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 April 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	**41-1941551**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
129 Concord Road, Billerica, Massachusetts	**01821**
(Address of principal executive offices)	**(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 May 8, 2023, there were 149,685,161 shares of the registrant's common stock outstanding.

ENTEGRIS, INC. AND SUBSIDIARIES
FORM 10-Q
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FOR THE QUARTER ENDED APRIL 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, 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.

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)	April 1, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 707,838	$ 561,559
Restricted cash	1,194	1,880
Trade accounts and notes receivable, net of allowance for credit losses of $5,341 and $5,443	511,435	535,485
Inventories, net	830,939	812,815
Deferred tax charges and refundable income taxes	38,845	47,618
Assets held-for-sale	247,932	246,531
Other current assets	118,864	129,297
Total current assets	2,457,047	2,335,185
Property, plant and equipment, net of accumulated depreciation of $820,644 and $770,093	1,464,420	1,393,337
Other assets:		
Right-of-use assets	91,383	94,940
Goodwill	4,247,504	4,408,331
Intangible assets, net of accumulated amortization of $691,514 and $636,872	1,742,336	1,841,955
Deferred tax assets and other noncurrent tax assets	29,795	28,867
Other	34,602	36,242
Total assets	$ 10,067,087	$ 10,138,857
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt, including current portion of long-term debt	$ 159,045	$ 151,965
Accounts payable	167,177	172,488
Accrued payroll and related benefits	94,166	142,340
Accrued interest payable	66,192	25,571
Liabilities held-for-sale	11,617	10,637
Other accrued liabilities	179,525	160,873
Income taxes payable	103,901	98,057
Total current liabilities	781,623	761,931
Long-term debt, excluding current maturities, net of unamortized discount and debt issuance costs of $131,245 and $140,107	5,634,710	5,632,928
Pension benefit obligations and other liabilities	55,449	54,090
Deferred tax liabilities and other noncurrent tax liabilities	349,763	391,192
Long-term lease liability	77,319	80,716
Equity:		
Preferred stock, par value $.01; 5,000,000 shares authorized; none issued and outstanding as of April 1, 2023 and December 31, 2022	—	—
Common stock, par value $.01; 400,000,000 shares authorized; issued and outstanding shares as of April 1, 2023: 149,869,777 and 149,667,377, respectively; issued and outstanding shares as of December 31, 2022: 149,339,486 and 149,137,086, respectively	1,499	1,493
Treasury stock, at cost: 202,400 shares held as of April 1, 2023 and December 31, 2022	(7,112)	(7,112)
Additional paid-in capital	2,244,984	2,205,325
Retained earnings	928,133	1,031,391
Accumulated other comprehensive loss	719	(13,097)
Total equity	3,168,223	3,218,000
Total liabilities and equity	$ 10,067,087	$ 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 April 1, 2023	Three months ended April 2, 2022
Net sales	$ 922,396	$ 649,646
Cost of sales	520,711	339,826
Gross profit	401,685	309,820
Selling, general and administrative expenses	169,867	87,108
Engineering, research and development expenses	71,906	46,715
Amortization of intangible assets	57,574	12,651
Goodwill Impairment	88,872	—
Operating income	13,466	163,346
Interest expense	86,146	12,876
Interest income	(1,325)	(12)
Other (income) expense, net	(4,658)	4,902
(Loss) income before income tax expense	(66,697)	145,580
Income tax expense	21,469	19,875
Net (loss) income	$ (88,166)	$ 125,705
Basic (loss) earnings per common share	$ (0.59)	$ 0.93
Diluted (loss) earnings per common share	$ (0.59)	$ 0.92
Weighted shares outstanding:		
Basic	149,426	135,670
Diluted	149,426	136,552

See the accompanying notes to condensed consolidated financial statements.

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

	Three months ended	
(In thousands)	**April 1, 2023**	**April 2, 2022**
Net (loss) income	$ (88,166)	$ 125,705
Other comprehensive income (loss), net of tax		
Foreign currency translation adjustments	23,734	(2,128)
Pension liability adjustments	37	73
Interest rate swap - cash flow hedge, change in fair value - loss, net of tax benefit of $2,903	(9,955)	—
Other comprehensive income (loss)	13,816	(2,055)
Comprehensive (loss) income	$ (74,350)	$ 123,650

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

(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

See the accompanying notes to condensed consolidated financial statements.

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

(In thousands)	Three months ended April 1, 2023	Three months ended April 2, 2022
Operating activities:		
Net (loss) income	$ (88,166)	$ 125,705
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation	46,775	23,905
Amortization	57,574	12,651
Share-based compensation expense	30,678	9,285
Provision for deferred income taxes	(34,826)	(11,230)
Impairment of goodwill	88,872	—
Loss on extinguishment of debt	2,787	—
Loss from sale of business	13,642	—
Charge for excess and obsolete inventory	13,287	5,811
Other	14,439	5,614
Changes in operating assets and liabilities:		
Trade accounts and notes receivable	8,379	(31,171)
Inventories	(34,852)	(77,476)
Accounts payable and accrued liabilities	20,043	(22,323)
Other current assets	2,538	2,629
Income taxes payable and refundable income taxes	15,867	16,760
Other	(5,166)	3,628
Net cash provided by operating activities	151,871	63,788
Investing activities:		
Acquisition of property, plant and equipment	(133,992)	(84,405)
Proceeds from sale of business	133,527	—
Other	108	1,123
Net cash used in investing activities	(357)	(83,282)
Financing activities:		
Proceeds from revolving credit facility and short-term debt	—	79,000
Payments of revolving credit facility and short-term debt	—	(79,000)
Proceeds from long-term debt	117,170	—
Payments of long-term debt	(117,170)	—
Payments for dividends	(15,170)	(13,895)
Issuance of common stock	18,393	3,379
Taxes paid related to net share settlement of equity awards	(9,406)	(16,117)
Other	(299)	(962)
Net cash used in financing activities	(6,482)	(27,595)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	561	(2,744)
Increase (decrease) in cash, cash equivalents and restricted cash	145,593	(49,833)
Cash, cash equivalents and restricted cash at beginning of period	563,439	402,565
Cash, cash equivalents and restricted cash at end of period	$ 709,032	$ 352,732

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)***	**Three months ended**	
	April 1, 2023	**April 2, 2022**
Non-cash transactions:		
Due from buyer on sale of business	$ 1,330	$ —
Equipment purchases in accounts payable	22,041	18,629
Dividend payable	576	423
Schedule of interest and income taxes paid:		
Interest paid less capitalized interest	38,146	1,002
Income taxes paid, net of refunds received	42,424	12,867

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

Our recently acquired subsidiary, CMC Materials LLC (formerly known as CMC Materials, Inc.) (“CMC Materials”), follows a monthly reporting calendar. The first quarter of 2023 for CMC Materials refers to the three months ended March 31, 2023, whereas the Company’s first quarter is April 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 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 months ended April 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)	April 1, 2023	April 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	(20,367)	(11,426)
Increases due to cash received, excluding amounts recognized as revenue during the period	43,270	15,987
Contract liabilities included as part of disposition	(6,226)	—
Balance at end of period	$ 77,153	$ 27,611

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 quarter. 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.

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 Acquisition 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 $39.3 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 (collectively "CMC Materials Acquisition Financing").

