is a discussion of the results of operations of these four business segments.

The following table presents selected net sales and segment profit data for the Company's four reportable segments, along with unallocated general and administrative expenses, for the three and six months ended July 1, 2023 and July 2, 2022.

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Specialty Chemicals and Engineered Materials				
Net sales	$ 200,073	$ 179,412	$ 398,077	$ 345,188
Segment profit	173,319	35,539	176,587	73,231
Advanced Planarization Solutions				
Net sales	$ 240,561	$ 28,317	490,887	58,962
Segment profit (loss)	42,419	10,179	9,629	21,338
Microcontamination Control				
Net sales	$ 283,614	$ 274,133	$ 552,911	$ 540,770
Segment profit	100,661	100,107	196,658	198,725
Advanced Materials Handling				
Net sales	$ 190,356	$ 224,084	$ 409,209	$ 422,197
Segment profit	35,830	46,926	83,995	93,616
Unallocated general and administrative expenses	$ 29,935	$ 22,287	$ 73,535	$ 40,449

Specialty Chemicals and Engineered Materials (SCEM)

For the second quarter of 2023, SCEM net sales increased to $200.1 million, up 12% compared to $179.4 million in the comparable period last year. The sales increase primarily reflects the inclusion of sales of $48.3 million from the inclusion of certain product lines from the acquisition of CMC Materials, partially offset by a sales decline seen across most other product lines which was primarily driven by the softening in the semiconductor market. SCEM reported a segment profit of $173.3 million in the second quarter of 2023, up 388% from $35.5 million in the year-ago period. The segment profit increase was primarily associated with a gain of $154.8 million resulting from the termination of the alliance agreement with MacDermid Enthone and segment profit attributed to the CMC Materials acquisition. See Note 5 to our condensed consolidated financial statements for further discussion on the termination of the alliance agreement.

For the six months ended July 1, 2023, SCEM net sales increased to $398.1 million, up 15% compared to $345.2 million in the comparable period last year. The sales increase primarily reflects the inclusion of sales of $98.1 million from the inclusion of certain product lines from the acquisition of CMC Materials, partially offset by a sales decline seen across most other product lines which was primarily driven by the softening in the semiconductor market. SCEM reported a segment profit of $176.6 million in the six months ended July 1, 2023, up 141% from $73.2 million in the year-ago period. The segment profit increase was primarily associated with a gain of $154.8 million resulting from the termination of the alliance agreement with MacDermid Enthone, and segment profit attributed to the CMC Materials acquisition, partially offset by a $14.9 million loss on the sale of QED business. See Note 5 to our condensed consolidated financial statements for further discussion on the termination of the alliance agreement.

Advanced Planarization Solutions (APS)

For the second quarter of 2023, APS net sales increased to $240.6 million, compared to $28.3 million in the comparable period last year. The sales increase was mainly due to sales attributed to the CMC Materials acquisition. APS reported a segment profit of $42.4 million in the second quarter of 2023, compared to segment profit of $10.2 million in the year-ago period. The segment profit increase was primarily due to the segment profit attributed to the CMC Materials acquisition, partially offset by $13.6 million loss on asset held for sale related to EC reporting unit.

For the six months ended July 1, 2023, APS net sales increased to $490.9 million, compared to $59.0 million in the comparable period last year. The sales increase was mainly due to sales attributed to the CMC Materials acquisition. APS reported a segment profit of $9.6 million in the six months ended July 1, 2023, down from $21.3 million in the year-ago period. The segment profit decrease was primarily due to goodwill impairment charge of $88.9 million related to the EC reporting unit (see

Note 3 to our condensed consolidated financial statements for further discussion) and a $13.6 million loss on asset held for sale related to the EC reporting unit, partially offset by the segment profit attributed to the CMC Materials acquisition.

Microcontamination Control (MC)

For the second quarter of 2023, MC net sales increased to $283.6 million, up 3% compared to $274.1 million in the comparable period last year. The sales increase was mainly due to improved sales from liquid filtration and gas purification products. MC reported a segment profit of $100.7 million in the second quarter of 2023, up 1% from $100.1 million in the year-ago period. The segment profit increase was primarily due to an increased sales volume, partially offset by costs associated with the ramp up of our new facility in Taiwan and increased investment in research and development.

