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 3, 2021

OR

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

For the transition period from __________ to __________

Commission file number: 001-32598

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

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

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

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

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

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

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

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

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

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 23, 2021, there were 135,500,992 shares of the registrant's common stock outstanding.

ENTEGRIS, INC. AND SUBSIDIARIES
FORM 10-Q
TABLE OF CONTENTS
FOR THE QUARTER ENDED APRIL 3, 2021

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 impact of the COVID-19 pandemic on the Company’s operations and markets; 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; 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, our customers and suppliers, which may impact our sales, gross margin, customer demand and our ability to supply our products to our customers; 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 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; 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; raw material shortages, supply constraints and price increases; 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, 2020, filed on February 5, 2021, under the heading "Risk Factors" in Item 1A of this Quarterly Report 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 3, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 548,520	$ 580,893
Trade accounts and notes receivable, net of allowance for doubtful accounts of $2,718 and $2,384	282,649	264,392
Inventories, net	358,819	323,944
Deferred tax charges and refundable income taxes	20,227	21,136
Other current assets	34,391	43,892
Total current assets	1,244,606	1,234,257
Property, plant and equipment, net of accumulated depreciation of $592,146 and $574,257	542,605	525,367
Other assets:		
Right-of-use assets	48,057	45,924
Goodwill	747,518	748,037
Intangible assets, net of accumulated amortization of $457,862 and $445,795	325,454	337,632
Deferred tax assets and other noncurrent tax assets	14,684	14,519
Other	10,615	11,960
Total assets	$ 2,933,539	$ 2,917,696
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 93,045	$ 81,618
Accrued payroll and related benefits	49,554	94,364
Other accrued liabilities	81,981	82,648
Income taxes payable	41,691	43,996
Total current liabilities	266,271	302,626
Long-term debt, excluding current maturities, net of unamortized discount and debt issuance costs of $8,814 and $9,217	1,086,186	1,085,783
Pension benefit obligations and other liabilities	36,663	36,457
Deferred tax liabilities and other noncurrent tax liabilities	73,133	73,606
Long-term lease liability	42,953	39,730
Commitments and contingent liabilities	—	—
Equity:		
Preferred stock, par value $.01; 5,000,000 shares authorized; none issued and outstanding as of April 3, 2021 and December 31, 2020	—	—
Common stock, par value $.01; 400,000,000 shares authorized; issued and outstanding shares as of April 3, 2021: 135,395,571 and 135,193,171, respectively; issued and outstanding shares as of December 31, 2020: 135,148,774 and 134,946,374, respectively	1,354	1,351
Treasury stock, at cost: 202,400 shares held as of April 3, 2021 and December 31, 2020	(7,112)	(7,112)
Additional paid-in capital	837,622	844,850
Retained earnings	637,574	577,833
Accumulated other comprehensive loss	(41,105)	(37,428)
Total equity	1,428,333	1,379,494
Total liabilities and equity	$ 2,933,539	$ 2,917,696

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 3, 2021	Three months ended March 28, 2020
Net sales	$ 512,844	$ 412,327
Cost of sales	277,858	226,849
Gross profit	234,986	185,478
Selling, general and administrative expenses	71,389	58,891
Engineering, research and development expenses	37,748	29,632
Amortization of intangible assets	11,871	16,211
Operating income	113,978	80,744
Interest expense	11,652	10,559
Interest income	(71)	(321)
Other expense, net	4,330	878
Income before income tax expense	98,067	69,628
Income tax expense	13,391	8,622
Net income	$ 84,676	$ 61,006
Basic earnings per common share	$ 0.63	$ 0.45
Diluted earnings per common share	$ 0.62	$ 0.45
Weighted shares outstanding:		
Basic	135,068	134,745
Diluted	136,502	136,369

See the accompanying notes to condensed consolidated financial statements.

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

	Three months ended	
(In thousands)	**April 3, 2021**	**March 28, 2020**
Net income	$ 84,676	$ 61,006
Other comprehensive income (loss), net of tax		
Foreign currency translation adjustments	(3,716)	(9,361)
Pension liability adjustments	39	10
Other comprehensive loss	(3,677)	(9,351)
Comprehensive income	$ 80,999	$ 51,655

See the accompanying notes to condensed consolidated financial statements.

ENTEGRIS, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF EQUITY

(Unaudited)

(In thousands)	Common shares outstanding	Common stock	Treasury shares	Treasury stock	Additional paid-in capital	Retained earnings	Foreign currency translation adjustments	Defined benefit pension adjustments	Total
Balance at December 31, 2019	134,930	$ 1,349	(202)	$ (7,112)	$ 842,784	$ 366,127	$ (36,468)	$ (791)	$ 1,165,889
Shares issued under stock plans	483	5	—	—	(10,894)	—	—	—	(10,889)
Share-based compensation expense	—	—	—	—	4,994	—	—	—	4,994
Repurchase and retirement of common stock	(604)	(6)	—	—	(3,740)	(25,818)	—	—	(29,564)
Dividends declared ($0.08 per share)	—	—	—	—	15	(10,773)	—	—	(10,758)
Pension liability adjustment	—	—	—	—	—	—	—	10	10
Foreign currency translation	—	—	—	—	—	—	(9,361)	—	(9,361)
Net income	—	—	—	—	—	61,006	—	—	61,006
Balance at March 28, 2020	134,809	$ 1,348	(202)	$ (7,112)	$ 833,159	$ 390,542	$ (45,829)	$ (781)	$ 1,171,327

