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 2, 2022

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

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

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

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.01 par value per share	**ENTG**	**The Nasdaq Stock Market LLC**

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

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

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 22, 2022, there were 135,883,084 shares of the registrant's common stock outstanding.

ENTERGIS, INC. AND SUBSIDIARIES
FORM 10-Q
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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 the impacts of the COVID-19 pandemic and the conflict in Ukraine on the Company’s operations and markets, including supply chain issues related thereto; 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 and the impact of the COVID-19 pandemic on such 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 its business strategies, including with respect to Company’s expansion of its manufacturing presence in Taiwan; 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; 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, risks related to the COVID-19 pandemic on the global economy and financial markets, as well as on the Company, its customers and suppliers, which may impact its sales, gross margin, customer demand and its ability to supply its products to its customers; raw material shortages, supply and labor constraints and price increases or pricing pressures; 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 ongoing conflict between Russia and Ukraine and the global response to it; 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 or other transactions; the Company’s ability to effectively implement any organizational changes; the Company’s ability to protect and enforce intellectual property rights; operational, political and legal risks of the Company's international operations; the Company's dependence on sole source and limited source suppliers; 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 foreign and national security policy, especially as they relate to China; fluctuation of currency exchange rates; fluctuations in the market price of the Company's stock; the level of, and obligations associated with, the Company's indebtedness; and other risk factors and additional information described in the Company's filings with the Securities and Exchange Commission, including under the heading "Risks Factors" in Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed on February 4, 2022, and in the Company's other periodic filings. Except as required under the federal securities laws and the rules and regulations of the Securities and Exchange Commission, 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 2, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 352,732	$ 402,565
Trade accounts and notes receivable, net of allowance for doubtful accounts of $2,486 and $2,349	372,759	347,413
Inventories, net	545,607	475,213
Deferred tax charges and refundable income taxes	34,755	35,312
Other current assets	63,482	52,867
Total current assets	1,369,335	1,313,370
Property, plant and equipment, net of accumulated depreciation of $674,237 and $653,104	698,574	654,098
Other assets:		
Right-of-use assets	69,713	66,563
Goodwill	793,861	793,702
Intangible assets, net of accumulated amortization of $507,465 and $494,601	322,289	335,113
Deferred tax assets and other noncurrent tax assets	17,820	17,671
Other	11,848	11,379
Total assets	$ 3,283,440	$ 3,191,896
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 133,956	$ 130,734
Accrued payroll and related benefits	55,562	108,818
Other accrued liabilities	117,469	90,313
Income taxes payable	64,674	49,136
Total current liabilities	371,661	379,001
Long-term debt, excluding current maturities, net of unamortized discount and debt issuance costs of $7,651 and $7,973	937,349	937,027
Pension benefit obligations and other liabilities	37,964	37,816
Deferred tax liabilities and other noncurrent tax liabilities	54,038	64,170
Long-term lease liability	62,110	60,101
Commitments and contingent liabilities	—	—
Equity:		
Preferred stock, par value $.01; 5,000,000 shares authorized; none issued and outstanding as of April 2, 2022 and December 31, 2021	—	—
Common stock, par value $.01; 400,000,000 shares authorized; issued and outstanding shares as of April 2, 2022: 136,085,484 and 135,883,084, respectively; issued and outstanding shares as of December 31, 2021: 135,719,366 and 135,516,966, respectively	1,361	1,357
Treasury stock, at cost: 202,400 shares held as of April 2, 2022 and December 31, 2021	(7,112)	(7,112)
Additional paid-in capital	876,388	879,845
Retained earnings	991,821	879,776
Accumulated other comprehensive loss	(42,140)	(40,085)
Total equity	1,820,318	1,713,781
Total liabilities and equity	$ 3,283,440	$ 3,191,896

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 2, 2022	Three months ended April 3, 2021
Net sales	$ 649,646	$ 512,844
Cost of sales	339,826	277,858
Gross profit	309,820	234,986
Selling, general and administrative expenses	87,108	71,389
Engineering, research and development expenses	46,715	37,748
Amortization of intangible assets	12,651	11,871
Operating income	163,346	113,978
Interest expense	12,876	11,652
Interest income	(12)	(71)
Other expense, net	4,902	4,330
Income before income tax expense	145,580	98,067
Income tax expense	19,875	13,391
Net income	$ 125,705	$ 84,676
Basic earnings per common share	$ 0.93	$ 0.63
Diluted earnings per common share	$ 0.92	$ 0.62
Weighted shares outstanding:		
Basic	135,670	135,068
Diluted	136,552	136,502

See the accompanying notes to condensed consolidated financial statements.

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

(In thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Net income	$ 125,705	$ 84,676
Other comprehensive income (loss), net of tax		
Foreign currency translation adjustments	(2,128)	(3,716)
Pension liability adjustments	73	39
Other comprehensive loss	(2,055)	(3,677)
Comprehensive income	$ 123,650	$ 80,999

See the accompanying notes to condensed consolidated financial statements.

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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	Total
Balance at December 31, 2020	135,149	$ 1,351	202	$ (7,112)	$ 844,850	$ 577,833	$ (36,588)	$ (840)	$ 1,379,494
Shares issued under stock plans	392	4	—	—	(13,470)	—	—	—	(13,466)
Share-based compensation expense	—	—	—	—	7,138	—	—	—	7,138
Repurchase and retirement of common stock	(145)	(1)	—	—	(904)	(14,095)	—	—	(15,000)
Dividends declared ($0.08 per share)	—	—	—	—	8	(10,840)	—	—	(10,832)
Pension liability adjustment	—	—	—	—	—	—	—	39	39
Foreign currency translation	—	—	—	—	—	—	(3,716)	—	(3,716)
Net income	—	—	—	—	—	84,676	—	—	84,676
Balance at April 3, 2021	135,396	$ 1,354	202	$ (7,112)	$ 837,622	$ 637,574	$ (40,304)	$ (801)	$ 1,428,333

(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	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

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 2, 2022	Three months ended April 3, 2021
Operating activities:		
Net income	$ 125,705	$ 84,676
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	23,905	22,095
Amortization	12,651	11,871
Share-based compensation expense	9,285	7,138
Provision for deferred income taxes	(11,230)	1,581
Charge for excess and obsolete inventory	5,811	3,249
Other	5,614	3,336
Changes in operating assets and liabilities:		
Trade accounts and notes receivable	(31,171)	(21,564)
Inventories	(77,476)	(39,337)
Accounts payable and accrued liabilities	(22,323)	(28,591)
Other current assets	2,629	9,400
Income taxes payable and refundable income taxes	16,760	(3,588)
Other	3,628	2,849
Net cash provided by operating activities	63,788	53,115
Investing activities:		
Acquisition of property, plant and equipment	(84,405)	(43,330)
Other	1,123	72
Net cash used in investing activities	(83,282)	(43,258)
Financing activities:		
Proceeds from revolving credit facility	79,000	—
Payments of revolving credit facility	(79,000)	—
Payments for dividends	(13,895)	(10,908)
Issuance of common stock	3,379	1,572
Repurchase and retirement of common stock	—	(15,000)
Taxes paid related to net share settlement of equity awards	(16,117)	(15,038)
Other	(962)	(1)
Net cash used in financing activities	(27,595)	(39,375)
Effect of exchange rate changes on cash and cash equivalents	(2,744)	(2,855)
Decrease in cash and cash equivalents	(49,833)	(32,373)
Cash and cash equivalents at beginning of period	402,565	580,893
Cash and cash equivalents at end of period	$ 352,732	$ 548,520

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 2, 2022	**April 3, 2021**
Non-cash transactions:		
Equipment purchases in accounts payable	18,629	8,249
Increase in dividends payable	235	76
Schedule of interest and income taxes paid:		
Interest paid	1,002	13,515
Income taxes paid, net of refunds received	12,867	14,959

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 2, 2022 and December 31, 2021, and the results of operations and comprehensive income for the three months ended April 2, 2022 and April 3, 2021, the equity statements as of and for the three months ended April 2, 2022 and April 3, 2021, and cash flows for the three months ended April 2, 2022 and April 3, 2021.