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		204,589
Inventory		256,598
Property, plant and equipment		537,387
Identifiable intangible assets		1,736,219
Other noncurrent assets		39,741
Current liabilities		(211,417)
Deferred tax liabilities and other noncurrent liabilities		(444,936)
Net assets acquired		2,398,817
Goodwill		3,622,434
Total purchase price	$	6,021,251

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 provisional 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 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 $3,622.4 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.

The final valuation of assets acquired and liabilities assumed is expected to be completed as soon as possible, but no later than one year from the acquisition date. Given the size and complexity of the acquisition, the valuation of certain assets and liabilities is still being finalized. In addition to identifiable intangible assets, for the reasons noted above, the Company's valuation of the CMC Materials’ tax accounts is provisional pending the completion of and the Company's review of CMC Materials’ tax returns to be filed for periods up to the acquisition date. To the extent that the Company's estimates require adjustment, the Company will modify the value.

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 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 April 2, 2022
Net sales	$ 969,091
Net income	$ 100,264
Per share amounts:	
Net income per common share - basic	$ 0.67
Net income per common share - diluted	$ 0.66

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

On October 11, 2022, the Company entered into a definitive agreement with Infineum USA L.P. (“Infineum”) for the sale of its Pipeline and Industrials Materials (“PIM”) business, which became part of the Company with the acquisition of CMC Materials. The PIM business 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 (income) 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 April 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.

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

(In thousands)		
Assets:		April 1, 2023
Accounts Receivable	$	25,838
Inventory		23,674
Other current assets		396
Property, Plant and Equipment, net		109,865
Intangible assets, net		76,692
Goodwill		10,213
Other assets		1,254
Total assets-held-for sale	$	247,932
Liabilities:		
Accounts payable	$	4,829
Accrued expenses		5,447
Long-term liabilities		1,341
Total liabilities-held-for sale	$	11,617

Income before income taxes attributable to the PIM business was $8.6 million for the three months ended April 1, 2023.

Divestiture

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. QED was a part of Specialty Chemicals and Engineered Materials segment and became part of the Company with the acquisition of CMC Materials.

The Company completed the divestiture of the QED on March 1, 2023 and received proceeds of $134.8 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)		April 1, 2023
Fair value of sale consideration	$	137,500
Preliminary working capital adjustment		1,602
Cash transferred to the buyer on the closing balance sheet		(1,465)
Direct costs to sell		(2,780)
Fair value of sale consideration	$	134,857

The net sales proceeds received from the QED business divestiture presented under cash flows from investing activities represent the cash portion of the sale consideration, which was determined as the fair value of sale consideration reduced by the amount held in escrow. We expect that the amount held in escrow should be paid out within the next six months. The following table summarizes the different components of net proceeds received from the QED business divestiture presented under Cash flows from investing activities:

(In thousands)		April 1, 2023
Fair value of sale consideration	$	134,857
Amount held in escrow		1,330
Net sales proceeds received from business divestiture	$	133,527

The carrying amount of net assets associated with the QED business was approximately $148.5 million. The major classes of assets and liabilities sold consisted of the following:

(In thousands)		April 1, 2023
Assets:		
Trade accounts receivable, net	$	4,818
Inventories, net		8,658
Other current assets		5,743
Property, plant and equipment, net		2,663
Goodwill		89,271
Intangible assets, net		48,661
ROU assets		806
Other long-term assets		37
Total assets	$	160,657
Liabilities:		
Accounts payable	$	1,340
Short-term lease obligation		271
Accrued expenses and other current liabilities		6,922
Payroll and related costs		1,557
Long-term lease obligation		517
Other long-term liabilities		1,551
Total liabilities	$	12,158

As a result of the QED divestiture, the Company recognized a pre-tax loss of approximately $13.6 million presented in selling, general and administrative expenses on the Condensed Consolidated Statements of Operations for the quarter ended April 1, 2023. The Company also recognized the income tax expense associated with the QED divestiture of approximately $17.0 million based on preliminary estimates as of April 1, 2023. We consider this a Level 3 measurement in the fair value hierarchy.

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)		April 1, 2023		December 31, 2022
Cash and cash equivalents	$	707,838	$	561,559
Restricted cash		1,194		1,880
Total cash, cash equivalents and restricted cash	$	709,032	$	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)	April 1, 2023	December 31, 2022
Raw materials	$ 349,380	$ 337,576
Work-in-process	58,886	60,182
Finished goods [1]	422,673	415,057
Total inventories, net	$ 830,939	$ 812,815

[1] Includes consignment inventories held by customers of $44.4 million and $46.2 million at April 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:

(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	(89,271)	—	—	—	(89,271)
Purchase accounting adjustments	10,435	(16,458)	—	—	(6,023)
Assets held-for-sale	(1,390)	—	—	—	(1,390)
Foreign currency translation	(3)	24,107	625	—	24,729
April 1, 2023	$ 481,099	$ 3,449,590	$ 242,713	$ 74,102	$ 4,247,504

Our goodwill balances reflect the goodwill impairment of our EC reporting unit of $88.9 million, see Note 3. In addition, the Company sold its QED business and the related goodwill of the business of $89.3 million was included in the disposition, see Note 5.

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

April 1, 2023 (In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 1,300,557	$ 351,751	$ 948,806
Trademarks and trade names	244,090	33,404	210,686
Customer relationships	832,016	286,038	545,978
In-process research and development [1]	31,400	—	31,400
Other	25,787	20,321	5,466
	$ 2,433,850	$ 691,514	$ 1,742,336

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

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(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 April 1, 2023:

(In thousands)	Remaining 2023	2024	2025	2026	2027	Thereafter	Total
Future amortization expense	$ 168,531	210,501	203,951	201,015	197,507	760,831	$ 1,742,336

9. DEBT

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

(In thousands)	April 1, 2023	December 31, 2022
Senior secured term loan facility due 2029	2,495,000	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	135,000
Total debt (par value)	5,925,000	5,925,000
Unamortized discount and debt issuance costs	131,245	140,107
Total debt, net	$ 5,793,755	$ 5,784,893
Less short-term debt, including current portion of long-term debt	159,045	151,965
Total long-term debt, net	$ 5,634,710	$ 5,632,928

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

(In thousands)	Remaining 2023	2024	2025	2026	2027	Thereafter	Total
Contractual debt obligation maturities[(1)]	$ 153,713	24,950	24,950	24,950	24,950	5,671,487	$ 5,925,000

(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.