(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

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 3, 2021	Three months ended March 28, 2020
Operating activities:		
Net income	$ 84,676	$ 61,006
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	22,095	20,648
Amortization	11,871	16,211
Share-based compensation expense	7,138	4,994
Provision for deferred income taxes	1,581	(64)
Charge for excess and obsolete inventory	3,249	3,605
Other	3,336	2,022
Changes in operating assets and liabilities:		
Trade accounts and notes receivable	(21,564)	(43,995)
Inventories	(39,337)	(18,205)
Accounts payable and accrued liabilities	(28,591)	(38,020)
Other current assets	9,400	5,825
Income taxes payable and refundable income taxes	(3,588)	(225)
Other	2,849	(2,399)
Net cash provided by operating activities	53,115	11,403
Investing activities:		
Acquisition of property, plant and equipment	(43,330)	(22,585)
Acquisition of businesses, net of cash acquired	—	(75,630)
Other	72	5
Net cash used in investing activities	(43,258)	(98,210)
Financing activities:		
Proceeds from short-term borrowings	—	217,000
Payments of short-term borrowings	—	(75,000)
Payments for dividends	(10,908)	(10,847)
Issuance of common stock	1,572	551
Repurchase and retirement of common stock	(15,000)	(29,564)
Taxes paid related to net share settlement of equity awards	(15,038)	(11,440)
Deferred acquisition payments	—	(16,125)
Other	(1)	(2,890)
Net cash (used in) provided by financing activities	(39,375)	71,685
Effect of exchange rate changes on cash and cash equivalents	(2,855)	(1,712)
Decrease in cash and cash equivalents	(32,373)	(16,834)
Cash and cash equivalents at beginning of period	580,893	351,911
Cash and cash equivalents at end of period	$ 548,520	$ 335,077

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 3, 2021	**March 28, 2020**
Non-cash transactions:		
Deferred acquisition payments	$ —	$ 1,451
Equipment purchases in accounts payable	8,249	6,689
Changes in dividends payable	76	89
Schedule of interest and income taxes paid:		
Interest paid	13,515	15,296
Income taxes paid, net of refunds received	14,959	7,997

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 3, 2021 and December 31, 2020, and the results of operations and comprehensive income for the three months ended April 3, 2021 and March 28, 2020, the equity statements as of and for the three months ended April 3, 2021 and March 28, 2020, and cash flows for the three months ended April 3, 2021 and March 28, 2020.

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, 2020. The results of operations for the three months ended April 3, 2021 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 $1,115.2 million at April 3, 2021, compared to the carrying amount of long-term debt, including current maturities, of $1,086.2 million at April 3, 2021.

Recently Adopted Accounting Pronouncements In December 2019, the FASB issued ASU No. 2019-12, “Simplifying the Accounting for Income Taxes” under ASC 740, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and amends existing guidance to improve consistent application. This guidance is effective for fiscal years beginning after December 15, 2020, including interim periods within that fiscal year. The Company adopted this new guidance in the first quarter of fiscal 2021. The adoption of ASU 2019-12 did not have a material impact on the condensed consolidated financial statements.

Recently Issued Accounting Pronouncements The Company currently has no material recent accounting pronouncements yet to be adopted.

2. REVENUES

Revenue Recognition Revenue is measured based on consideration specified in a contract with a customer, and excludes any sales incentives and amounts collected on behalf of third parties. The Company recognizes revenue when it satisfies a performance obligation by transferring control over a product or service to a customer.

Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue.

Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in cost of sales.

The Company recognizes the incremental costs of obtaining contracts as an expense when incurred if the amortization period of the assets that the Company otherwise would have recognized is one year or less.

When the Company receives consideration, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a sales contract, the Company records deferred revenue, which represents a contract liability. Such deferred revenue typically results from advance payments received on sales of the Company's products. The Company makes the required disclosures with respect to deferred revenue below.

The Company does not disclose information about remaining performance obligations that have original expected durations of one year or less.

Nature of goods and services The following is a description of principal activities from which the Company generates its revenues. The Company has three reportable segments. For more detailed information about reportable segments, see note 10 to the condensed consolidated financial statements. For each of the three reportable segments, the recognition of revenue regarding the nature of goods and services provided by the segments are similar and described below. The Company recognizes revenue for product sales at a point in time following the transfer of control of such products to the customer, which generally occurs upon shipment or delivery, depending on the terms of the underlying contracts. For product sales contracts that contain multiple performance obligations, the Company allocates the transaction price to each performance obligation identified in the contract based on relative standalone selling prices, or estimates of such prices, and recognizes the related revenue as control of each individual product is transferred to the customer, in satisfaction of the corresponding performance obligations.

The Company generally recognizes revenue for sales of services when the Company has satisfied the performance obligation. The payment terms and revenue recognized is based on time and materials.

The Company also enters into arrangements to license its intellectual property. These arrangements typically permit the customer to use a specialized manufacturing process or patented technology and in return the Company receives a royalty fee. The Company recognizes revenue for a sales-based or usage-based royalty promised in exchange for a license of intellectual property when the subsequent sale or usage occurs.

The Company offers certain customers cash discounts and volume rebates as sales incentives. The discounts and volume rebates are recorded as a reduction in sales at the time revenue is recognized in an amount estimated based on historical experience and contractual obligations. The Company periodically reviews the assumptions underlying its estimates of discounts and volume rebates and adjusts its revenues accordingly.