For the six months ended July 1, 2023, MC net sales increased to $552.9 million, up 2% compared to $540.8 million in the comparable period last year. The sales increase was mainly due to improved sales from liquid filtration and gas purification products. MC reported a segment profit of $196.7 million in the six months ended July 1, 2023, down 1% from $198.7 million in the year-ago period. The segment profit decline was primarily due to increased costs associated with the ramp up of our new facility in Taiwan, increased investment in research and development, and higher compensation costs.

Advanced Materials Handling (AMH)

For the second quarter of 2023, AMH net sales decreased to $190.4 million, down 15% compared to $224.1 million in the comparable period last year. The sales decrease was mainly due to lower sales of our microenvironment solution products. AMH reported a segment profit of $35.8 million in the second quarter of 2023, down 24% from $46.9 million in the year-ago period. The segment profit decrease was primarily due to lower sales volume and lower factory utilization and higher project costs.

For the six months ended July 1, 2023, AMH net sales decreased to $409.2 million, down 3% compared to $422.2 million in the comparable period last year. The sales decrease was mainly due to lower sales from our microenvironment solution products. AMH reported a segment profit of $84.0 million in the six months ended July 1, 2023, down 10% from $93.6 million in the year-ago period. The segment profit decrease was primarily due to lower sales volume, lower factory utilization and higher compensation costs.

Unallocated general and administrative expenses

Unallocated general and administrative expenses totaled $29.9 million in the second quarter of 2023, compared to $22.3 million in the comparable period last year. The $7.6 million increase is primarily due to a $8.3 million increase in integration costs related to the acquisition of CMC Materials.

Unallocated general and administrative expenses for the six months ended July 1, 2023 totaled $73.5 million, up from $40.4 million in the six months ended July 2, 2022. The $33.1 million increase is primarily due to a $24.0 million increase resulting from integration costs and a $14.5 million increase in employee related costs, driven by higher stock based compensation costs.

Liquidity and Capital Resources

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

In thousands	July 1, 2023	December 31, 2022
Cash and cash equivalents including restricted cash	$ 567,017	$ 563,439
Working capital	2,322,259	1,573,254
Total debt, net of unamortized discount and debt issuance costs	5,492,011	5,784,893

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 additional 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 2023, 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:

(in thousands)	Six months ended July 1, 2023	Six months ended July 2, 2022
Net cash provided by operating activities	$ 278,889	$ 174,698
Net cash provided by (used in) investing activities	53,860	(190,974)
Net cash (used in) provided by financing activities	(318,583)	2,367,324
Increase in cash, cash equivalents and restricted cash	3,578	2,340,666

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 $278.9 million in the six months ended July 1, 2023, compared to $174.7 million in the six months ended July 2, 2022. The increase was driven by a $123.9 million of changes in operating assets and liabilities, partially offset by $19.7 million decrease of net income adjusted for non-cash reconciling items.

Changes in operating assets and liabilities for the six months ended July 1, 2023 were driven by changes in accounts payable and accrued liabilities, trade accounts and notes receivable, inventories, income taxes payable and refundable income taxes. The change for trade receivables was mainly due to lower sales. The change for accounts payable and accrued liabilities was driven by lower vendor purchases. The change for inventory was driven by a management initiative to reduce inventory. The change for income taxes payable and refundable income taxes is due to larger tax payments paid compared to the previous year.

Investing activities Cash flows provided by investing activities totaled $53.9 million in the six months ended July 1, 2023, compared to cash flows used in investing activities of $191.0 million in the six months ended July 2, 2022. The change resulted primarily from proceeds from the sale of the QED business of $134.3 million and net proceeds from termination of the alliance agreement with MacDermid Enthone of $169.3 million, partially offset by higher cash paid for acquisition of property, plant and equipment.