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 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 Form 10-K for the year ended December 31, 2021. The results of operations for the three months ended April 2, 2022 are not necessarily indicative of the results to be expected for the full year.

Fair Value of Financial Instruments The carrying value of cash equivalents, accounts receivable, accounts payable, accrued payroll and related benefits, and other accrued liabilities approximates fair value due to the short maturity of those items. The fair value of long-term debt, including current maturities, was $896.8 million at April 2, 2022, compared to the carrying amount of long-term debt, including current maturities, of $937.3 million at April 2, 2022.

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 consolidated balance sheet.

(In thousands)	April 2, 2022	April 3, 2021
Balance at beginning of period	$ 23,050	$ 13,852
Revenue recognized that was included in the contract liability balance at the beginning of the period	(11,426)	(9,713)
Increases due to cash received, excluding amounts recognized as revenue during the period	15,987	14,938
Balance at end of period	$ 27,611	$ 19,077

3. ACQUISITIONS

Pending Acquisition - CMC Materials

On December 14, 2021, Entegris and CMC Materials, Inc. (“CMC Materials”) entered into a definitive Agreement and Plan of Merger pursuant to which Entegris will acquire CMC Materials in a cash and stock transaction with an enterprise value of approximately $6.5 billion. The transaction is expected to be financed with a combination of equity issued to CMC Materials, new debt and cash on hand. In connection with the Agreement and Plan of Merger, Entegris has obtained debt financing commitments from Morgan Stanley Senior Funding, Inc. and certain other financial institutions for (i) a senior unsecured bridge term loan facility in an aggregate principal amount of up to $895.0 million and (ii) a senior secured first lien term loan B facility in an aggregate principal amount of up to $2.495 billion. On April 14, 2022, Entegris also issued, via a wholly-owned escrow subsidiary, $1.6 billion aggregate principal amount of new 4.750% Senior Secured Notes due 2029. The transaction is expected to close in the second half of 2022, subject to the satisfaction of customary closing conditions, including the receipt of antitrust clearance or approval in China, Japan and Singapore and other customary closing conditions.

Precision Microchemicals

On November 30, 2021, the Company completed its acquisition of the Precision Microchemicals business from BASF SE. The Precision Microchemicals business reports into the Specialty Chemicals and Engineered Materials segment of the Company. The acquisition was accounted for under the acquisition method of accounting, and the Precision Microchemicals business results of operations are included in the Company’s consolidated financial statements as of and since November 30, 2021. The acquisition does not constitute a material business combination.

The purchase price for the Precision Microchemical business includes cash consideration of $89.7 million (net of cash acquired), which was funded from the Company’s existing cash on hand.

The purchase price of the Precision Microchemical business exceeds the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed by $42.8 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. This additional investment value resulted in goodwill, which is expected to be deductible for income tax purposes.

The fair value of acquired identifiable intangible assets was determined using Level 3 inputs for the “income approach” on an individual asset basis. The key assumptions used in the calculation of the discounted cash flows include future revenue growth rates, future gross margin, future selling, general and administrative expense, royalty rates, and discount rates. The valuations and the underlying assumptions have been deemed reasonable by the Company’s management. There are inherent uncertainties and management judgment required in these determinations.

During the quarter ended April 2, 2022, the Company finalized its fair value determination of the assets acquired and the liabilities assumed. The following table summarizes the final 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):	November 30, 2021	As of April 2, 2022
Inventories, net	$ 967	$ 967
Other current assets	19	19
Identifiable intangible assets	44,910	44,910
Right-of-use assets	1,912	1,912
Property, plant and equipment	1,002	1,002
Other noncurrent assets	18	18
Accounts payable and accrued liabilities	(43)	(30)
Short-term lease liability	(170)	(170)
Long-term lease liability	(1,742)	(1,742)
Net assets acquired	46,873	46,886
Goodwill	42,819	42,824
Total purchase price, net of cash acquired	$ 89,692	$ 89,710

The Company recognized the following finite-lived intangible assets as part of the acquisition of the Precision Microchemicals business:

(In thousands)	Amount	Weighted average life in years
Developed technology	$ 9,600	9.0
Trademarks and trade names	3,400	15.0
Customer relationships	31,800	15.5
Other	110	
	$ 44,910	14.1

4. INVENTORIES

Inventories consist of the following:

(In thousands)	April 2, 2022	December 31, 2021
Raw materials	$ 236,645	$ 191,986
Work-in-process	47,965	40,257
Finished goods	260,997	242,970
Total inventories, net	$ 545,607	$ 475,213

5. GOODWILL AND INTANGIBLE ASSETS

Goodwill activity for each of the Company's reportable segments that carry goodwill, Specialty Chemicals and Engineered Materials ("SCEM"), Microcontamination Control ("MC") and Advanced Materials Handling ("AMH"), for each period was as follows:

(In thousands)	Specialty Chemicals and Engineered Materials	Microcontamination Control	Advanced Materials Handling	Total
December 31, 2021	$ 470,875	$ 248,725	$ 74,102	$ 793,702
Purchase accounting adjustments	5	—	—	5
Foreign currency translation	(27)	181	—	154
April 2, 2022	$ 470,853	$ 248,906	$ 74,102	$ 793,861

Identifiable intangible assets at April 2, 2022 and December 31, 2021 consist of the following:

April 2, 2022

(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 294,216	$ 235,827	$ 58,389
Trademarks and trade names	33,558	20,838	12,720
Customer relationships	481,693	236,317	245,376
Other	20,287	14,483	5,804
	$ 829,754	$ 507,465	$ 322,289

December 31, 2021

(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 293,982	$ 232,722	$ 61,260
Trademarks and trade names	33,553	20,340	13,213
Customer relationships	481,674	227,350	254,324
Other	20,505	14,189	6,316
	$ 829,714	$ 494,601	$ 335,113

Future amortization expense during the remainder of 2022, each of the succeeding four years and thereafter relating to intangible assets currently recorded in the Company's condensed consolidated balance sheets is estimated to be the following at April 2, 2022:

(In thousands)	Remaining 2022	2023	2024	2025	2026	Thereafter	Total
Future amortization expense	$ 38,262	50,280	37,490	31,129	28,901	136,227	$ 322,289

6. DEBT

Long-term debt as of April 2, 2022 and December 31, 2021 consists of the following:

(In thousands)	April 2, 2022	December 31, 2021
Senior unsecured notes due 2029	$ 400,000	$ 400,000
Senior unsecured notes due 2028	400,000	400,000
Senior secured term loan facility due 2025	145,000	145,000
	945,000	945,000
Unamortized discount and debt issuance costs	7,651	7,973
Total long-term debt	$ 937,349	$ 937,027

Annual maturities of long-term debt, excluding unamortized discount and issuance costs, due as of April 2, 2022 are as follows:

(In thousands)	2022	2023	2024	2025	2026	Thereafter	Total
Contractual debt obligation maturities*	$ —	—	—	145,000	—	800,000	$ 945,000

*Subject to Excess Cash Flow payments to the lenders.