In addition, the Company offers free product rebates to certain customers. The Company utilizes an adjusted market approach to estimate the stand-alone selling price of the loyalty program and allocates a portion of the consideration received to the free product offering. The free product offering is redeemable upon future purchases of the Company's products. The amount associated with free product rebates is recorded as deferred revenue on the balance sheet and is recognized as revenue when the free product is redeemed or when the likelihood of redemption is remote. The Company has deemed that the amount is immaterial for disclosure.

The Company provides for the estimated costs of fulfilling its obligations under product warranties at the time the related revenue is recognized. The Company estimates the costs based on historical failure rates, projected repair costs, and knowledge of specific product failures (if any). The specific warranty terms and conditions vary depending upon the product sold and the country in which we do business, but generally include parts and labor over a period generally ranging from 90 days to one year. The Company regularly reevaluates its estimates to assess the adequacy of the recorded warranty liabilities and adjusts the amounts as necessary.

The Company's contracts are generally short-term in nature. Most contracts' terms do not exceed twelve months. Payment terms vary by the type and location of the Company's customers and the products or services offered. The term between invoicing and when payment is due is not significant. For certain products or services and customer types, the Company requires payment before the products or services are delivered to the customer. Those customers that prepay are represented by the contract liabilities below until the performance obligations are satisfied.

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

(In thousands)	April 3, 2021	December 31, 2020
Contract liabilities - current	$ 19,077	$ 13,852

Significant changes in the contract liabilities balances during the period are as follows:

(In thousands)	Three months ended April 3, 2021
Revenue recognized that was included in the contract liability balance at the beginning of the period	$ (9,713)
Increases due to cash received, excluding amounts recognized as revenue during the period	14,938

3. ACQUISITIONS

Global Measurement Technologies, Inc.

On July 10, 2020, the Company acquired Global Measurement Technologies, Inc. (“GMTI”), an analytical instrument provider for critical processes in semiconductor production, and its manufacturing partner Clean Room Plastics, Inc. GMTI reports into the Advanced Materials Handling segment of the Company. The acquisition was accounted for under the acquisition method of accounting, and GMTI’s results of operations are included in the Company’s condensed consolidated financial statements as of and since July 10, 2020. The acquisition does not constitute a material business combination.

The purchase price for GMTI includes cash consideration of $36.3 million, net of cash acquired, which was funded from the Company’s existing cash on hand.

The purchase price of GMTI exceeds the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed by $16.1 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 non-deductible for income tax purposes.

During the quarter ended September 26, 2020, 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):	July 10, 2020
Trade accounts and note receivable, net	$ 937
Inventories, net	1,079
Identifiable intangible assets	18,180
Right-of-use assets	337
Accounts payable and accrued liabilities	(28)
Short-term lease liability	(150)
Long-term lease liability	(187)
Net assets acquired	20,168
Goodwill	16,099
Total purchase price, net of cash acquired	$ 36,267

The Company recognized the following finite-lived intangible assets as part of the acquisition of GMTI:

(In thousands)	Amount	Weighted average life in years
Developed technology	$ 3,570	6.5
Trademarks and trade names	1,010	11.5
Customer relationships	13,600	15.5
	$ 18,180	13.5

Sinmat

On January 10, 2020, the Company acquired Sinmat, a chemical mechanical polishing slurry manufacturer. Sinmat reports into the Specialty Chemicals and Engineered Materials segment of the Company. The acquisition was accounted for under the acquisition method of accounting and Sinmat's results of operations are included in the Company's condensed consolidated financial statements as of and since January 10, 2020. Costs associated with the acquisition of Sinmat were $0.7 million for the year ended March 28, 2020 and were expensed as incurred. These costs are included in the selling, general and administrative expenses in the Company's condensed consolidated statement of operations. The acquisition does not constitute a material business combination.

The purchase price for Sinmat includes cash consideration of $76.2 million, or $75.6 million net of cash acquired, which was funded from the Company's existing cash on hand.

The purchase price of Sinmat exceeds the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed by $31.7 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 non-deductible for income tax purposes.

During the quarter ended June 27, 2020, the Company finalized its fair value determination of the assets acquired and the liabilities assumed. The following table summarizes the provisional and final allocations of the purchase price to the fair values assigned to the assets acquired and liabilities assumed at the date of the acquisition date and as adjusted as of June 27, 2020, respectively:

(In thousands):	As of January 10, 2020	As of June 27, 2020
Trade accounts and note receivable, net	$ 1,189	$ 1,189
Inventories, net	1,010	1,010
Other current assets	8	8
Property, plant and equipment	63	63
Identifiable intangible assets	41,680	41,680
Right-of-use assets	1,712	1,712
Deferred tax asset	—	102
Accounts payable and accrued liabilities	(58)	(58)
Short-term lease liability	(150)	(150)
Long-term lease liability	(1,562)	(1,562)
Net assets acquired	43,892	43,994
Goodwill	31,751	31,651
Total purchase price, net of cash acquired	$ 75,643	$ 75,645

The Company recognized the following finite-lived intangible assets as part of the acquisition of Sinmat:

(In thousands)	Amount	Weighted average life in years
Developed technology	$ 7,650	7.0
Trademarks and trade names	130	1.3
Customer relationships	33,900	15.0
	$ 41,680	13.5

4. INVENTORIES

Inventories consist of the following:

(In thousands)	April 3, 2021	December 31, 2020
Raw materials	$ 124,799	$ 97,319
Work-in process	36,980	32,316
Finished goods	197,040	194,309
Total inventories, net	$ 358,819	$ 323,944

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, 2020	$ 427,713	$ 247,154	$ 73,170	$ 748,037
Foreign currency translation	(31)	(488)	—	(519)
April 3, 2021	$ 427,682	$ 246,666	$ 73,170	$ 747,518