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:	April 1, 2023	December 31, 2022	April 1, 2023	December 31, 2022	April 1, 2023	December 31, 2022	April 1, 2023	December 31, 2022
Cash and cash equivalents	$ 707,838	$ 561,559	$ —	$ —	$ —	$ —	$ 707,838	$ 561,559
Restricted cash	1,194	1,880	—	—	—	—	1,194	1,880
Derivative financial instruments - Interest rate swap - cash flow hedge	—	—	33,731	46,589	—	—	33,731	46,589
Derivative financial instruments - Forward exchange contracts	—	—	234	726	—	—	234	726
Total Assets	$ 709,032	$ 563,439	$ 33,965	$ 47,315	$ —	$ —	$ 742,997	$ 610,754
Liabilities:								
Derivative financial instruments - Forward exchange contracts	$ —	$ —	$ 71	$ 193	$ —	$ —	$ 71	$ 193
Total Liabilities	$ —	$ —	$ 71	$ 193	$ —	$ —	$ 71	$ 193

Other Fair Value Disclosures

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

	April 1, 2023		December 31, 2022	
(In thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
Total debt, net	$ 5,793,755	$ 5,573,511	$ 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)	April 1, 2023	December 31, 2022
Derivatives designated as hedging instruments:		
Interest rate swap contract - cash flow hedge	$ 1,950,000	$ 1,950,000
Derivatives not designated as hedging instruments:		
Foreign exchange contracts to purchase U.S. dollars	$ 4,400	$ 3,995
Foreign exchange contracts to sell U.S. dollars	20,055	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	April 1, 2023	December 31, 2022	April 1, 2023	December 31, 2022
Derivatives designated as hedging instruments - Interest rate swap contract -cash flow hedge				
Other current assets	$ 28,213	$ 32,481	$ —	$ —
Other assets - long-term	5,518	14,108	—	—
Derivatives not designated as hedging instruments -Foreign exchange contracts				
Other current assets	$ 234	726	$ —	$ —
Other accrued liabilities	—	—	71	193

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

(In thousands)	Condensed Consolidated Statements of Operations Location	(Gain) Loss Recognized in Condensed Consolidated Statements of Income Three Months Ended April 1, 2023	April 2, 2022
Derivatives designated as hedging instruments:			
Interest rate swap contract-cash flow hedge	Interest expense, net	$ (7,913)	$ —
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Other expense, net	$ 129	$ —

The following table summarizes the effects of our derivative instruments on Accumulated Other Comprehensive Income:

(In thousands)	Loss recognized in Other Comprehensive Income Three Months Ended	
Derivatives designated as hedging instruments:	April 1, 2023	April 2, 2022
Interest rate swap contract - Cash flow hedge	$ (9,955)	$ —

We expect approximately $28.2 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 April 1, 2023.

12. (LOSS) EARNINGS PER COMMON SHARE

Basic (loss) 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	
(In thousands)	April 1, 2023	April 2, 2022
Basic—weighted common shares outstanding	149,426	135,670
Weighted common shares assumed upon exercise of stock options and vesting of restricted common stock	—	882
Diluted—weighted common shares and common shares equivalent outstanding	149,426	136,552

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 months ended April 1, 2023 and April 2, 2022:

	Three months ended	
(In thousands)	April 1, 2023	April 2, 2022
Shares excluded from calculations of diluted EPS	1,747	140

13. OTHER (INCOME) EXPENSE, NET

Other (income) expense, net for the three months ended April 1, 2023 and April 2, 2022 consists of the following:

	Three months ended	
(In thousands)	April 1, 2023	April 2, 2022
Infineum termination fee, net	$ (10,876)	$ —
Loss on foreign currency transactions	2,401	4,577
Loss on extinguishment of debt and modification	3,880	—
Other, net	(63)	325
Other (income) expense, net	$ (4,658)	$ 4,902

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.

14. 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 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	
(In thousands)	April 1, 2023	April 2, 2022
Net sales		
SCEM	$ 198,004	$ 165,776
APS	250,326	30,645
MC	269,297	266,637
AMH	218,853	198,113
Inter-segment elimination	(14,084)	(11,525)
Total net sales	$ 922,396	$ 649,646

	Three months ended	
(In thousands)	April 1, 2023	April 2, 2022
Segment profit (loss)		
SCEM	$ 3,268	$ 37,692
APS [1]	(32,790)	11,159
MC	95,997	98,618
AMH	48,165	46,690
Total segment profit	$ 114,640	$ 194,159

[1] APS segment loss is inclusive of $88.9 million goodwill impairment charge. See Note 3.

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

(In thousands)	Three months ended April 1, 2023	Three months ended April 2, 2022
Total segment profit	$ 114,640	$ 194,159
Less:		
Amortization of intangible assets	57,574	12,651
Unallocated general and administrative expenses	43,600	18,162
Operating income	13,466	163,346
Interest expense	86,146	12,876
Interest income	(1,325)	(12)
Other (income) expense, net	(4,658)	4,902
(Loss) income before income tax expense	$ (66,697)	$ 145,580

In the following tables, revenue is disaggregated by customers' country or region based on the ship to location of the customer for the three months ended April 1, 2023 and April 2, 2022, respectively.

Three months ended April 1, 2023						
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 81,319	$ 66,010	$ 41,766	$ 75,598	$ (14,084)	$ 250,609
Taiwan	24,034	34,159	54,236	36,661	—	149,090
China	16,347	31,613	55,671	31,800	—	135,431
South Korea	20,645	35,726	29,829	34,456	—	120,656
Japan	20,277	9,079	49,753	11,316	—	90,425
Europe	23,156	40,271	27,004	21,984	—	112,415
Southeast Asia	12,226	33,468	11,038	7,038	—	63,770
	$ 198,004	$ 250,326	$ 269,297	$ 218,853	$ (14,084)	$ 922,396

Three months ended April 2, 2022						
(In thousands)	SCEM	APS	MC	AMH	Inter-segment	Total
North America	$ 50,112	$ 7,192	$ 35,355	$ 64,341	$ (11,525)	$ 145,475
Taiwan	27,263	5,241	78,043	33,718	—	144,265
China	22,544	3,980	40,521	26,828	—	93,873
South Korea	18,405	6,049	33,692	30,009	—	88,155
Japan	22,514	785	47,659	12,864	—	83,822
Europe	11,231	2,458	18,374	22,246	—	54,309
Southeast Asia	13,707	4,940	12,993	8,107	—	39,747
	$ 165,776	$ 30,645	$ 266,637	$ 198,113	$ (11,525)	$ 649,646

15. SUBSEQUENT EVENTS

Dividend

On April 19, 2023, the Company's Board of Directors declared a quarterly cash dividend of $0.10 per share to be paid on May 24, 2023 to shareholders of record on the close of business on May 3, 2023.

Debt Repayment

On April 20, 2023, the Company repaid the remaining principal of $135.0 million on the Bridge Credit Facility.

Disposition

On May 10, 2023, the Company announced the execution of a definitive agreement to sell its Electronic Chemicals ("EC") business, which became part of the Company with the recent 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 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 Company does not expect a material gain or loss from the sale of the EC business.

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 QED business was part of the SCEM segment. The QED business became part of the Company with the acquisition of CMC Materials. The Company received proceeds of $134.8 million subject to certain post-closing adjustments. See Note 5 to our condensed consolidated financial statements for further discussion.

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.

On May 10, 2023, the Company announced the execution of a definitive agreement to sell its Electronic Chemicals ("EC") business, which became part of the Company with the recent acquisition of CMC Materials, 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 specializes in purification, formulation, blending, packaging and distribution of high-purity 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 Company does not expect a material gain or loss from the sale of the EC business.