Pending Acquisition

In connection with the pending acquisition of CMC Materials, on March 2, 2022, the Company entered into an amended and restated commitment letter, which amended and restated the commitment letter with Morgan Stanley Senior Funding, Inc. and certain other financial institutions (collectively, the “Financing Sources”), dated as of December 14, 2021, among Entegris and the Financing Sources (as amended and restated, the “Commitment Letter”). Pursuant to the Commitment Letter, the Financing Sources (a) committed to provide Entegris (i) a senior secured first lien term loan B facility in an aggregate principal amount of up to $4.0 billion (the “Term Loan B Facility”), and (ii) a senior unsecured bridge term loan facility in an aggregate principal amount of up to $895.0 million (the “Bridge Facility” and together with the Term Loan B Facility, the “Facilities”) and (b) to the extent that such Financing Sources are revolving lenders under Entegris’ existing credit agreement, (i) consented to the acquisition and certain amendments to the terms of the Company’s senior secured revolving credit facility (the “Revolving Facility”) and (ii) committed to provide to Entegris additional revolving credit commitments in an aggregate principal amount of $175.0 million (the Revolving Facility as amended, the “Amended Revolving Facility”). Commitments under the Bridge Facility will be reduced by, among other things, the aggregate gross cash proceeds in excess of $300.0 million resulting from any issuance or sale by Entegris of (x) senior unsecured notes pursuant to a public offering or a Rule 144A offering or other private placement or certain other debt securities or indebtedness for borrowed money, which are collectively referred to as the notes, and (y) equity securities (including common stock and any securities convertible or exchangeable into or exercisable for equity securities or other equity-linked securities) of Entegris. On March 2, 2022, the Company launched syndication of the Term Loan B Facility and completed syndication of $2.495 billion of the commitments under the Term Loan B Facility with pricing at Secured Overnight Financing Rate (“SOFR”) plus 3.00%. The Term Loan B Facility will be borrowed at, and the documentation with respect thereto will be executed on, the closing date of the pending acquisition of CMC Materials.

On March 30, 2022, the Company entered into an amendment to the Commitment Letter pursuant to which the Company was permitted to reduce the total commitments from the Financing Sources under the Term Loan B Facility instead of under the Bridge Facility upon issuance of the 2029 Secured Notes (as defined below). On April 13, 2022, the Company entered into a second amendment to the Commitment Letter pursuant to which the Company was permitted to exclude $95.0 million from the proceeds of any secured notes from reducing the commitments under the Bridge Facility.

On April 14, 2022, Entegris also issued, via a wholly-owned escrow subsidiary, $1.6 billion aggregate principal amount of new 4.750% Senior Secured Notes due 2029 (the “2029 Secured Notes”) and in connection therewith, reduced the commitments under the Term Loan B Facility to $2.495 billion.

The Company began incurring ticking fees associated with the Term Loan B Facility on March 2, 2022 and expects to continue to incur ticking fees through the closing date of the acquisition of CMC Materials. The ticking fees will be paid in cash to the term loan lenders on the closing date of the acquisition. During the quarter ended April 2, 2022, the Company incurred $4.7 million in ticking fees which were recorded to interest expense in the Condensed Consolidated Statement of Operations.

7. EARNINGS PER COMMON SHARE

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

	Three months ended	
(In thousands)	April 2, 2022	April 3, 2021
Basic—weighted common shares outstanding	135,670	135,068
Weighted common shares assumed upon exercise of stock options and vesting of restricted common stock	882	1,434
Diluted—weighted common shares and common shares equivalent outstanding	136,552	136,502

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 2, 2022 and April 3, 2021:

	Three months ended	
(In thousands)	April 2, 2022	April 3, 2021
Shares excluded from calculations of diluted EPS	140	140

8. OTHER EXPENSE, NET

Other expense, net for the three months ended April 2, 2022 and April 3, 2021 consists of the following:

	Three months ended	
(In thousands)	April 2, 2022	April 3, 2021
Loss on foreign currency transactions	$ 4,577	$ 4,263
Other, net	325	67
Other expense, net	$ 4,902	$ 4,330

9. 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 three segments to create new and increasingly integrated solutions for its customers. The Company's business is reported 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 delivery systems to support semiconductor and other advanced manufacturing processes.
- **Microcontamination Control:** MC offers solutions to filter and purify critical liquid chemistries and gases 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, life sciences and other high-technology industries.

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

(In thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Net sales		
SCEM	$ 196,421	$ 166,541
MC	266,637	207,099
AMH	198,113	148,541
Inter-segment elimination	(11,525)	(9,337)
Total net sales	$ 649,646	$ 512,844

(In thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Segment profit		
SCEM	$ 48,851	$ 34,556
MC	98,618	70,566
AMH	46,690	32,095
Total segment profit	$ 194,159	$ 137,217

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

(In thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Total segment profit	$ 194,159	$ 137,217
Less:		
Amortization of intangible assets	12,651	11,871
Unallocated general and administrative expenses	18,162	11,368
Operating income	163,346	113,978
Interest expense	12,876	11,652
Interest income	(12)	(71)
Other expense, net	4,902	4,330
Income before income tax expense	$ 145,580	$ 98,067

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 2, 2022 and April 3, 2021, respectively.

	Three months ended April 2, 2022				
(In thousands)	SCEM	MC	AMH	Inter-segment	Total
North America	$ 57,304	$ 35,355	$ 64,341	$ (11,525)	$ 145,475
Taiwan	32,504	78,043	33,718	—	144,265
China	26,524	40,521	26,828	—	93,873
South Korea	24,454	33,692	30,009	—	88,155
Japan	23,299	47,659	12,864	—	83,822
Europe	13,689	18,374	22,246	—	54,309
Southeast Asia	18,647	12,993	8,107	—	39,747
	$ 196,421	$ 266,637	$ 198,113	$ (11,525)	$ 649,646

	Three months ended April 3, 2021				
(In thousands)	SCEM	MC	AMH	Inter-segment	Total
North America	$ 49,064	$ 34,592	$ 45,465	$ (9,337)	$ 119,784
Taiwan	28,679	44,830	27,806	—	101,315
China	20,662	41,689	20,577	—	82,928
South Korea	25,170	28,011	18,905	—	72,086
Japan	22,480	36,723	12,005	—	71,208
Europe	11,777	11,117	16,494	—	39,388
Southeast Asia	8,709	10,137	7,289	—	26,135
	$ 166,541	$ 207,099	$ 148,541	$ (9,337)	$ 512,844

10. SUBSEQUENT EVENT

On April 14, 2022, Entegris Escrow Corporation (the "Issuer"), a Delaware corporation and wholly-owned subsidiary of Entegris, completed a private offering of $1.6 billion aggregate principal amount of 4.75% Senior Secured Notes due 2029. The Company expects net proceeds from the offering of approximately $1.57 billion, after deducting estimated commissions and offering fees and expenses.