Identifiable intangible assets at April 3, 2021 and December 31, 2020 consist of the following:

April 3, 2021			
(In thousands)	Gross carrying Amount	Accumulated amortization	Net carrying value
Developed technology	$ 283,228	$ 224,340	$ 58,888
Trademarks and trade names	30,087	18,887	11,200
Customer relationships	449,606	201,743	247,863
Other	20,395	12,892	7,503
	$ 783,316	$ 457,862	$ 325,454

December 31, 2020			
(In thousands)	Gross carrying amount	Accumulated amortization	Net carrying value
Developed technology	$ 283,272	$ 221,651	$ 61,621
Trademarks and trade names	30,100	18,374	11,726
Customer relationships	449,659	193,313	256,346
Other	20,396	12,457	7,939
	$ 783,427	$ 445,795	$ 337,632

Future amortization expense during the remainder of 2021, 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 3, 2021:

(In thousands)	Remaining 2021	2022	2023	2024	2025	Thereafter	Total
Future amortization expense	$ 36,332	47,602	46,913	34,294	27,663	132,650	$ 325,454

6. 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 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 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 3, 2021	March 28, 2020
Basic—weighted common shares outstanding	135,068	134,745
Weighted common shares assumed upon exercise of stock options and vesting of restricted common stock	1,434	1,624
Diluted—weighted common shares and common shares equivalent outstanding	136,502	136,369

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 3, 2021 and March 28, 2020:

	Three months ended	
(In thousands)	April 3, 2021	March 28, 2020
Shares excluded from calculations of diluted EPS	140	252

7. LEASES

As of April 3, 2021, the Company was obligated under operating lease agreements for certain sales offices and manufacturing facilities, manufacturing equipment, vehicles, information technology equipment and warehouse space. As of April 3, 2021, the Company does not have material finance leases. Our leases have remaining lease terms of 1 year to 13 years, some of which may include options to extend the lease for up to 6 years, and some of which may include options to terminate the leases within 1 year.

As of April 3, 2021 and December 31, 2020, the Company's operating lease components with initial or remaining terms in excess of one year were classified on the condensed consolidated balance sheet as follows, together with certain supplemental balance sheet information:

(In thousands, except lease term and discount rate)	Classification	April 3, 2021	December 31, 2020
Assets			
Right-of-use assets	Right-of-use assets	$ 48,057	$ 45,924
Liabilities			
Short-term lease liability	Other accrued liabilities	8,903	9,960
Long-term lease liability	Long-term lease liability	42,953	39,730
Total lease liabilities		$ 51,856	$ 49,690
Lease Term and Discount Rate			
Weighted average remaining lease term (years)		8.7	7.9
Weighted average discount rate		4.8 %	5.0 %

Expense for leases less than 12 months for the three months ended April 3, 2021 and March 28, 2020 were not material. The components of lease expense for the three months ended April 3, 2021 and March 28, 2020 are as follows:

	Three months ended	
(In thousands)	April 3, 2021	March 28, 2020
Operating lease cost	$ 3,399	$ 3,541

The Company combines the amortization of the right-of-use assets and the change in the operating lease liability in the same line item in the condensed consolidated statement of cash flows. Other information related to the Company's operating leases for the three months ended April 3, 2021 and March 28, 2020 are as follows:

(*In thousands*)	April 3, 2021	March 28, 2020
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from leases	$ 2,782	$ 2,717
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	$ 5,082	$ 912

Future minimum lease payments for noncancellable operating leases as of April 3, 2021, were as follows:

(*In thousands*)	Operating Leases
Remaining 2021	$ 11,235
2022	8,037
2023	6,490
2024	5,654
2025	5,181
Thereafter	28,026
Total	64,623
Less: Interest	12,767
Present value of lease liabilities	$ 51,856

8. SEGMENT REPORTING

The Company's financial segment reporting reflects an organizational alignment intended to leverage the Company's unique portfolio of capabilities to create value for its customers by developing mission-critical solutions to maximize manufacturing yields and enable higher performance of devices. 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 industry and other high-technology industries.

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

	Three months ended	
(*In thousands*)	April 3, 2021	March 28, 2020
Net sales		
SCEM	$ 166,541	$ 144,214
MC	207,099	159,261
AMH	148,541	116,137
Inter-segment elimination	(9,337)	(7,285)
Total net sales	$ 512,844	$ 412,327

(In thousands)	Three months ended April 3, 2021	Three months ended March 28, 2020
Segment profit		
SCEM	$ 34,556	$ 32,670
MC	70,566	50,167
AMH	32,095	20,632
Total segment profit	$ 137,217	$ 103,469

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

(In thousands)	Three months ended April 3, 2021	Three months ended March 28, 2020
Total segment profit	$ 137,217	$ 103,469
Less:		
Amortization of intangible assets	11,871	16,211
Unallocated general and administrative expenses	11,368	6,514
Operating income	113,978	80,744
Interest expense	11,652	10,559
Interest income	(71)	(321)
Other expense, net	4,330	878
Income before income tax expense	$ 98,067	$ 69,628

In the following tables, revenue is disaggregated by customers' country or region for the three months ended April 3, 2021 and March 28, 2020, respectively.