Financing activities Cash used in financing activities totaled $318.6 million during the six months ended July 1, 2023, compared to cash provided by financing activities of $2,367.3 million during the six months ended July 2, 2022. The change was primarily due to the net debt activity, which was a use of cash of 315.0 million in 2023 compared to a source of cash of $2,402.7 million in 2022. The net debt activity in 2022 primarily related to the preliminary financing obtained for the CMC acquisition.

Our total dividend payments were $30.2 million in the six months ended July 1, 2023, compared to $27.5 million in the six months ended July 2, 2022. We have paid a cash dividend in each quarter since the fourth quarter of 2017. On July 19, 2023, the Company's Board of Directors declared a quarterly cash dividend of $0.10 per share to be paid on August 23, 2023 to shareholders of record on the close of business on August 2, 2023.

Other Liquidity and Capital Resources Considerations

Debt

(In thousands)	July 1, 2023	December 31, 2022
Senior secured term loan facility due 2029	$ 2,318,499	$ 2,495,000
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
Bridge credit facility due 2023	—	135,000
Revolving facility due 2027	—	—
Total debt (par value)	$ 5,613,499	$ 5,925,000

On March 10, 2023, the Company amended its Amended Credit Agreement. The amendment provides for, among other things, the refinancing of the Company's outstanding term B loans under the Existing Credit Agreement in an aggregate principal amount of $2.495 billion (the "Original Tranche B Term Loans") with a new tranche of term B loans under the Amended Credit Agreement in an aggregate principal amount of $2.495 billion (the "New Tranche B Term Loans"). The New Tranche B Term Loans will bear interest under the Amended Credit Agreement, at a rate per annum equal to, at the Company's option, either (i) Term SOFR plus an applicable margin of 2.75% or (ii) a base rate plus an applicable margin of 1.75%. Consistent with the Original Tranche B Term Loans, the new Tranche B Term Loans will mature on July 6, 2029. See Note 9 to our condensed consolidated financial statements for further discussion.

As of July 1, 2023, during the fiscal year 2023, the Company has repaid $176.5 million of the outstanding borrowings under the New Tranche B Term Loan and $135.0 million in full repayment of all outstanding borrowings under the bridge credit facility.

Through July 1, 2023, the Company was in compliance with the financial covenants under its debt arrangements.

The Company has commitments under 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 three and six months ended July 1, 2023, there were no borrowings under this Revolving Facility and no balance was outstanding at July 1, 2023.

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 $6.9 million. During the three and six months ended July 1, 2023, there were no borrowings under this line of credit and no balance was outstanding at July 1, 2023.

Cash, cash equivalents and restricted cash and cash requirements

(In thousands)	July 1, 2023	December 31, 2022
U.S.	$ 189,164	$ 136,262
Non-U.S.	376,714	425,297
Cash and cash equivalents	565,878	561,559
Restricted cash - U.S.	1,139	1,880
Cash, cash equivalents and restricted cash	$ 567,017	$ 563,439

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. No additional withholding taxes have been accrued for any indefinitely reinvested earnings.

Our restricted cash represents cash held in a "Rabbi" trust and is not available for general corporate purposes. See Note 6 to the condensed consolidated financial statements for additional information.

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 on Form 10-K for the fiscal year ended December 31, 2022 that were outside the ordinary course of business except for the principal repayments of $311.5 million made on the senior secured term loan facility and bridge credit 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 earnings per share, 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 (loss) income before, as applicable, (1) income tax (benefit) expense, (2) interest expense, (3) interest income, (4) other (income) expense, net, (5) goodwill impairment, (6) deal and transaction costs, (7) integration costs, (8) restructuring costs, (9) loss on sale of business and held for sales assets, (10) gain on termination of the Alliance Agreement, (11) amortization of intangible assets and (12) 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 (loss) 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 on sale of business and held for sales assets, (7) gain on termination of the Alliance Agreement, (8) Infineum termination fee, net, (9) Interest expense, net, (10) amortization of intangible assets, (11) the tax effect of the foregoing adjustments to net income, stated on a per share basis. 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 and 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 is not computed under GAAP and may differ notably from the methodology used by other companies. For example, the Company's non-GAAP measure of adjusted EBITDA may not be directly comparable to EBITDA or an adjusted EBITDA measure 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, and non-GAAP EPS, and reconciliations between these financial measures and their most directly comparable GAAP equivalents, are presented below in the accompanying tables.