The Company intends to use the net proceeds from the offering of the 2029 Secured Notes, together with the borrowings under the Bridge Facility (or other sources of indebtedness which reduce the commitments under the Bridge Facility) and the Term Loan B Facility and cash on hand, to (a) finance a portion of the cash consideration for the pending acquisition of CMC Materials, (b) pay the fees and expenses related to the acquisition, the 2029 Secured Notes offering, the New Term Loan Facility, the Bridge Facility and the Amended Revolving Facility, (c) repay certain existing indebtedness of CMC Materials and Entegris and (d) in the case of the Term Loan B Facility, finance working capital and general corporate purposes of Entegris. In the event that the acquisition does not close, the Issuer will be required to redeem the 2029 Secured Notes at a price equal to 100% of the aggregate principal amount of the 2029 Secured Notes plus accrued and unpaid interest, if any, up to, but not including, the redemption date. The gross proceeds of the offering, together with certain additional amounts, have been deposited into a separate escrow account until the consummation of the acquisition.

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, 2021 as well as in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K 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

This overview is not a complete discussion of the Company's financial condition, changes in financial condition or results of operations; it is intended merely to facilitate an understanding of the most salient aspects of the Company's financial condition and operating performance and to provide a context for the detailed discussion and analysis that follows. The discussion and analysis must be read in its entirety in order to fully understand the Company's financial condition and results of operations.

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

Our customized materials solutions enable the highest levels of performance essential to the manufacture of semiconductors. As our customers introduce more complex architectures and search for new materials with better electrical and structural properties to improve the performance of their devices, they rely on Entegris as a trusted partner to address these challenges. We understand these challenges and have solutions to address them, such as our advanced deposition materials, implant gases, formulated cleaning chemistries and selective etch chemistries. Our customers also require greater end-to-end materials purity and integrity in their manufacturing processes that, when combined with smaller dimensions and more complex architectures, can be challenging to achieve. To enable the use of new metals and the further miniaturization of chips, and to maximize yield and increase long-term device reliability, we provide products such as our advanced liquid and gas filtration and purification products that help to selectively remove new classes of contaminants throughout the semiconductor supply chain. In addition, to ensure purity levels are maintained across the entire supply chain, from bulk manufacturing, to transportation to and delivery through a fabrication plant, to application onto the wafer, we provide high-purity packaging and materials handling products.

Our business is organized and operated in three 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 delivery systems, to support semiconductor and other advanced manufacturing processes. The Microcontamination Control segment, or MC, offers solutions to filter and purify critical liquid chemistries and gases 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, life sciences and other high-technology industries. While these segments have separate products and technical know-how, they share common business systems and processes, technology centers and strategic and technology roadmaps. With the technology, capabilities and complementary product portfolios from these segments, we believe we are uniquely positioned to collaborate across divisions to create new, co-optimized and increasingly integrated solutions for our customers. For example, our SCEM segment offers a highly selective nitride etch chemistry, our MC segment provides a liquid filter that is specifically matched to that formulation and our AMH segment ensures the integrity of the product as it is moved to and through the fab environment. See note 9 to the condensed consolidated financial statements for additional information on the Company's three segments.

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 2022 end April 2, 2022, July 2, 2022, October 1, 2022 and December 31, 2022.

Key operating factors Key factors that management believes have the largest impact on the overall results of operations of the Company include:

- ***Level of sales*** Since a significant portion of the Company's product costs (except for raw materials, purchased components and direct labor) are largely fixed in the short-to-medium term, an increase or decrease in sales affects gross profits and overall profitability significantly. Also, increases or decreases in sales and operating profitability affect certain costs such as incentive compensation and commissions, which are highly variable in nature. The

Company's sales are subject to the effects of industry cyclicality, technological change, substantial competition, pricing pressures and foreign currency fluctuations.

- ***Variable margin on sales*** The Company's variable margin on sales is determined by selling prices and the costs of manufacturing and raw materials. This is affected by a number of factors, which include the Company's sales mix, purchase prices of raw materials (especially polymers, membranes, stainless steel and purchased components), domestic and international competition, direct labor costs and the efficiency of the Company's production operations, among others.
- ***Fixed cost structure*** The Company's operations include a number of large fixed or semi-fixed cost components, which include salaries, indirect labor and benefits, facility costs, lease expenses and depreciation and amortization. It is not possible to vary these costs easily in the short-term as volumes fluctuate. Accordingly, increases or decreases in sales volume can have a large effect on the usage and productivity of these cost components, resulting in a large impact on the Company's profitability.

Impact of COVID-19 on our Business

The COVID-19 pandemic continues to impact the global economy and cause significant macroeconomic uncertainty. Infection rates vary across the countries in which we operate. Governmental authorities have continued to implement numerous and constantly evolving measures to try to contain the virus, such as travel bans and restrictions, masking recommendations and mandates, vaccine recommendations and mandates, limits on gatherings, quarantines, shelter-in-place orders and business shutdowns. For example, in response to an outbreak of infection in Shanghai, beginning in March 2022 governmental authorities in China implemented a lockdown order in that city, significantly slowing economic and business activity in that region. We have taken proactive, aggressive action to protect the health and safety of our employees, customers, partners and suppliers, consistent with the latest and evolving governmental guidelines. We expect to continue to implement appropriate measures until the COVID-19 pandemic is adequately contained. We continue to monitor the rapidly evolving situation and guidance from international and domestic authorities, including federal, state and local public health authorities, and may take additional actions based on their recommendations and requirements or as we otherwise see fit to protect the health and safety of our employees, customers, partners and suppliers.

While certain of our operations from time-to-time have been temporarily affected by government-mandated restrictions, to date we have not experienced significant adverse impacts to our global operations as a result of the COVID-19 pandemic. Broader impacts of the pandemic have included a more dynamic supply chain and global logistics environment, and we have experienced instances of raw material constraints, higher freight costs and delivery delays in both inbound shipments of raw materials and outgoing shipments of finished products to customers. While we continue to focus on mitigating risks to our operations and supply chain in the current industry environment, we expect some of the foregoing challenges to linger. From a demand perspective, we continued to see strong demand for our leading-edge products, largely driven by accelerated digitalization, 5G applications and high-performance computing. As described above, the lockdown in Shanghai may cause demand for our products to be delayed or deferred.

At this time, given the dynamic nature of the situation, any impact on our financial condition, results of operations or cash flows in the future continues to be difficult to estimate and predict, as it depends on future events that are highly uncertain and cannot be predicted with accuracy, including, but not limited to, the duration and continued spread of the pandemic, its severity, potential additional surges of infection, the emergence of more virulent or more dangerous variants, the actions taken to mitigate the virus or its impact, the development, distribution, efficacy and acceptance of vaccines worldwide, how quickly and to what extent normal economic and operating conditions can resume, the broader impact that the pandemic is having on the economy and our industry, and specific implications the pandemic may have on our suppliers and on global logistics. See Item 1A, "Risk Factors," in our Annual Report on Form 10-K for the year ended December 31, 2021 for additional information regarding risks associated with the COVID-19 pandemic, including under the caption "The COVID-19 pandemic and ensuing governmental responses could materially adversely affect our financial condition and results of operations."