	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

	Three months ended March 28, 2020				
(In thousands)	SCEM	MC	AMH	Inter-segment	Total
North America	$ 46,550	$ 28,680	$ 33,403	$ (7,285)	$ 101,348
Taiwan	25,182	42,483	24,801	—	92,466
China	15,510	18,197	11,639	—	45,346
South Korea	20,129	20,122	15,161	—	55,412
Japan	17,123	28,111	10,420	—	55,654
Europe	8,608	13,488	12,548	—	34,644
Southeast Asia	11,112	8,180	8,165	—	27,457
	$ 144,214	$ 159,261	$ 116,137	$ (7,285)	$ 412,327

9. SUBSEQUENT EVENT

On April 16, 2021, the Company announced that it had priced its private offering of $400.0 million aggregate principal amount of 3.625% senior unsecured notes due 2029 (the “2029 Notes”). The 2029 Notes will be senior unsecured obligations of the Company and will be guaranteed by certain subsidiaries of the Company. The issuance of the 2029 Notes is expected to close on April 30, 2021, subject to customary closing conditions.

The Company expects the net proceeds of the offering to be approximately $394.0 million, after deducting estimated commissions and offering fees and expenses. The Company intends to use the net proceeds of the offering, together with cash on hand and approximately $75.0 million borrowed under the Company’s revolving credit facility (the “Revolving Facility”), to pay the redemption price for the redemption in full of the $550.0 million aggregate principal amount of 4.625% senior unsecured notes due 2026 that are currently outstanding. The redemption of the $550.0 million notes due 2026 is expected to result in a loss of $23.1 million on extinguishment of debt, which will be included in the Company’s condensed consolidated statement of operations.

In connection with the Company’s issuance of the 2029 Notes, the Company intends to amend the Revolving Facility to provide for lending commitments in an aggregate principal amount of up to $400.0 million and to extend the maturity to April 30, 2026. The Revolving Facility currently provides for lending commitments in an aggregate principal amount of up to $300.0 million, maturing on November 6, 2023.

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

The following discussion and analysis of the Company’s condensed consolidated financial condition and results of operations should be read along with the condensed consolidated financial statements and the accompanying notes thereto included elsewhere in this Quarterly Report on Form 10-Q. The information, except for historical information, contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q includes forward-looking statements that involve risks and uncertainties. You should review the section entitled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2020 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. 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 fab, 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, or SCEM, segment 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, or MC, segment 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, or AMH, segment develops solutions to monitor, protect, transport, and deliver critical liquid chemistries, wafers and other substrates for a broad set of applications in the semiconductor industry, life sciences and other high-technology industries. 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 8 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 2021 end April 3, 2021, July 3, 2021, October 2, 2021 and December 31, 2021. Unaudited information for the three months ended April 3, 2021 and March 28, 2020 and the financial position as of April 3, 2021 and December 31, 2020 are included in this Quarterly Report on Form 10-Q.

Key operating factors Key factors, which 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

As a result of the COVID-19 pandemic, governmental authorities have implemented and are continuing to implement numerous and constantly evolving measures to try to contain the virus, such as travel bans and restrictions, masking recommendations and mandates, limits on gatherings, quarantines, shelter-in-place orders and business shutdowns. In some cases, governmental re-opening plans have been delayed or reversed due to spikes in the number of infections in the local area. We continue to monitor the situation regarding the COVID-19 pandemic, which remains fluid and uncertain, and to proactively manage and adapt our responses in collaboration with our employees, customers and suppliers. However, we are unable to accurately predict the full impact that COVID-19 may have on our business, results of operations, financial condition, liquidity and cash flows, which will depend on future developments that are highly uncertain and cannot be predicted with accuracy, including, but not limited to, the duration and continued spread of the outbreak, its severity, potential additional waves of infection, the actions to mitigate the virus or its impact, the development, distribution, efficacy and acceptance of vaccines and how quickly and to what extent normal economic and operating conditions can resume.

Health and Safety

Commencing in the first quarter of 2020, we have taken, and continue to take, proactive, aggressive action to protect the health and safety of our employees, customers, partners and suppliers. We enacted rigorous safety measures, including social distancing protocols, encouraging employees who do not need to be physically present on the manufacturing floor or in a lab to perform their work to work from home, suspending non-essential travel, implementing temperature checks and other access controls at the entrances to our facilities, extensively and frequently disinfecting our workspaces and providing masks to employees who are physically present at our facilities. We expect to continue to implement these measures until the COVID-19 pandemic is adequately contained, and we may take further actions as government authorities require or recommend or as we determine to be in the best interests of our employees, customers, partners and suppliers. We expect that the pandemic may abate at different times in different regions, and accordingly our health and safety protocols may vary across regions.

Operations

We have important manufacturing operations in the United States, Japan, Korea, China, Malaysia, and Taiwan, all of which have been affected by the outbreak and have taken measures to try to contain it. Measures providing for business shutdowns have generally excluded certain essential services, and those essential services have commonly included critical infrastructure and the businesses that support that critical infrastructure. While all of our facilities currently remain operational, these measures have impacted and may further impact our workforce and operations, as well as those of our customers, suppliers and other third parties with which we do business. For example, in March 2020 the government of Malaysia issued an order that significantly reduced the number of employees who could be physically present to operate our Malaysian plant, which temporarily reduced the productivity of that plant. The government of Malaysia issued a similar order restricting movement throughout that country in January 2021. Our Malaysian plant is operating at normal capacity as of the date of this filing. In addition to reduced productivity, constraints and limits imposed on our operations may slow or diminish our research and development and customer qualification activities. During 2020, we experienced brief interruptions in operations at our sites in Hangzhou, China, San Luis Obispo, California and Bedford, Massachusetts and so far during 2021 we have experienced minor interruptions in operations at our site in San Luis Obispo, California and a brief construction delay to an expansion of our facility in Toronto, Canada. While governmental measures may be modified, extended or reimposed, we expect that, absent a significant surge in infections in the relevant local area or within our workforce or those of our suppliers, our manufacturing and research and development facilities will remain operational, largely at or near normal capacity. In connection with the COVID-19 pandemic, we have experienced limited absenteeism from employees who are required to be on-site to perform their jobs. We do not currently expect that our operations will be materially adversely affected by significant absenteeism. In addition, we have incurred incremental employee compensation related to the COVID-19 pandemic. For example, since April

2020, we have awarded certain of our employees who are required to physically report to a manufacturing facility in order to perform their jobs during the COVID-19 crisis with a special appreciation bonus for their efforts in sustaining our production continuity.