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 Months Ended April 1, 2023 Compared to Three Months Ended April 2, 2022

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

	Three months ended			
(Dollars in thousands)	April 1, 2023		April 2, 2022	
Net sales	$ 922,396	100.0 %	$ 649,646	100.0 %
Cost of sales	520,711	56.5	339,826	52.3
Gross profit	401,685	43.5	309,820	47.7
Selling, general and administrative expenses	169,867	18.4	87,108	13.4
Engineering, research and development expenses	71,906	7.8	46,715	7.2
Amortization of intangible assets	57,574	6.2	12,651	1.9
Goodwill impairment	88,872	9.6	—	—
Operating income	13,466	1.5	163,346	25.1
Interest expense	86,146	9.3	12,876	2.0
Interest income	(1,325)	(0.1)	(12)	—
Other (income) expense, net	(4,658)	(0.5)	4,902	0.8
(Loss) Income before income taxes	(66,697)	(7.2)	145,580	22.4
Income tax expense	21,469	2.3	19,875	3.1
Net (loss) income	$ (88,166)	(9.6)%	$ 125,705	19.3 %

Net sales For the three months ended April 1, 2023, net sales increased by 42% to $922.4 million, compared to $649.6 million for the three months ended April 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 April 2, 2022	$ 649,646
Increase associated with acquired businesses	273,843
Increase mainly associated with volume exclusive of CMC Materials	16,969
Decrease associated with effect of foreign currency translation	(18,062)
Net sales in the quarter ended April 1, 2023	$ 922,396

Total net sales increased primarily driven by the inclusion of sales from the acquisition of CMC Materials for the three-months ended April 1, 2023 subsequent to the Closing Date. Growth was also driven in part by our strong position at the leading-edge technology nodes, led by solutions like our liquid filtration products that are of growing importance to our customers' technology roadmaps. Total net sales also reflected unfavorable foreign currency translation effects of $18.1 million, mainly due to the significant weakening of the Japanese yen relative to the U.S. dollar.

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

	Three months ended		
	April 1, 2023	April 2, 2022	Percentage increase in sales
North America	27 %	22 %	72 %
Taiwan	16 %	22 %	3 %
China	15 %	14 %	44 %
South Korea	13 %	14 %	37 %
Japan	10 %	13 %	8 %
Europe	12 %	8 %	107 %
Southeast Asia	7 %	6 %	60 %

The increases in sales to customers for all countries and regions in the table above were principally driven by 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		
	April 1, 2023	April 2, 2022	Percentage point change
Gross margin as a percentage of net revenues:	43.5 %	47.7 %	(4.2)

Gross margin decreased by 4.2 percentage points for the three months ended April 1, 2023, compared to the same period in the prior year. Gross margin declined primarily due to the inclusion of CMC Materials products, which have aggregate lower gross margins. In addition, the Company had restructuring costs of $7.4 million in the quarter.

Selling, general and administrative expenses Selling, general and administrative, or SG&A, expenses were $169.9 million in the three months ended April 1, 2023, compared to $87.1 million in the year-ago period. An analysis of 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 April 2, 2022	$	87,108
Employee costs other than share based compensation costs, mainly driven by the inclusion of CMC Materials		20,127
Share based compensation costs		17,827
Integration costs		15,729
Loss on sale of QED business		13,642
Restructuring costs		3,865
Depreciation expense, mainly driven by the inclusion of CMC Materials		4,573
Professional fees		4,290
Transaction and deal costs		(2,007)
Other increases, net		4,713
Selling, general and administrative expenses in the quarter ended April 1, 2023	$	169,867

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 54% to $71.9 million in the three months ended April 1, 2023 compared to $46.7 million in the year-ago period. An analysis of 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 April 2, 2022	$	46,715
Employee costs, mainly driven by the inclusion of CMC Materials		17,007
Project materials, mainly driven by the inclusion of CMC Materials		2,773
Depreciation expense, mainly driven by the inclusion of CMC Materials		3,794
Other increases, net		1,617
Engineering, research and development expenses in the quarter ended April 1, 2023	$	71,906

Amortization expenses Amortization of intangible assets was $57.6 million in the three months ended April 1, 2023, compared to $12.7 million for the three months ended April 2, 2022. The increase primarily reflects additional amortization expense associated with the recent acquisition of CMC Materials.

Goodwill impairment The Company recorded a goodwill impairment charge of $88.9 million in the three months ended April 2, 2022. See Note 3 to our condensed consolidated 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 $86.1 million in the three months ended April 1, 2023, compared to $12.9 million in the three months ended April 2, 2022. The increase primarily reflects higher interest expense related to the debt financing of the CMC Materials acquisition.

Other (income) expense, net Other income, net was $4.7 million in the three months ended April 1, 2023 and consisted mainly of net proceeds received of $10.9 million resulting from the termination of the definitive agreement with Infineum, partially offset by a loss of extinguishment and modification of debt of $3.9 million associated with the amendment of the Company’s

Amended Credit Agreement (see Note 9 to the Company's condensed consolidated financial statements) and foreign currency transaction losses of $2.4 million. Other expense, net was $4.9 million in the three months ended April 2, 2022 and consisted mainly of foreign currency transaction losses of $4.6 million.

Income tax expense Income tax expense of $21.5 million in the three months ended April 1, 2023, compared to income tax expense of $19.9 million in the three months ended April 2, 2022, respectively. The Company's year-to-date effective income tax rate at April 1, 2023 was (32.2)%, compared to 13.7% at April 2, 2022.

The change in the effective tax rate for the three months ended April 1, 2023, compared to the prior year primarily relates to non-deductible goodwill impairment charge and tax expense of $17.0 million on the sale of the QED business unit recorded during the quarter ended April 1, 2023. The year-to-date income tax expense in 2023 and 2022 includes discrete expense of $0.1 million and a discrete benefit of $4.3 million, respectively, recorded in connection with share-based compensation.

Net (loss) income Due to the factors noted above, the Company recorded net loss of $88.2 million, or $0.59 per diluted share, in the three months ended April 1, 2023, compared to net income of $125.7 million, or $0.92 per diluted share, in the three months ended April 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 22% to $251.5 million in the three months ended April 1, 2023, compared to $206.2 million in the three months ended April 2, 2022. In the three months ended April 1, 2023, adjusted EBITDA, as a percentage of net sales, decreased to 27.3% from 31.7% in the year-ago period.

Adjusted operating income increased 12% to $204.8 million in the three months ended April 1, 2023, compared to $182.3 million in the three months ended April 2, 2022. Adjusted operating income, as a percentage of net sales, decreased to 22.2% from 28.1% in the year-ago period.

Non-GAAP earnings per share decreased 39% to $0.65 in the three months ended April 1, 2023, compared to $1.06 in the three months ended April 2, 2022.

The increases in adjusted EBITDA and adjusted operating income for the three months ended April 1, 2023 compared to the year-ago period is generally attributable to the increases in sales and gross profit. The decrease in non-GAAP earnings per share for the three months ended April 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 14 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 (loss) data for the Company's four reportable segments, along with unallocated general and administrative expenses, for the three months ended April 1, 2023 and April 2, 2022.

	Three months ended	
(In thousands)	April 1, 2023	April 2, 2022
Specialty Chemicals and Engineered Materials		
Net sales	$ 198,004	$ 165,776
Segment profit	3,268	37,692
Advanced Planarization Solutions		
Net sales	$ 250,326	$ 30,645
Segment (loss) profit	(32,790)	11,159
Microcontamination Control		
Net sales	$ 269,297	$ 266,637
Segment profit	95,997	98,618
Advanced Materials Handling		
Net sales	$ 218,853	$ 198,113
Segment profit	48,165	46,690
Unallocated general and administrative expenses	$ 43,600	$ 18,162

Specialty Chemicals and Engineered Materials (SCEM)

For the first quarter of 2023, SCEM net sales increased to $198.0 million, up 19% compared to $165.8 million in the comparable period last year. The sales increase primarily reflects the inclusion of sales of $49.7 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 $3.3 million in the first quarter of 2023, down 91% from $37.7 million in the year-ago period. The segment profit decrease was primarily associated with a 71% increase in operating expenses, which was primarily due to a $13.6 million loss on sale of QED business,$6.5 million related to restructuring charges and higher compensation costs.