Impact of Conflict Between Russia and Ukraine

The military conflict between Russia and Ukraine and the sanctions imposed by the United States and other governments in response to this conflict have caused significant volatility and disruptions to the global markets. While we source a few raw materials from Russia and Ukraine, to date our supply of these materials has not been significantly impacted by the conflict. We continue to monitor the situation closely and are proactively assessing and evaluating alternative sources to bolster our supply of these materials moving forward, in addition to working closely with our customers on any product re-qualification that may be required. Revenue relating to products manufactured from raw materials sourced from this region does not constitute a material portion of our business. Further, while sales to customers in Russia and Ukraine do not constitute a material portion of our business, there is uncertainty regarding the ultimate impact the conflict will have on the global economy, supply chains, logistics, fuel prices, raw material pricing and our business. Refer to Part II, Item 1A. "Risk Factors" for more information.

Overall Summary of Financial Results

For the three months ended April 2, 2022, net sales increased 27% to $649.6 million, compared to $512.8 million for the three months ended April 3, 2021. Total net sales increased primarily as a result of strong growth across all three segments, as we benefited from robust industry growth and more wafers produced for leading-edge solutions, driving record demand for our products and solutions. Net sales for the three months ended April 2, 2022 included sales of $5.4 million from acquired businesses and unfavorable foreign currency translation effects of $9.7 million.

The Company experienced a 47.7% gross margin for the three months ended April 2, 2022, compared to 45.8% in the comparable year-ago period. The gross margin increase was driven by strong execution and higher volumes, offset in part by raw material, logistic costs and modest labor inflation.

As a result of the factors mentioned above, the Company reported net income of $125.7 million, or $0.92 per diluted share, for the quarter ended April 2, 2022, compared to net income of $84.7 million, or $0.62 per diluted share, a year ago.

On April 14, 2022, Entegris Escrow Corporation, a Delaware corporation and wholly-owned subsidiary of Entegris, completed a private offering of $1.6 billion aggregate principal amount of 4.75% Senior Secured Notes due 2029, or the 2029 Secured Notes. The Company expects net proceeds from the offering of approximately $1.57 billion, after deducting estimated commissions and offering fees and expenses, which will be used to finance a portion of the Company's pending acquisition of CMC Materials.

Cash and cash equivalents were $352.7 million at April 2, 2022, compared with $402.6 million at December 31, 2021. The Company had outstanding long-term debt (excluding current maturities) of $937.3 million at April 2, 2022, compared to $937.0 million at December 31, 2021.

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 its Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission on February 4, 2022. 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 2, 2022 Compared to Three Months Ended April 3, 2021

The following table compares operating results for the three months ended April 2, 2022 and April 3, 2021, both in dollars and as a percentage of net sales, for each caption.

	Three months ended			
(Dollars in thousands)	April 2, 2022		April 3, 2021	
Net sales	$ 649,646	100.0 %	$ 512,844	100.0 %
Cost of sales	339,826	52.3	277,858	54.2
Gross profit	309,820	47.7	234,986	45.8
Selling, general and administrative expenses	87,108	13.4	71,389	13.9
Engineering, research and development expenses	46,715	7.2	37,748	7.4
Amortization of intangible assets	12,651	1.9	11,871	2.3
Operating income	163,346	25.1	113,978	22.2
Interest expense	12,876	2.0	11,652	2.3
Interest income	(12)	—	(71)	—
Other expense, net	4,902	0.8	4,330	0.8
Income before income taxes	145,580	22.4	98,067	19.1
Income tax expense	19,875	3.1	13,391	2.6
Net income	$ 125,705	19.3 %	$ 84,676	16.5 %

Net sales For the three months ended April 2, 2022, net sales increased by 27% to $649.6 million, compared to $512.8 million for the three months ended April 3, 2021. 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 3, 2021	$ 512,844
Increase mainly associated with volume	141,104
Increase associated with acquired businesses	5,406
Decrease associated with effect of foreign currency translation	(9,708)
Net sales in the quarter ended April 2, 2022	$ 649,646

Total net sales increased primarily as a result of strong growth across all three segments. Growth was driven in large part by our strong position and sales of leading-edge solutions like liquid and gas filtration, specialty coatings, advanced deposition materials, selective etch and other areas of increasing importance to our customers across the semiconductor ecosystem. Total net sales also reflected unfavorable foreign currency translation effects of $9.7 million and net sales associated with recent acquisitions of $5.4 million.

On a geographic basis, sales percentage by customers' country or region for the three months ended April 2, 2022 and April 3, 2021 and the percentage increase in sales for the three months ended April 2, 2022 compared to the sales for the three months ended April 3, 2021 were as follows:

	Three months ended		
	April 2, 2022	April 3, 2021	Percentage increase in sales
North America	22 %	23 %	21 %
Taiwan	22 %	20 %	42 %
China	14 %	16 %	13 %
South Korea	14 %	14 %	22 %
Japan	13 %	14 %	18 %
Europe	8 %	8 %	38 %
Southeast Asia	6 %	5 %	52 %

The increases in sales to customers in North America, Taiwan, China, Japan and Europe were primarily driven by general increases in demand for products in all three of the Company's segments. The increase in sales in China primarily relates to higher sales of Advanced Materials Handling products of 30% and Specialty Chemicals and Engineering Materials products of

28%. The increase in sales in Korea primarily relates to higher sales of Advanced Materials Handling products of 59% and Microcontamination Control products of 20%.

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

	Three months ended		
	April 2, 2022	April 3, 2021	Percentage point change
Gross margin as a percentage of net revenues:	47.7 %	45.8 %	1.9

Gross margin increased by 1.9 percentage points for the three months ended April 2, 2022, compared to the same period in the prior year. Gross margins were better than expected, driven by strong execution and higher volumes, offset in part by raw material, logistic costs and modest labor inflation.

Selling, general and administrative expenses Selling, general and administrative, or SG&A, expenses were $87.1 million in the three months ended April 2, 2022, compared to $71.4 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 3, 2021	$ 71,389
Employee costs	7,206
Deal and transaction costs	5,008
Donation costs	2,963
Other increases, net	542
Selling, general and administrative expenses in the quarter ended April 2, 2022	$ 87,108

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 24% to $46.7 million in the three months ended April 2, 2022 compared to $37.7 million in the year-ago period as planned. 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 3, 2021	$ 37,748
Employee costs	5,391
Project materials	2,436
Other increases, net	1,140
Engineering, research and development expenses in the quarter ended April 2, 2022	$ 46,715

Amortization expenses Amortization of intangible assets was $12.7 million in the three months ended April 2, 2022, compared to $11.9 million for the three months ended April 3, 2021. The increase primarily reflects additional amortization expense associated with recent acquisitions.

Interest expense Interest expense includes interest associated with debt outstanding and the amortization of debt issuance costs associated with such borrowings. Interest expense was $12.9 million in the three months ended April 2, 2022, compared to $11.7 million in the three months ended April 3, 2021. The increase primarily reflects higher interest expense of $4.7 million related to ticking fees on the secured commitments for $2.495 billion under the Term Loan B Facility secured in connection with the pending acquisition of CMC Materials, partially offset by lower interest expense due to lower average debt levels and interest rates.