Supply

We have not yet experienced any significant impacts or interruptions to our supply chain as a result of the COVID-19 pandemic. However, certain of our suppliers have faced difficulties maintaining operations in light of government-ordered restrictions, shelter-in-place mandates and outbreaks of infection within their workforces. As the pandemic continues, our suppliers may face challenges in maintaining their level of supply as a result of these or other factors. For example, as a result of the COVID-19 pandemic, during the first half of 2020, one of our critical valve suppliers was shut down and was unable to supply us with valves for certain of our gas purification products. In this instance we were able to procure this critical part from a second, pre-qualified source. Although we regularly monitor the financial health of companies in our supply chain, financial hardship on our suppliers or sub-suppliers caused by the COVID-19 pandemic could cause a disruption in our ability to obtain raw materials or components required to manufacture our products and thus require us to increase our safety stocks of certain raw materials or components, adversely affecting our operations. To mitigate the risk of potential supply interruptions from the COVID-19 pandemic, during 2020 and into 2021, we chose to increase certain inventory levels, causing us to hold more inventory than we might have otherwise maintained. We may decide to take similar actions going forward, which may result in increased charges for excess or obsolete inventory, which would have the effect of reducing our profitability. Additionally, restrictions or disruptions of transportation, such as reduced availability of air transport, port closures and increased border controls or closures, have resulted, in certain instances, in higher costs and delays, both on obtaining materials and shipping finished goods to customers. If these restrictions and disruptions continue, they could harm our profitability, make our products less competitive or cause our customers to seek alternative suppliers.

Demand

While the COVID-19 pandemic has caused economic and demand uncertainty, during the first quarter of 2021 we continued to see strong demand from leading-edge customers associated with end-uses in servers and other data center applications. We believe that a portion of the orders that we received in the first quarter of 2021 may have been a result of customers increasing their inventory to reduce their exposure to risks of future supply disruptions due to COVID-19 or global logistics constraints, which could offset demand for our products in the future. We anticipate that the pandemic will continue to contribute to global economic uncertainty, which could ultimately harm demand for our products.

Liquidity

Although there is uncertainty regarding the impact of the COVID-19 pandemic on our future results, we believe our business model, our current cash reserves and our balance sheet leave us well-positioned to manage our business through this crisis as we expect it to unfold. We have taken recent steps to strengthen our balance sheet. In April 2021, we announced and priced a private offering of $400 million aggregate principal amount of 3.625% senior unsecured notes due 2029, or the 2029 Notes. We plan to use the proceeds of the offering, together with cash on hand and approximately $75 million borrowed under our senior secured revolving facility due 2023, or the Revolving Facility, to pay the redemption price in full of the $550 million aggregate principal amount of 4.625% senior unsecured notes due 2026 that are currently outstanding, or the 2026 Notes, and to pay certain fees and expenses related to the offering. In addition, on April 30, 2020, we issued $400 million aggregate principal amount of 4.375% senior unsecured notes due April 15, 2028. We used a portion of the net proceeds of the offering to repay approximately $142 million of borrowings under the Revolving Facility, representing the entire aggregate principal amount outstanding thereunder. We also used a portion of the net proceeds of the offering to repay approximately $251 million of outstanding borrowings under our senior secured term loan facility, or the Term Loan Facility.

We have reviewed numerous potential scenarios in connection with the impact of COVID-19 on the global economy and the semiconductor industry. Based on our analysis, we believe our existing balances of domestic cash and cash equivalents, which totaled $171.9 million as of April 3, 2021, and our currently anticipated operating cash flows, after taking into account the anticipated issuance of the 2029 Notes and the use of net proceeds, cash on hand and borrowings to fund the redemption of the 2026 Notes, will be sufficient to meet our cash needs arising in the ordinary course of business for the next twelve months.

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. In these circumstances, there may be developments outside our control requiring us to adjust our operating plan. As such, given the dynamic nature of this situation, we cannot reasonably estimate the impacts that COVID-19 may have on our financial condition, results of operations or cash flows in the future. See Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the year ended December 31, 2020 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.”

Overall Summary of Financial Results

For the three months ended April 3, 2021, net sales increased 24% to $512.8 million, compared to $412.3 million for the three months ended March 28, 2020. Total net sales increased primarily as a result of strong industry conditions, several node transitions and strong overall demand for the Company’s products and solutions. Net sales for the three months ended April 3, 2021 included sales of $3.2 million from acquired businesses and favorable foreign currency translation effects of $5.4 million.

The Company’s gross profit for the three months ended April 3, 2021 increased to $235.0 million, up from $185.5 million for the three months ended March 28, 2020. The Company experienced a 45.8% gross margin for the three months ended April 3, 2021, compared to 45.0% in the comparable year-ago period. The gross profit and gross margin increases reflect higher factory utilization associated with higher sales levels and a favorable sales mix.