Advanced Planarization Solutions (APS)

For the first quarter of 2023, APS net sales increased to $250.3 million, compared to $30.6 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 loss of $32.8 million in the first quarter of 2023, compared to segment profit of $11.2 million in the year-ago period. The segment loss in the current year was due to the 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, partially offset by the segment profit attributed to the CMC Materials acquisition.

Microcontamination Control (MC)

For the first quarter of 2023, MC net sales increased to $269.3 million, up 1% compared to $266.6 million in the comparable period last year. The sales increase was mainly due to improved sales from liquid microcontamination products, partially offset by gas microcontamination products. MC reported a segment profit of $96.0 million in the first quarter of 2023, down 3% from $98.6 million in the year-ago period. The segment profit decline was primarily due to a 21% increase in operating expenses primarily due to higher compensation costs.

Advanced Materials Handling (AMH)

For the first quarter of 2023, AMH net sales increased to $218.9 million, up 10% compared to $198.1 million in the comparable period last year. The sales increase was mainly due to improved sales from wafer handling and fluid handling. AMH reported a segment profit of $48.2 million in the first quarter of 2023, up 3% from $46.7 million in the year-ago period. The segment profit increase was primarily due to higher sales volume, partially offset by an 18% increase in operating expenses, primarily due to higher compensation costs.

Unallocated general and administrative expenses

Unallocated general and administrative expenses totaled $43.6 million in the first quarter of 2023, compared to $18.2 million in the comparable period last year. The $25.4 million increase is primarily due to a $15.7 million increase in integration related costs related to the acquisition of CMC Materials and a $14.0 million increase in employee related costs, driven by higher higher stock based compensation costs, partially offset by the absence of $2.0 million of deal costs in the prior comparable period.

Liquidity and Capital Resources

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

In thousands	April 1, 2023	December 31, 2022
Cash and cash equivalents including restricted cash	$ 709,032	$ 563,439
Working capital	1,675,424	1,573,254
Total debt, net of unamortized discount and debt issuance costs	5,793,755	5,784,893

The Company has historically financed its operations and capital requirements through cash flow from its operating activities, long-term loans, 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:

	Three months ended	
(in thousands)	April 1, 2023	April 2, 2022
Net cash provided by operating activities	$ 151,871	$ 63,788
Net cash used in investing activities	(357)	(83,282)
Net cash used in financing activities	(6,482)	(27,595)
Increase (decrease) in cash, cash equivalents and restricted cash	145,593	(49,833)

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 $151.9 million in the three months ended April 1, 2023, compared to $63.8 million in the three months ended April 2, 2022. The increase was driven by a $114.8 million of changes in operating assets and liabilities, partially offset by $26.7 million decrease of net (loss) income adjusted for non-cash reconciling items.

Changes in operating assets and liabilities for the three months ended April 1, 2023 were driven by changes in accounts payable and accrued liabilities, trade accounts and notes receivable and inventories. The change for trade receivables was mainly due to timing of customer collections. The change for accounts payable and accrued liabilities was driven by an increase in accrued interest payable related to the debt financing in connection with the CMC Materials acquisition and advanced payments from customers.

Investing activities Cash flows used in investing activities totaled $0.4 million in the three months ended April 1, 2023, compared to $83.3 million in the three months ended April 2, 2022. The change resulted primarily from proceeds from the sale of the QED business, partially offset by higher cash paid for acquisition of property, plant and equipment.

Financing activities Cash used in financing activities totaled $6.5 million during the three months ended April 1, 2023, compared to cash used in financing activities of $27.6 million during the three months ended April 2, 2022. The change was primarily due to higher proceeds received from stock option exercises.

Our total dividend payments were $15.2 million in the three months ended April 1, 2023, compared to $13.9 million in the three months ended April 2, 2022. We have paid a cash dividend in each quarter since the fourth quarter of 2017. On April 19, 2023, the Company's Board of Directors declared a quarterly cash dividend of $0.10 per share to be paid on May 24, 2023 to shareholders of record on the close of business on May 3, 2023.

Other Liquidity and Capital Resources Considerations

Debt

(In thousands)	April 1, 2023	December 31, 2022
Senior secured term loan facility due 2029	$ 2,495,000	$ 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	135,000
Revolving facility due 2027	—	—
Total debt (par value)	$ 5,925,000	$ 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.

Through April 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 months ended April 1, 2023, there were no borrowings under this Revolving Facility and no balance was outstanding at April 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 $7.5 million. During the three months ended April 1, 2023, there were no borrowings under this line of credit and no balance was outstanding at April 1, 2023.

Cash, cash equivalents and restricted cash and cash requirements

(In thousands)	April 1, 2023	December 31, 2022
U.S.	$ 286,726	$ 136,262
Non-U.S.	421,112	425,297
Cash and cash equivalents	707,838	561,559
Restricted cash - U.S.	1,194	1,880
Cash, cash equivalents and restricted cash	$ 709,032	$ 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.

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 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 (10) amortization of intangible assets and (11) 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, (7) Infineum termination fee, net, (8) Interest expense, net, (9) amortization of intangible assets, (10) the tax effect of the foregoing adjustments to net (loss) income, stated on a per share basis and (11) tax effect of legal entity restructuring. 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	
(In thousands)	April 1, 2023	April 2, 2022
Net sales	$ 922,396	$ 649,646
Net (loss) income	$ (88,166)	$ 125,705
Net (loss) income - as a % of net sales	(9.6)%	19.3 %
Adjustments to net (loss) income		
Income tax expense	21,469	19,875
Interest expense	86,146	12,876
Interest income	(1,325)	(12)
Other (income) expense, net	(4,658)	4,902
GAAP – Operating income	13,466	163,346
Operating margin - as a % of net sales	1.5 %	25.1 %
Goodwill impairment [1]	88,872	—
Deal and transaction costs [2]	3,001	5,008
Integration costs:		
Professional fees [3]	11,988	796
Severance costs [4]	1,362	—
Retention costs [5]	1,280	—
Other costs [6]	2,345	450
Restructuring costs [7]	11,242	—
Loss on sale of business [8]	13,642	—
Amortization of intangible assets [9]	57,574	12,651
Adjusted operating income	204,772	182,251
Adjusted operating margin - as a % of net sales	22.2 %	28.1 %
Depreciation	46,775	23,905
Adjusted EBITDA	$ 251,547	$ 206,156
Net (loss) income - as a % of net sales	(9.6)%	19.3 %
Operating margin	1.5 %	25.1 %
Adjusted operating income – as a % of net sales	22.2 %	28.1 %
Adjusted EBITDA – as a % of net sales	27.3 %	31.7 %

[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. These fees arise outside of the ordinary course of our continuing operations.

[4] Represent severance charges resulting from cost saving initiatives in connection with 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.