Other expense, net 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. Other expense, net was $4.3 million in the three months ended April 3, 2021 and consisted mainly of foreign currency transaction losses of $4.3 million.

Income tax expense Income tax expense was $19.9 million in the three months ended April 2, 2022, compared to income tax expense of $13.4 million in the three months ended April 3, 2021. The Company's year-to-date effective income tax rate at April 2, 2022 and April 3, 2021 was 13.7%.

The 2022 tax rate included benefits from a decrease in the foreign effective tax rate due to a change in foreign income mix and an increase in the foreign derived intangible income deduction which was offset by a reduction in creditable foreign withholding taxes. The 2021 tax rate included a valuation allowance on federal foreign tax credits generated in 2021 of $1.4

million. The year-to-date income tax expense in 2022 and 2021 includes discrete benefits of $4.3 million and $7.5 million, respectively, recorded in connection with share-based compensation.

Net income Due to the factors noted above, the Company recorded net income of $125.7 million, or $0.92 per diluted share, in the three months ended April 2, 2022, compared to net income of $84.7 million, or $0.62 per diluted share, in the three months ended April 3, 2021. In the three months ended April 2, 2022, net income, as a percentage of net sales, increased to 19.3% from 16.5% in the year-ago period.

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 37% to $206.2 million in the three months ended April 2, 2022, compared to $150.1 million in the three months ended April 3, 2021. In the three months ended April 2, 2022, adjusted EBITDA, as a percentage of net sales, increased to 32% from 29% in the year-ago period.

Adjusted operating income increased 42% to $182.3 million in the three months ended April 2, 2022, compared to $128.0 million in the three months ended April 3, 2021. Adjusted operating income, as a percentage of net sales, increased to 28% from 25% in the year-ago period.

Non-GAAP earnings per share increased 51% to $1.06 in the three months ended April 2, 2022, compared to $0.70 in the three months ended April 3, 2021.

The increases in adjusted EBITDA, adjusted operating income and non-GAAP earnings per share for the three months ended April 2, 2022 compared to the year-ago period are generally attributable to the increases in sales and gross profit.

Segment Analysis

The Company reports its financial performance based on three reporting segments. The following is a discussion of the results of operations of these three business segments. See note 9 to the condensed consolidated financial statements for additional information on the Company's three segments.

The following table presents selected net sales and segment profit data for the Company's three reportable segments, along with unallocated general and administrative expenses, for the three months ended April 2, 2022 and April 3, 2021.

	Three months ended	
(In thousands)	April 2, 2022	April 3, 2021
Specialty Chemicals and Engineered Materials		
Net sales	$ 196,421	$ 166,541
Segment profit	48,851	34,556
Microcontamination Control		
Net sales	$ 266,637	$ 207,099
Segment profit	98,618	70,566
Advanced Materials Handling		
Net sales	$ 198,113	$ 148,541
Segment profit	46,690	32,095
Unallocated general and administrative expenses	$ 18,162	$ 11,368

Specialty Chemicals and Engineered Materials (SCEM)

For the first quarter of 2022, SCEM net sales increased to $196.4 million, up 18% compared to $166.5 million in the comparable period last year. The sales increase was primarily due to increased sales of advanced deposition materials, selective etch and specialty coatings products, as well as additional sales of $5.4 million attributable to the Company's acquisition of the Precision Microchemicals business from BASF SE. SCEM reported a segment profit of $48.9 million in the first quarter of 2022, up 41% from $34.6 million in the year-ago period. The segment profit increase was primarily due to higher gross profit related to increased sales volume, partially offset by an 18% increase in operating expenses, primarily due to higher compensation costs.

Microcontamination Control (MC)

For the first quarter of 2022, MC net sales increased to $266.6 million, up 29% compared to $207.1 million in the comparable period last year. The sales increase was mainly due to improved performance across substantially all product lines. MC reported a segment profit of $98.6 million in the first quarter of 2022, up 40% from $70.6 million in the year-ago period. The segment profit improvement was primarily due to higher gross profit related to increased sales volume, partially offset by a 16% increase in operating expenses due to higher compensation costs.

Advanced Materials Handling (AMH)

For the first quarter of 2022, AMH net sales increased to $198.1 million, up 33% compared to $148.5 million in the comparable period last year. The sales increase was mainly due to improved sales from wafer handling, fluid handling and measurement products. AMH reported a segment profit of $46.7 million in the first quarter of 2022, up 45% from $32.1 million in the year-ago period. The segment profit increase was primarily due to higher sales volume, partially offset by a 23% increase in operating expenses due to higher compensation costs.

Unallocated general and administrative expenses

Unallocated general and administrative expenses totaled $18.2 million in the first quarter of 2022, compared to $11.4 million in the comparable period last year. The $6.8 million increase is primarily due to a $5.0 million increase in deal and transaction costs this quarter related to the pending acquisition of CMC Materials and $3.0 million increase in donation costs from the comparable period last year.

Liquidity and Capital Resources

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

In thousands	April 2, 2022	December 31, 2021
Cash and cash equivalents	$ 352,732	$ 402,565
Working capital	997,674	934,369
Total debt	937,349	937,027

The Company has historically financed its operations and capital requirements through cash flow from its operating activities, long-term loans, lease financing and borrowings under domestic and international short-term lines of credit. In connection with the pending acquisition of CMC Materials, pursuant to the Commitment Letter the Company has secured commitments of $2.495 billion under the Term Loan B Facility and $895.0 million under the Bridge Facility and increased commitments of $175.0 million under the Revolving Facility (from $400.0 million to $575.0 million). In addition, on April 14, 2022, Entegris, via a wholly-owned escrow subsidiary, completed a private offering of $1.6 billion aggregate principal amount of 4.750% Senior Secured Notes due 2029.

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 2022, we have not experienced difficulty accessing the capital and credit markets, but future volatility in the capital and credit markets may increase costs associated with issuing debt instruments or affect our ability to access those markets. In addition, it is possible that our ability to access the capital and credit markets could be limited at a time when we would like, or need, to do so, which could have an adverse impact on our ability to refinance maturing debt and/or react to changing economic and business conditions.

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

(in thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Net cash provided by operating activities	$ 63,788	$ 53,115
Net cash used in investing activities	(83,282)	(43,258)
Net cash used in financing activities	(27,595)	(39,375)
Decrease in cash and cash equivalents	(49,833)	(32,373)

Operating activities Cash provided by operating activities is net income adjusted for certain non-cash items and changes in assets and liabilities. Cash flows provided by operating activities totaled $63.8 million in the three months ended April 2, 2022, compared to $53.1 million in the three months ended April 3, 2021. The increase in cash provided by operating activities was primarily due to higher net income, partially offset by net change in working capital and other assets and liabilities. The net change in working capital and other assets and liabilities resulted in a decrease to cash provided by operating activities of $108.0 million for the three months ended April 2, 2022 compared to a decrease of $80.8 million for the three months ended April 3, 2021.

Changes in working capital and other assets and liabilities for the three months ended April 2, 2022 were driven primarily by increases in inventories, trade accounts receivables and income taxes payable. The change for inventory was driven by an increase in business activity. The change for trade accounts receivable was primarily due to increased sales activity and days sales outstanding. The change in income taxes payable was primarily driven by higher current tax provision.