The Company’s selling, general and administrative, or SG&A, expense increased by $12.5 million for the three months ended April 3, 2021 compared to the year-ago quarter, mainly due to higher employee costs resulting from increased headcount, benefits and merit increases.

As a result of the aforementioned factors, the Company reported net income of $84.7 million, or $0.62 per diluted share, for the quarter ended April 3, 2021, compared to net income of $61.0 million, or $0.45 per diluted share, a year ago.

On April 16, 2021, the Company announced that it had priced its private offering of the 2029 Notes. The 2029 Notes will be senior unsecured obligations of the Company and will be guaranteed by certain subsidiaries of the Company. The issuance of the 2029 Notes is expected to close on April 30, 2021, subject to customary closing conditions.

Cash and cash equivalents were $548.5 million at April 3, 2021, compared with cash and cash equivalents of $580.9 million at December 31, 2020. The Company had outstanding long-term debt (excluding current maturities) of $1,086.2 million at April 3, 2021, compared to $1,085.8 million at December 31, 2020.

Critical Accounting Policies

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, 2020, filed with the Securities and Exchange Commission on February 5, 2021. 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 aforementioned critical accounting policies.

Three Months Ended April 3, 2021 Compared to Three Months Ended March 28, 2020

The following table compares operating results for the three months ended April 3, 2021 and March 28, 2020 both in dollars and as a percentage of net sales, for each caption.

	Three months ended			
(Dollars in thousands)	April 3, 2021		March 28, 2020	
Net sales	$ 512,844	100.0 %	$ 412,327	100.0 %
Cost of sales	277,858	54.2	226,849	55.0
Gross profit	234,986	45.8	185,478	45.0
Selling, general and administrative expenses	71,389	13.9	58,891	14.3
Engineering, research and development expenses	37,748	7.4	29,632	7.2
Amortization of intangible assets	11,871	2.3	16,211	3.9
Operating income	113,978	22.2	80,744	19.6
Interest expense	11,652	2.3	10,559	2.6
Interest income	(71)	—	(321)	(0.1)
Other expense, net	4,330	0.8	878	0.2
Income before income taxes	98,067	19.1	69,628	16.9
Income tax expense	13,391	2.6	8,622	2.1
Net income	$ 84,676	16.5 %	$ 61,006	14.8 %

Net sales For the three months ended April 3, 2021, net sales increased by 24% to $512.8 million, compared to $412.3 million for the three months ended March 28, 2020. 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 March 28, 2020	$ 412,327
Increase associated with volume, pricing and mix	91,865
Increase associated with effect of foreign currency translation	5,411
Increase associated with acquired businesses	3,241
Net sales in the quarter ended April 3, 2021	$ 512,844

The Company's sales benefited from strong industry conditions, several node transitions and strong overall demand for the Company's products and solutions compared to the year-ago quarter. Total net sales also reflected net sales associated with recent acquisitions of $3.2 million and favorable foreign currency translation effects of $5.4 million.

On a geographic basis, sales percentage by customers' country or region for the three months ended April 3, 2021 and March 28, 2020 and the percentage increase (decrease) in sales for the three months ended April 3, 2021 compared to the sales for the three months ended March 28, 2020 were as follows:

	Three months ended		
	April 3, 2021	March 28, 2020	Percentage increase (decrease) in sales
North America	23 %	25 %	18 %
Taiwan	20 %	22 %	10 %
China	16 %	11 %	83 %
South Korea	14 %	13 %	30 %
Japan	14 %	13 %	28 %
Europe	8 %	8 %	14 %
Southeast Asia	5 %	7 %	(5 %)

The increase in sales to customers in North America, Taiwan, South Korea, Japan and China was primarily driven by a general increase in demand for products in all three of the Company's segments. The increase in sales from Europe primarily relates to higher sales of Advanced Materials Handling products. The decrease in sales from Southeast Asia primarily relates to lower demand for products from our SCEM segment.

Gross profit The Company's gross profit increased 27% for the three months ended April 3, 2021 to $235.0 million, compared to $185.5 million for the three months ended March 28, 2020. The Company experienced a 45.8% gross margin rate for the three months ended April 3, 2021, compared to 45.0% in the comparable year-ago period. The gross profit and gross margin increases reflect higher factory utilization associated with higher sales levels and a favorable sales mix.

Selling, general and administrative expenses SG&A expenses were $71.4 million in the three months ended April 3, 2021, compared to $58.9 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 March 28, 2020	$	58,891
Employee costs		12,687
Integration costs		1,996
Deal and transaction costs		(1,431)
Other decreases, net		(754)
Selling, general and administrative expenses in the quarter ended April 3, 2021	$	71,389

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 were $37.7 million in the three months ended April 3, 2021 compared to $29.6 million in the year-ago period. An analysis of the factors underlying the increase in ER&D is presented in the following table:

(In thousands)		
Engineering, research and development expenses in the quarter ended March 28, 2020	$	29,632
Employee costs		5,640
Project materials		1,835
Other increases, net		641
Engineering, research and development expenses in the quarter ended April 3, 2021	$	37,748

Amortization expenses Amortization of intangible assets was $11.9 million in the three months ended April 3, 2021, compared to $16.2 million for the three months ended March 28, 2020. The decrease primarily reflects the elimination of amortization expense of $5.0 million for identifiable intangible assets acquired in acquisitions that became fully amortized in previous periods, partially offset by additional amortization expense of $0.5 million 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 $11.7 million in the three months ended April 3, 2021, compared to $10.6 million in the three months ended March 28, 2020. The increase primarily reflects higher average debt levels.