[9] 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

(In thousands, except per share data)	Three months ended April 1, 2023	Three months ended April 2, 2022
Net (loss) income	$ (88,166)	$ 125,705
Adjustments to net (loss) income		
Goodwill impairment [1]	88,872	—
Deal and transaction costs [2]	3,001	5,008
Integration costs:		
Professional fees [3]	11,988	796
Severance costs [4]	1,362	—
Retention costs [5]	1,280	—
Other costs [6]	2,345	450
Restructuring costs [7]	11,242	—
Loss on extinguishment of debt and modification [8]	3,880	—
Loss on sale of business [9]	13,642	—
Infineum termination fee, net [10]	(10,877)	—
Interest expense, net [11]	—	4,683
Amortization of intangible assets [12]	57,574	12,651
Tax effect of adjustments to net (loss) income and certain discrete tax items[13]	1,639	(4,160)
Non-GAAP net income	$ 97,782	$ 145,133
Diluted (loss) earnings per common share	$ (0.59)	$ 0.92
Effect of adjustments to net (loss) income	1.24	0.14
Diluted non-GAAP earnings per common share	$ 0.65	$ 1.06
Diluted weighted averages shares outstanding	149,426	136,552
Effect of adjustment to diluted weighted average shares outstanding	955	—
Diluted non-GAAP weighted average shares outstanding	150,381	136,552

[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 resulting from cost saving initiatives from 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.

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

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

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

[13] The tax effect of pre-tax adjustments to net (loss) 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 $0.2 million and $1.6 million as of April 1, 2023 and April 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 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 23.4% and 23.8% of the Company’s sales for the quarters ended April 1, 2023 and April 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 April 1, 2023 and April 2, 2022, revenue for the quarters would have been negatively impacted by approximately $25.7 million and $14.1 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 April 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 April 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 April 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.

As discussed in Note 4 to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q, the Company completed its acquisition of CMC Materials on July 6, 2022. As permitted by interpretive guidance for newly acquired businesses issued by the SEC Staff, management has excluded the internal control over financial reporting of CMC Materials from the evaluation of the Company’s effectiveness of its disclosure controls and procedures as of April 1, 2023. Since the date of the acquisition, CMC Materials’ financial results are included in the Company's condensed consolidated financial statements. As part of our post-closing integration activities, we are engaged in the process of assessing the internal controls. The Company has begun to integrate policies, processes, people, technology and operations for the post-acquisition combined company, and it will continue to evaluate the impact of any related changes to internal control over financial reporting.

Other than the items discussed above, there has been no change 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.

PART II

OTHER INFORMATION

Item 1. Legal Proceedings

As of April 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 April 1, 2023.

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 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
(4)	Amendment No. 1, dated as of March 10, 2023, among Entegris, Inc., as borrower, the other credit parties party thereto, the lenders party thereto and Morgan Stanley Senior Funding, Inc., as administrative agent.	Exhibit 10.1 to Entegris, Inc. Current Rep Form 8-K filed with the Securities and Exchange Commission on March 13,2023

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
(10)	10.1	Employment Offer Letter, dated April 8, 2023, between Entegris, Inc. and Linda LaGorga
(10)	10.2	Transition Services Agreement, effective April 11, 2023, between Entegris, Inc. and Gregory B. Graves
(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: May 11, 2023

/s/ Gregory B. Graves

Gregory B. Graves
Executive Vice President and Chief Financial Officer (on behalf of the registrant and as principal financial officer)

April 8, 2023

Ms. Linda LaGorga
23 W. Chicago Ave, Apt. 3809
Chicago, IL 60654

Dear Linda, I am pleased to confirm our offer of employment to join Entegris as Senior Vice President, Chief Financial Officer, reporting to Bertrand Loy. We are looking forward to welcoming you as a member our Executive Leadership Team, with an anticipated start date of May 8, 2023

Below is a summary of the key aspects of your offer:

- An annual base salary of $550,000/$21,154 biweekly, subject to customary withholding for federal, state and local taxes to be payable in two-week increments.

- Entegris Incentive Plan: You are eligible to participate in the Entegris Incentive Plan (EIP) with a 70% target bonus, with a 0-2x multiplier subject to the company's performance against set annual goals. Your 2023 EIP bonus will be calculated pro rata temporis based on your date of hire.

- A recommendation will be made to the Board of Directors that you receive an equity award equal to $3,000,000 consisting of the following:

    - 40% Restricted Stock Units (RSUs) ratable over a four-year period at 25% per year
    - 30% Stock options vesting over a four-year period, with a 7-year term
    - 30% Performance Shares (PRSUs) with a three-year performance period ending January 31, 2026

  - For purposes of calculating the number of RSUs and PRSUs we will use a unit value equal to the closing price of Entegris Stock on your date of hire. The Options will be valued based upon our calculated Black-Scholes value also on your date of hire. While we expect that this award will be made as recommended, all equity awards are at the discretion of the Board of Directors.

- As part of our standard annual grant cycle in February 2024, you will be eligible to receive an annual long-term incentive compensation award with a target grant date fair value which will be consistent with your performance and market data for your position. Based upon current market data and your experience we would estimate your annual award will approximate $2,000,000 in February 2024.

- A sign-on bonus of up to $135,000 (subject to customary withholding for federal, state and local taxes.) The amount paid to you will be subject to submission of documentation showing your current employer's relocation expense repayment requirement. Should you voluntarily leave the company at any time prior to 12 months of hire, you will be required to pay back this amount and understand that you will be responsible for reimbursing the company for the entire signing bonus. Repayment will be made in full no later than ninety (90) days following your last day of employment with the company.

- As an SVP and Executive Leadership Team member, you are eligible for Entegris' Executive Change in Control Agreement subject to Board of Directors approval. Details of the Agreement will be provided when you join the company.

- Severance: In the event that Entegris terminates your employment without "cause" following your date of hire, then, subject to your timely execution and nonrevocation of a release of claims in favor of Entegris, you will receive (i) a lump-sum cash payment equal to your then-current annual Base Salary, which lump-sum will be paid to you on the 61st day following such termination of employment, and (ii)continuation of Entegris' contributions necessary to maintain coverage for you and your eligible dependents for the twelve (12) calendar months immediately following the end of the calendar month in which the date of termination occurs under the medical, dental and vision programs in which you and your eligible dependents participated immediately prior to the date of termination.

- Indemnification. As a senior executive of the company, you will receive the same indemnification protections and directors' and officers' liability insurance coverage as that provided to the company's other senior executives.

- Stock Ownership Guidelines. You will be expected to maintain compliance with the company's Stock Ownership Guidelines, as in effect from time to time. Under the current terms of the guidelines, you must accumulate ownership of shares having an aggregate market value equal to three times your annual base salary. A copy of the company's current Stock Ownership Guidelines have been provided to you for your review.

- Recoupment Policy. As a senior executive of the company, certain compensation paid or provided to you will be subject to the terms of the company's Clawback Policy, as in effect from time to time. A copy of the policy as currently in effect has been provided to you for your review.