Investing activities Cash flows used in investing activities totaled $83.3 million in the three months ended April 2, 2022, compared to $43.3 million in the three months ended April 3, 2021. The change resulted primarily from higher cash paid for acquisition of property, plant and equipment.

Financing activities Cash used in financing activities totaled $27.6 million during the three months ended April 2, 2022, compared to cash provided by financing activities of $39.4 million during the three months ended April 3, 2021. The change was primarily due to the absence of $15.0 million of repurchase and retirement of common stock. In connection with its pending acquisition of CMC Materials, the Company suspended its previously announced share repurchase program in the fourth quarter of 2021 and does not anticipate authorizing a new repurchase program in 2022.

Our total dividend payments were $13.9 million in the three months ended April 2, 2022, compared to $10.9 million in the three months ended April 3, 2021. We have paid a cash dividend in each quarter since the fourth quarter of 2017. On April 20, 2022, the Company’s Board of Directors declared a quarterly cash dividend of $0.10 per share to be paid on May 25, 2022 to shareholders of record on the close of business on May 4, 2022.

Other Liquidity and Capital Resources Considerations

Debt

(In thousands)	April 2, 2022	December 31, 2021
Senior unsecured notes due 2029 at 3.625%	$ 400,000	$ 400,000
Senior unsecured notes due 2028 at 4.375%	400,000	400,000
Senior secured term loan facility due 2025 at 2.457%	145,000	145,000
Total debt (par value)	$ 945,000	$ 945,000

In connection with the pending acquisition of CMC Materials, on December 31, 2021, Entegris entered into the Commitment Letter with the Financing Sources, pursuant to which the Financing Sources (a) committed to provide Entegris (i) a senior secured first lien term loan B facility in an aggregate principal amount of up to $4.0 billion, and (ii) a senior unsecured bridge term loan facility in an aggregate principal amount of up to $895.0 million and (b) to the extent that such Financing Sources are revolving lenders under Entegris’ existing credit agreement, (i) consented to the acquisition and certain amendments to the terms of the Revolving Facility and (ii) committed to provide to Entegris additional revolving credit commitments in an aggregate principal amount of $175.0 million.

On March 2, 2022, the Company launched syndication of the Term Loan B Facility and completed syndication of $2.495 billion of the commitments under the Term Loan B Facility with pricing at SOFR plus 3.00%. The Company began incurring ticking fees associated with the term loan on March 2, 2022 and expects to continue to incur ticking fees through the closing date of the acquisition of CMC Materials. The ticking fees will be paid in cash to the term loan lenders on the closing date. During the quarter ended April 2, 2022, the Company incurred $4.7 million in ticking fees which were expensed to interest expense in the Condensed Consolidated Statement of Operations. See Note 6 to the Company’s consolidated financial statements for additional discussions.

On April 14, 2022, Entegris also issued, via a wholly-owned escrow subsidiary, $1.6 billion aggregate principal amount of new 4.750% Senior Secured Notes due 2029 and in connection therewith, reduced the commitments under the Term Loan B Facility to $2.495 billion.

The Company's Revolving Facility has revolving commitments in an aggregate principal amount of $400.0 million that terminate on April 30, 2026. The Company intends to increase the commitments under the Revolving Facility by $175.0 million in connection with the closing of the pending acquisition of CMC Materials. 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 LIBOR, plus, in each case, an applicable margin. At April 2, 2022, there was no balance outstanding under the Revolving Facility and we had undrawn outstanding letters of credit of $0.2 million.

Through April 2, 2022, the Company was in compliance with all applicable financial covenants under its debt arrangements.

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 $8.2 million. There were no outstanding borrowings under this line of credit at April 2, 2022.

Cash and cash requirements

(In thousands)	April 2, 2022	December 31, 2021
Cash and cash equivalents	$ 352,732	$ 402,565
U.S.	77,877	107,814
Non-U.S.	274,855	294,751

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.

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 credit 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, 2021, except for interest payments on long-term debt and new long-term debt. In connection with the pending acquisition of CMC Materials, on March 2, 2022, the Company launched syndication of $2.495 billion of commitments under the Term Loan B Facility. The Company will incur estimated ticking fees that are recorded as interest expense of $33.4 million associated with the Term Loan B Facility during the period of March 2, 2022 to the closing date of the acquisition of CMC Materials. In addition, on April 14, 2022, the Company issued, via a wholly-owned escrow subsidiary, $1.6 billion aggregate principal amount of 4.750% senior secured notes due 2029 (see note 10 to the Company's condensed consolidated financial statements) and the Company expects to incur interest expense of $55.3 million during 2022 related to the 2029 Secured Notes.

We expect capital expenditure spending to be approximately $500.0 million in 2022, half of which is for our new facility in Taiwan. This new facility will ultimately support all three of our divisions. As of April 2, 2022, the Company had outstanding capital purchase obligations of $324.1 million for the construction or purchase of plant and equipment not yet recorded in the Company's condensed consolidated financial statements as the Company had not received the related goods or property as of such date.

Other Planned Uses of Capital. On December 14, 2021, we entered into an Agreement and Plan of Merger, or the merger agreement, with our wholly-owned subsidiary, Yosemite Merger Sub, Inc., or merger sub, and CMC Materials. Pursuant and subject to the terms and conditions of the merger agreement, upon completion of the transaction, merger sub will merge with and into CMC Materials, with CMC Materials surviving and continuing as a wholly-owned subsidiary of Entegris. At the effective time of the pending acquisition, each outstanding share of common stock of CMC Materials (with certain exceptions set forth in the merger agreement) will be converted into the right to receive $133.00 in cash and 0.4506 shares of common stock of Entegris, plus cash in lieu of any fractional shares. The transaction is subject to certain conditions, including the receipt of antitrust clearance or approval in China, Japan and Singapore and other customary closing conditions. We have agreed to operate our business in the ordinary course during the period between the execution of the merger agreement and the effective time of the pending acquisition, subject to specific exceptions set forth in the merger agreement, and have agreed to certain other customary restrictions on operations, as set forth in the merger agreement. In connection with the merger agreement, Entegris has obtained debt financing commitments from Morgan Stanley Senior Funding, Inc. and certain other financial institutions for (i) a senior unsecured bridge term loan facility in an aggregate principal amount of up to $895.0 million and (ii) a senior secured first lien term loan B facility in an aggregate principal amount of $2.495 billion. On April 14, 2022, Entegris also issued, via a wholly-owned escrow subsidiary, $1.6 billion aggregate principal amount of new 4.750% senior secured notes due 2029. The Company intends to use the net proceeds from the secured notes offering, together with the borrowings under the Bridge Facility (or other sources of indebtedness) and the Term Loan B Facility and cash on hand to (a) finance a portion of the cash consideration of the pending acquisition of CMC Materials, (b) pay the fees and expenses related to the merger, the secured notes offering, the Term Loan B Facility, the Bridge Facility and the Amended Revolving Facility, (c) repay certain existing indebtedness of CMC Materials and Entegris and (d) in the case of the Term Loan B Facility, finance working capital and general corporate purposes of Entegris.

As of April 2, 2022, we believe our cash and cash equivalents, cash generated from operations, and our ability to access the capital markets will satisfy our cash needs for the foreseeable future both globally and domestically.