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

	Three months ended		Six months ended	
(In thousands)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Net sales	$ 901,000	$ 692,489	$ 1,823,396	$ 1,342,135
Net income	$ 197,646	$ 99,491	$ 109,480	$ 225,196
Net income - as a % of net sales	21.9 %	14.4 %	6.0 %	16.8 %
Adjustments to net income				
Equity in net loss of affiliates	130	—	130	—
Income tax (benefit) expense	(16,491)	17,517	4,978	37,392
Interest expense	80,908	32,001	167,054	44,877
Interest income	(2,303)	(658)	(3,628)	(670)
Other expense, net	7,724	9,619	3,066	14,521
GAAP – Operating income	267,614	157,970	281,080	321,316
Operating margin - as a % of net sales	29.7 %	22.8 %	15.4 %	23.9 %
Goodwill impairment [1]	—	—	88,872	—
Deal and transaction costs [2]	—	2,410	3,001	7,418
Integration costs:				
Professional fees [3]	13,324	9,525	25,312	10,321
Severance costs [4]	965	—	2,327	—
Retention costs [5]	362	—	1,642	—
Other costs [6]	3,789	640	6,134	1,090
Restructuring costs [7]	—	—	11,242	—
Loss on sale of business and held for sale assets [8]	14,937	—	28,579	—
Gain on termination of alliance agreement [9]	(154,754)	—	(154,754)	—
Amortization of intangible assets [10]	54,680	12,494	112,254	25,145
Adjusted operating income	200,917	183,039	405,689	365,290
Adjusted operating margin - as a % of net sales	22.3 %	26.4 %	22.2 %	27.2 %
Depreciation	43,719	24,381	90,494	48,286
Adjusted EBITDA	$ 244,636	$ 207,420	$ 496,183	$ 413,576
Adjusted EBITDA – as a % of net sales	27.2 %	30.0 %	27.2 %	30.8 %

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

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

[3] Represents professional and vendor fees recorded in connection with services provided by consultants, accountants, lawyers and other vendors to assist us in integrating recently acquired CMC into our operations.

[4] Represent severance charges related to the integration of the CMC acquisition

[5] Represents retention charges related directly to the CMC acquisition and completed and announced 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 acquisition and the completed and announced divestitures. These costs arise outside of the ordinary course of our continuing operations.

[7] Restructuring charges resulting from cost saving initiatives.

[8] Loss from the sale of QED and held for sales assets of EC.

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

[10] 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 Earnings per Share

	Three months ended		Six months ended	
(In thousands, except per share data)	July 1, 2023	July 2, 2022	July 1, 2023	July 2, 2022
Net income	$ 197,646	$ 99,491	$ 109,480	$ 225,196
Adjustments to net income				
Goodwill impairment [1]	—	—	88,872	—
Deal and transaction costs [2]	—	2,410	3,001	7,418
Integration costs:				
Professional fees [3]	13,324	9,525	25,312	10,321
Severance costs [4]	965	—	2,327	—
Retention costs [5]	362	—	1,642	—
Other costs [6]	3,789	640	6,134	1,090
Restructuring costs [7]	—	—	11,242	—
Loss on extinguishment of debt and modification [8]	4,481	—	8,361	—
Loss on sale of business and held for sale assets [9]	14,937	—	28,579	—
Gain on termination of alliance agreement [10]	(154,754)	—	(154,754)	—
Infineum termination fee, net [11]	—	—	(10,877)	—
Interest expense, net [12]	—	22,742	—	27,425
Amortization of intangible assets [13]	54,680	12,494	112,254	25,145
Tax effect of adjustments to net income and discrete tax items[14]	(35,825)	(10,486)	(34,186)	(14,646)
Non-GAAP net income	$ 99,605	$ 136,816	$ 197,387	$ 281,949
Diluted earnings per common share	$ 1.31	$ 0.73	$ 0.73	$ 1.65
Effect of adjustments to net income	(0.65)	0.27	0.58	0.42
Diluted non-GAAP earnings per common share	$ 0.66	$ 1.00	$ 1.31	$ 2.07
Diluted weighted averages shares outstanding	150,837	136,454	150,609	136,503

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

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

[3] Represents professional and vendor fees recorded in connection with services provided by consultants, accountants, lawyers and other vendors to assist us in integrating the recently acquired CMC into our operations. These fees arise outside of the ordinary course of our continuing operations.