- A comprehensive benefits plan. You will be entitled to receive all benefit coverage provided to the senior executives of Entegris, effective immediately upon your commencement of employment. (See attached "Benefits Highlights")

- Inclusion in the Entegris Relocation Program, which will be managed by our relocation partner, Global Mobility Solutions. A detailed explanation of services will be provided to you separately. You will be required to repay relocation costs if you voluntarily choose to end your employment or are released from the company for reasons other than job elimination, reduction in force or restructuring, within 24 months of your hire date. You understand that you will be responsible for reimbursing the company for the entire relocation amount. Repayment will be made in full no later than ninety (90) days following your last day of employment with the company. You agree to relocate within 12 months of your start date.

Entegris reserves the right to make changes to its plans at any time. Our offer of employment is subject to your successful completion of the company paid pre-employment drug screen and background check. Your employment with Entegris is at-will and either party can terminate the employment relationship at any time with or without cause and with or without notice.

Entegris

Please indicate your acceptance of the terms of this letter, by signing below. We are excited about the future of Entegris and having you as a part of our successful team!

Best regards,

/s/ Sue Rice
Sue Rice
Senior Vice President, Human Resources

By signing below, I acknowledge, agree, and attest that I have reviewed the information above, accept the terms of this offer, and am the person whose name appears above.

Signature:

/s/ Linda LaGorga______________________________ __April 8, 2023
Linda LaGorga Date

ENTEGRIS, INC.
entegris.com
129 Concord Road, Building 2
Billerica, MA 01821 USA
T +1 978 436 6500
F +1 978 436 6735

TRANSITION SERVICES AGREEMENT

THIS TRANSITION SERVICES AGREEMENT (the "Agreement") is made effective as of April 11, 2023 (the "Effective Date"), by and between Entegris, Inc., a Delaware corporation (the "Company" and together with its subsidiaries, the "Company Group"), and Gregory B. Graves ("Executive" and, together with the Company, the "Parties").

RECITALS

WHEREAS, Executive currently serves as the Executive Vice President, Chief Financial Officer and Treasurer of the Company;

WHEREAS, Executive is party to the Severance Protection Agreement, dated as of May 13, 2011, by and between the Company and Executive, as amended effective as of February 23, 2016 (the "Severance Protection Agreement"); and

WHEREAS, the Parties desire to enter into this Agreement to set forth their agreement as to the retirement of Executive and in connection with the hiring of an individual to succeed Executive as the Chief Financial Officer of the Company (such individual, the "Successor Chief Financial Officer" and the actual date such individual commences employment with the Company, which date is currently believed to be May 15, 2023, the "Transition Date").

NOW, **THEREFORE,** in consideration of the premises and mutual covenants herein contained, the Parties agree as follows:

1. Transition Date; Retirement Date. Executive's employment with the Company Group as its Executive Vice President, Chief Financial Officer and Treasurer of the Company shall cease effective as of the Transition Date, and Executive's employment with the Company Group shall cease effective as of July 7, 2023 (the "Retirement Date"). Effective as of the Transition Date, Executive shall be deemed to have resigned from all positions Executive holds as an officer of the Company and after the Transition Date, Executive shall, as requested, resign from all position Executive holds as an officer or board member with respect to each member of the Company Group and agrees to execute all further documents reasonably necessary or appropriate to further memorialize any or all such resignations. The Parties acknowledge and agree that Executive's termination of employment effective as of the Retirement Date shall (i) constitute a qualifying "retirement" for purposes of Section 9 of the Severance Protection Agreement, (ii) constitute a "Retirement" after satisfying the "Retirement Vesting Criteria" for purposes of those equity and equity-based awards granted to Executive on January 31, 2023 and (iii) entitle Executive to distribution under the Company's Amended and Restated Senior Executive Retirement Plan for Key Salaried Employees in accordance with its terms.

2. Transition Services.

(a) Effective as of the Transition Date, Executive agrees to continue in the employment of the Company as, and perform the duties of, Special Advisor to the Chief Executive Officer of the Company through the Retirement Date and perform for the Company Group (i) services related to transition matters and the onboarding of the Successor Chief Financial Officer, (ii) services related to SAP and legal entity integration matters, and (iii) other such services as reasonably requested by the Chief Executive Officer of the Company (the "Transition Services"). Executive acknowledges and agrees that, during the period commencing at the Transition Date and ending on the Retirement Date, Executive shall not work on a full- or part-time basis for another person, firm or entity; provided, that Executive may manage personal and family investments, participate in industry organizations, serve on corporate and not for profit boards of directors and deliver lectures at educational institutions, so long as such activities do not interfere with the performance of the Transition Services or Executive's responsibilities as Special Advisor to the Chief Executive Officer of the Company.

(b) Subject to the execution and nonrevocation of the Release of Claims attached hereto as Exhibit A (the "Release of Claims") in accordance with the time period provided therein, Executive shall, following the Retirement Date, receive (i) an amount in cash equal to the product of (x) the annual cash incentive bonus that Executive would have received for fiscal year 2023 absent the Transition Date and termination of employment effective as of the Retirement Date, and based on the actual level of performance at the end of the performance period and (y) a fraction, the numerator of which is the number of days Executive was employed by the Company Group during fiscal year 2023, and the denominator of which is 365 (the "Pro-Rata Bonus"); and (ii) provided Executive timely makes the applicable COBRA and life insurance conversion elections, continued participation for a period of twenty-four (24) months for Executive and Executive's eligible dependents in the Company's group health, dental, vision and life insurance programs or policies in which Executive and the Executive's eligible dependents were eligible to participate as of the Transition Date on the same basis as active employees of the Company Group at the Executive's cost ("Benefit Continuation"). The Pro-Rata Bonus shall be paid to Executive at the same time as annual cash incentive bonuses are paid to eligible employees in the ordinary course of business and, in any event, no later than March 15, 2024.

3. Miscellaneous.

(a) Governing Law. This Agreement and the Release of Claims shall be construed under and governed in all respects by the laws of the State of Minnesota, without regard to any conflicts of laws principles thereof that would cause the laws of any other jurisdiction to apply.

(b) Severability. The provisions of this Agreement and the Release of Claims shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof.

(c) Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of the Company, its successors and permitted assigns and the Company shall require any successor or assign to expressly assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession or assignment had taken place. The Company may not assign or delegate any rights or obligations hereunder except to a successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company. Neither this Agreement nor any right or interest hereunder shall be assignable or transferable by Executive, Executive's beneficiaries or legal representatives, except by will or by the laws of descent and distribution. This Agreement shall inure to the benefit of and be enforceable by Executive's legal personal representatives and estate.

(d) Entire Agreement; Certain Acknowledgements. This Agreement and the Release of Claims contains the entire agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, if any, understandings and arrangements, oral or written, between or among any member of the Company Group and Executive with respect to the subject matter hereof; provided, however, that neither this Agreement nor the Release of Claims shall supersede or otherwise affect the validity of, and is not intended to (and shall not be deemed to) limit, decrease or reduce the scope of, any prior or contemporaneous restrictive covenants, including, without limitation, any confidentiality, non-disparagement, non-compete, non-solicit or similar restrictive covenants to which Executive is subject in respect of the Company Group, which restrictive covenants Executive agrees remain in full force and effect in accordance with their terms.

(e) Headings. The headings and captions in this Agreement are provided for reference and convenience only, shall not be considered part of this Agreement, and shall not be employed in the construction of this Agreement.

(f) Construction. This Agreement shall be deemed drafted equally by both the Parties, and any presumption or principle that the language is to be construed against either Party shall not apply.