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 income before, as applicable, (1) income tax expense, (2) interest expense, (3) interest income, (4) other expense (income), net, (5) charge for fair value write-up of acquired inventory sold, (6) deal and transaction costs, (7) integration costs, (8) severance and restructuring costs, (9) amortization of intangible assets and (10) 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 EPS is defined by the Company as net income before, as applicable, (1) charge for fair value write-up of acquired inventory sold, (2) deal and transaction costs, (3) integration costs, (4) severance and restructuring costs, (5) loss on extinguishment of debt and modification, (6) term loan ticking fee (7) amortization of intangible assets, (8) the tax effect of the foregoing adjustments to net income, stated on a per share basis and (9) tax effect of legal entity restructuring.

The Company provides supplemental non-GAAP financial measures to help management and investors to better understand its 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 its business.

In addition, and as a consequence of the importance of these non-GAAP financial measures in managing its 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 fair value write-up of acquired inventory, 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

(In thousands)	Three months ended April 2, 2022	Three months ended April 3, 2021
Net sales	$ 649,646	$ 512,844
Net income	$ 125,705	$ 84,676
Net income - as a % of net sales	19.3 %	16.5 %
Adjustments to net income		
Income tax expense	19,875	13,391
Interest expense	12,876	11,652
Interest income	(12)	(71)
Other expense, net	4,902	4,330
GAAP – Operating income	163,346	113,978
Operating margin - as a % of net sales	25.1 %	22.2 %
Deal and transaction costs	5,008	—
Integration costs	1,246	2,044
Severance and restructuring costs	—	143
Amortization of intangible assets	12,651	11,871
Adjusted operating income	182,251	128,036
Adjusted operating margin - as a % of net sales	28.1 %	25.0 %
Depreciation	23,905	22,095
Adjusted EBITDA	$ 206,156	$ 150,131
Adjusted EBITDA – as a % of net sales	31.7 %	29.3 %

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 2, 2022	Three months ended April 3, 2021
Net income	$ 125,705	$ 84,676
Adjustments to net income		
Deal and transaction costs	5,008	—
Integration costs	1,246	2,044
Severance and restructuring costs	—	143
Term loan ticking fee	4,683	—
Amortization of intangible assets	12,651	11,871
Tax effect of adjustments to net income and certain discrete tax items[1]	(4,160)	(3,221)
Non-GAAP net income	$ 145,133	$ 95,513
Diluted earnings per common share	$ 0.92	$ 0.62
Effect of adjustments to net income	0.14	0.08
Diluted non-GAAP earnings per common share	$ 1.06	$ 0.70

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

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The Company’s principal financial market risks are sensitivities to interest rates and foreign currency exchange rates. The Company’s interest-bearing cash equivalents 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 $1.6 million and $3.1 million as of April 2, 2022 and April 3, 2021, respectively.

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, Canadian Dollar, Malaysian Ringgit, Singapore Dollar, Euro, Israeli Shekel and the Japanese Yen. Approximately 23.8% and 23.5% of the Company’s sales for the quarters ended April 2, 2022 and April 3, 2021, respectively, are denominated in these currencies. Financial results therefore will be affected by changes in currency exchange rates. If all foreign currencies had experienced a 10% reduction versus the U.S. dollar during the three months ended April 2, 2022 and April 3, 2021, revenue for the quarters would have been negatively impacted by approximately $14.1 million and $12.5 million, respectively.

The Company occasionally uses derivative financial instruments to manage the foreign currency exchange rate risks associated with its foreign-based operations. At April 2, 2022, the Company had no 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 2, 2022. 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 2, 2022, the Company’s CEO and CFO have concluded that the disclosure controls and procedures used by the Company were effective to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and is accumulated and communicated to management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

(b) Changes in internal control over financial reporting.
There 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 2, 2022, 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

We are not aware of any material changes to the risk factors included in Item 1A. “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2021, except for the addition of the following risk factor:

The ongoing conflict between Russia and Ukraine, and the global response to it, may adversely affect our business and results of operations.

The military conflict between Russia and Ukraine has resulted in the implementation of sanctions by the United States and other governments against Russia and has caused significant volatility and disruptions to the global markets. It is not possible to predict the short- and long-term implications of this conflict, which could include but are not limited to further sanctions, uncertainty about economic and political stability, increases in inflation rate and energy prices and adverse effects on currency exchange rates and financial markets. In addition, the U.S. government reported that U.S. sanctions against Russia in response to the conflict could lead to an increased threat of cyberattacks against U.S. companies. These increased threats could pose risks to the security of our networks and on information technology systems owned and maintained by third parties. Further, if the conflict develops beyond Ukraine or further intensifies, it could have an adverse impact on operations in other affected regions.

While we source a few raw materials from Russia and Ukraine, to date our supply of these materials has not been significantly impacted by the conflict. We continue to monitor the situation closely and are proactively assessing and evaluating alternative sources to bolster our supply of these materials moving forward, in addition to working closely with our customers in any product re-qualification that may be required. Revenue relating to products manufactured from raw materials sourced from this region does not constitute a material portion of our business. Further, while sales to customers in Russia and Ukraine do not constitute a material portion of our business, there is uncertainty regarding the ultimate impact the conflict, including any escalation or further expansion of the conflict’s current scope, will have on our customers, the global economy, supply chains, logistics, fuel prices, raw material pricing and our business.

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 2, 2022.

On December 14, 2020, the Company’s Board of Directors authorized a repurchase program, effective February 16, 2021, covering the repurchase of up to an aggregate of $125 million of the Company’s common stock during a period of twelve months, in open market transactions and in accordance with one or more pre-arranged stock trading plans to be established in accordance with Rule 10b5-1 under the Exchange Act. This repurchase program expired pursuant to its terms on February 15, 2022. In connection with its pending acquisition of CMC Materials, the Company suspended its previously announced share repurchase program in the fourth quarter of 2021 and does not anticipate authorizing a new repurchase program in 2022.

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)	Indenture, dated as of April 14, 2022, by and among Entegris Escrow Corporation, as escrow issuer and Truist Bank, as trustee and notes collateral agent, including the form of note issuable thereunder.	Exhibit 4.1 to Entegris, Inc. Current Repo Form 8-K filed with the Securities and Exchange Commission on April 15, 2022

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

Reg. S-K Item 601(b) Reference	Exhibit No.	Document Filed Herewith
(31)	31.1	Certification of Chief Executive Officer Pursuant to Exchange Act Rule 13a-14(a).
(31)	31.2	Certification of Chief Financial Officer Pursuant to Exchange Act Rule 13a-14(a).
(32)	32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
(101)	101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
(101)	101.SCH	XBRL Taxonomy Extension Schema Document
(101)	101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
(101)	101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
(101)	101.LAB	XBRL Taxonomy Extension Label Linkbase Document
(101)	101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
(104)	104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

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

ENTEGRIS, INC.

Date: April 26, 2022

/s/ Gregory B. Graves

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

Exhibit 31.1

CERTIFICATIONS

I, Bertrand Loy, certify that:

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

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

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

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

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

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

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

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

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

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

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

Dated: April 26, 2022

/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: April 26, 2022

/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 2, 2022 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: April 26, 2022

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer

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