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

[5] Represents retention charges related directly to the CMC acquisition and completed and announced 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 acquisition and completed and announced 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 from the sale of QED and held for sales assets of EC.

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

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

[12] Non-recurring interest costs related to the financing of the CMC acquisition.

[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

The Company’s principal financial market risks are sensitivities to interest rates and foreign currency exchange rates. The Company’s interest-bearing cash, cash equivalents, restricted cash and senior secured financing obligations are subject to interest rate fluctuations. The Company’s cash equivalents are instruments with maturities of three months or less. A 100-basis point change in interest rates would potentially increase or decrease annual net income by approximately $0.8 million and $20.1 million as of July 1, 2023 and July 2, 2022, respectively. On July 28, 2022, the Company entered into a floating-to-fixed interest rate swap agreement to hedge the variability in SOFR-based interest payments associated with $1.95 billion of its $2.495 billion Initial Term Loan Facility. The notional amount is $1.65 billion at July 1, 2023 and is scheduled to decrease quarterly and will expire on December 30, 2025.

The cash flows and results of operations of the Company’s foreign-based operations are subject to fluctuations in foreign exchange rates. We have sales denominated in the South Korean Won, New Taiwan Dollar, Chinese Renminbi, Malaysian Ringgit, Canadian Dollar, Great British Pound, Euro, Singapore Dollar, Israeli Shekel and the Japanese Yen. Approximately 24.8% and 22.3% of the Company’s sales for the quarters ended July 1, 2023 and July 2, 2022, respectively, are denominated in these currencies. Financial results therefore can be and have been affected by changes in currency exchange rates, as seen in the Company’s results in this quarter. If all foreign currencies had experienced a 10% reduction versus the U.S. dollar during the three months ended July 1, 2023 and July 2, 2022, revenue for the quarters would have been negatively impacted by approximately $20.0 million and $8.9 million, respectively.

The Company occasionally uses derivative financial instruments to manage the foreign currency exchange rate risks associated with its foreign-based operations. However, we are unlikely to be able to hedge these exposures completely. We do not enter into forward contracts or other derivative instruments for speculative or trading purposes. At July 1, 2023, the Company had no material net exposure to any foreign currency forward contracts.

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 July 1, 2023. 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 July 1, 2023, 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 has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting, except that the Company is continuing to migrate the former CMC Materials financial system operations onto the Company’s SAP enterprise resource planning (ERP) platform in fiscal 2023. The Company will continue to monitor and test these systems as part of management’s annual evaluation of internal control over financial reporting.

PART II

OTHER INFORMATION

Item 1. Legal Proceedings

As of July 1, 2023, the Company is subject to various claims, legal actions, and complaints 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 our risk factors from those described in the Annual Report.

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

Issuer Purchases of Equity Securities

The Company did not purchase any of its equity securities during the quarter ended July 1, 2023 under an authorized company 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 under the Company’s authorized common stock repurchase plan.

Item 5. Other Information

Rule 10b5-1 Trading Plan Arrangements

On May 19, 2023, James A. O’Neill, our Senior Vice President and Chief Technology Officer, entered into a Rule 10b5-1 Plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act. Mr. O’Neill’s plan provides for the sale of up to 1,918 shares of the Company’s common stock. The plan expires on May 17, 2024, or upon the earlier completion of all authorized transactions under the plan.

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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

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: August 3, 2023

/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:August 3, 2023

/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: August 3, 2023

/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 July 1, 2023 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: August 3, 2023

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer

/s/ Linda LaGorga
Linda LaGorga
Chief Financial Officer