(g) Counterparts. This Agreement may be executed in several counterparts, each of which is an original and all of which shall constitute one instrument. It shall not be necessary in making proof of this Agreement or any counterpart hereof to produce or account for any of the other counterparts.

(h) Withholding. The Company shall be entitled to withhold (or to cause the withholding of) the amount, if any, of all taxes of any applicable jurisdiction required to be withheld by an employer with respect to any amount paid to Executive hereunder. The Company, in its sole and absolute discretion, shall make all determinations as to whether it is obligated to withhold any taxes hereunder and the amount thereof.

(i) Section 409A. The Parties intend for the payments and benefits under this Agreement to be exempt from Section 409A or, if not so exempt, to be paid or provided in a manner which complies with the requirements of such section, and intend that this Agreement shall be construed and administered in accordance with such intention. If any payments or benefits due to the Executive hereunder would cause the application of an accelerated or additional tax under Section 409A, such payments or benefits shall be restructured in a manner which does not cause such an accelerated or additional tax. For purposes of the limitations on nonqualified deferred compensation under Section 409A, each payment of compensation under this Agreement shall be treated as a separate payment of compensation. Without limiting the foregoing and notwithstanding anything contained herein to the contrary, to the extent required in order to avoid accelerated taxation and/or tax penalties under Section 409A amounts that would otherwise be payable and benefits that would otherwise be provided pursuant to this Agreement during the six-month period immediately following the Executive's separation from service shall instead be paid on the first business day after the date that is six months following the Executive's termination date (or death, if earlier).

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date and year first above written.

ENTEGRIS, INC.

By: /s/ Susan Rice
Name: Susan Rice
Title: Senior Vice President, Global Human Resources

EXECUTIVE

/s/ Gregory B. Graves
Gregory B. Graves

Exhibit A

RELEASE OF CLAIMS

1. Release. In exchange for good and valuable, including Entegris, Inc.'s (the "Company") agreement to provide to Gregory B. Graves ("Executive") certain benefits in accordance with Section 2(b) of the Transition Services Agreement between Executive and the Company, dated [●], 2023 (the "Transition Agreement"), Executive, on behalf of Executive, Executive's spouse, heirs, administrators, representatives, executors, successors, assigns, and all other persons claiming through Executive (collectively, "Releasors"), does hereby voluntarily, knowingly, and willingly release, waive, and forever discharge the Company, together with each of its past, present and future owners, parents, subsidiaries and affiliates, together with each of their current, former and future directors, officers, partners, agents, members, managers, insurers, employees, trustees, stockholders, investors, joint ventures, representatives, and attorneys, and each of their respective subsidiaries, affiliates, estates, predecessors, successors and assigns, both individually and in their official capacities (each, individually, a "Releasee" and collectively, the "Releasees") from, and does fully waive any obligations of any of the Releasees to Releasors for, any and all rights, actions, charges, causes of action, demands, damages, claims for relief, complaints, remuneration, sums of money, losses, suits, debts, covenants, contracts, agreements, promises, obligations, demands, accounts, expenses (including attorneys' fees and costs) and liabilities of any kind whatsoever, whether known or unknown, in law or in equity, contingent or absolute (collectively, "Claims"), which Executive or any of the other Releasors ever had, now has, or may hereafter claim to have by reason of any matter, cause, act, omission or thing whatsoever: (i) arising from the beginning of time through the date Employee executes this Release, including but not limited to, any such Claims (A) arising out of or relating in any way to Employee's employment with the Company or any other Releasee, (B) arising out of or relating to tort, fraud or defamation, and (C) arising under any federal, local, or state statute, regulation or ordinance, including, without limitation, the Age Discrimination in Employment Act (as amended by the Older Workers Benefit Protection Act) (collectively, "ADEA"), Title VII of the Civil Rights Act of 1964, the Civil Rights Acts of 1866 and 1871 (42 U.S.C. § 1981), the Civil Rights Act of 1991, the National Labor Relations Act, the Employee Retirement Income Security Act of 1974, the Americans with Disabilities Act of 1990, the Rehabilitation Act of 1973, the Equal Pay Act of 1963, the Genetic Information Nondiscrimination Act of 2008, the Minnesota Human Rights Act, the Minnesota Equal Pay for Equal Work Law, the Minnesota Whistleblower Act, the Minnesota Whistleblower Protection Laws, the Minnesota Parental Leave Act, each as amended and including each of their respective implementing regulations and/or any other federal, state, local, or foreign law (statutory, regulatory, or otherwise) that may be legally waived or released; (ii) arising out of or relating to the termination of Executive's employment; or (iii) arising under or relating to any policy, agreement, understanding, or promise, written or oral, formal or informal, between the Company or any other Releasee and Executive.

2. Acknowledgement of Full Payment. Executive acknowledges and agrees that the payments provided under Section 2 of the Transition Agreement are in complete satisfaction of any and all compensation and benefits due to Executive from the Company or any other Releasee, whether for services provided to the Company or any other Releasee, through the Retirement Date and that, except as expressly provided under the Transition Agreement, no further compensation is owed to Executive.

3. Non-Admission. Nothing in this Release of Claims, nor the furnishing of consideration for this Release of Claims, is intended to be nor will it be used as an admission of liability by either party that there has been any violation of state or federal law, employment practice or any other matter.

4. Review and Rescission Periods. Executive acknowledges that he has been provided a period of up to twenty-one (21) days following the Retirement Date (as defined in the Transition Agreement) in which to consider the release of claims set forth in this Release of Claims. Executive may sign and return this Release of Claims before the expiration of the twenty-one (21)-day period following the Retirement Date; **provided, however, that in no event may Executive execute this Release of Claims prior to the Retirement Date**. Once this Release of Claims is executed, Executive may rescind the Agreement, within fifteen (15) calendar days following the date of signature. To be effective, any rescission within the relevant time period must be in writing and delivered to the Company in care of the General Counsel. If sent by mail, any rescission must be postmarked within the relevant time period, must be properly addressed, and must be sent by certified mail, return receipt requested. The benefits described in Section

2(b) of the Transition Agreement shall not commence or be provided to Executive until this Release of Claims becomes effective. If Executive rescinds Executive's consent within the relevant time period, this Release of Claims shall be of no force or effect and Executive shall have no right to the payments and benefits set forth in Section 2(b) of the Transition. If Executive does not rescind this Release of Claims, then, at the expiration of such fifteen (15) day period, this Release of Claims will take effect as a legally-binding agreement between Executive and the Company on the basis set forth above.

I HAVE READ THIS EXHIBIT THOROUGHLY, UNDERSTAND ITS TERMS AND HAVE SIGNED IT KNOWINGLY AND VOLUNTARILY. I UNDERSTAND THAT THIS SUPPLEMENTAL RELEASE AGREEMENT IS A LEGAL DOCUMENT.

IN WITNESS WHEREOF, Executive has executed this Release of Claims as of the date set forth below.

____

Gregory B. Graves

Date: ______________________________

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:May 11, 2023

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Gregory B. Graves, 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: May 11, 2023

/s/ Gregory B. Graves
Gregory B. Graves
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 April 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 Gregory B. Graves, 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: May 11, 2023

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer

/s/ Gregory B. Graves
Gregory B. Graves
Chief Financial Officer