Interest income Interest income was $0.1 million in the three months ended April 3, 2021, compared to $0.3 million in the three months ended March 28, 2020. The decrease reflects lower average interest rates.

Other expense, net 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. Other expense, net was $0.9 million in the three months ended March 28, 2020 and consisted mainly of foreign currency transaction losses of $0.6 million.

Income tax expense Income tax expense was $13.4 million in the three months ended April 3, 2021, compared to income tax expense of $8.6 million in the three months ended March 28, 2020, respectively. The Company's year-to-date effective tax rate at April 3, 2021 was 13.7%, compared to 12.4% at March 28, 2020.

The income tax expense for the three months ended April 3, 2021 and March 28, 2020 include discrete benefits of $7.5 million and $5.0 million, respectively, recorded in connection with share-based compensation. The increase in the effective tax rate from 2020 to 2021 primarily relates to a valuation allowance on federal foreign tax credits generated in 2021 of $1.4 million.

Net income Due to the factors noted above, the Company recorded net income of $84.7 million, or $0.62 per diluted share, in the three-month period ended April 3, 2021, compared to net income of $61.0 million, or $0.45 per diluted share, in the three months ended March 28, 2020. In the three months ended April 3, 2021, net income, as a percentage of net sales, increased to 16.5% from 14.8% 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 "Non-GAAP Information" included below in this section 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 25% to $150.1 million in the three months ended April 3, 2021, compared to $120.3 million in the three months ended March 28, 2020. In the three months ended April 3, 2021, Adjusted EBITDA, as a percentage of net sales, was flat at 29% compared to the year-ago period.

Adjusted Operating Income increased 29% to $128.0 million in the three months ended April 3, 2021, compared to $99.6 million in the three months ended March 28, 2020. Adjusted Operating Income, as a percentage of net sales, increased to 25% from 24% in the year-ago period.

Non-GAAP Earnings Per Share increased 27% to $0.70 in the three months ended April 3, 2021, compared to $0.55 in the three months ended March 28, 2020.

The increases in adjusted EBITDA, adjusted operating income and non-GAAP earnings per share 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 8 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 3, 2021 and March 28, 2020.

	Three months ended	
(In thousands)	April 3, 2021	March 28, 2020
Specialty Chemicals and Engineered Materials		
Net sales	$ 166,541	$ 144,214
Segment profit	34,556	32,670
Microcontamination Control		
Net sales	$ 207,099	$ 159,261
Segment profit	70,566	50,167
Advanced Materials Handling		
Net sales	$ 148,541	$ 116,137
Segment profit	32,095	20,632
Unallocated general and administrative expenses	$ 11,368	$ 6,514

Specialty Chemicals and Engineered Materials (SCEM)

For the first quarter of 2021, SCEM net sales increased to $166.5 million, compared to $144.2 million in the comparable period last year. The sales increase was due to increased sales of advanced deposition materials, cleaning chemistries, specialty gases and advanced coatings. SCEM reported a segment profit of $34.6 million in the first quarter of 2021, up 6% from $32.7 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 a 17% increase in operating expenses, primarily due to higher compensation costs.

Microcontamination Control (MC)

For the first quarter of 2021, MC net sales increased to $207.1 million, compared to $159.3 million in the comparable period last year. The sales increase was mainly due to improved sales from liquid filtration and gas filtration products. MC reported a segment profit of $70.6 million in the first quarter of 2021, up 41% from $50.2 million in the year-ago period. The segment profit improvement was primarily due to higher gross profit related to increased sales volume and favorable product mix, partially offset by a 24% increase in operating expenses due to higher compensation costs.

Advanced Materials Handling (AMH)

For the first quarter of 2021, AMH net sales increased to $148.5 million, compared to $116.1 million in the comparable period last year. The sales increase was mainly due to improved sales from all major semi-related product platforms, sales of our Aramus high purity bags, as well as additional sales of $2.7 million attributable to the acquisition of Global Measurement

Technologies, Inc., or GMTI, in the third quarter of 2020. AMH reported a segment profit of $32.1 million in the first quarter of 2021, up 56% from $20.6 million in the year-ago period. The segment profit increase was primarily due to higher sales volume and favorable product mix, partially offset by a 16% increase in operating expenses due to higher compensation costs.

Unallocated general and administrative expenses

Unallocated general and administrative expenses totaled $11.4 million in the first quarter of 2021, compared to $6.5 million in the comparable period last year. The $4.9 million increase mainly reflects a $5.1 million increase in employee costs.

Liquidity and Capital Resources

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

In thousands	April 3, 2021	December 31, 2020
Cash and cash equivalents	$ 548,520	$ 580,893
Working capital	978,335	931,631
Total debt	1,086,186	1,085,783

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. On April 16, 2021, we agreed to sell $400 million of our 2029 Notes. The sale of the 2029 Notes is expected to close on April 30, 2021, subject to customary closing conditions. We intend to use the net proceeds of the offering, together with cash on hand and approximately $75 million borrowed under the Revolving Facility, to pay the redemption price for the redemption in full of the 2026 Notes and to pay certain fees and expenses related to the offering. The redemption of the 2026 Notes is conditioned on the Company's receipt of $400 million of proceeds from a new offering of unsecured notes, such as the 2029 Notes.

Although there is uncertainty regarding the impact of the COVID-19 pandemic on the Company's future results, we believe our business model and our current cash reserves will help us to manage our business through this crisis as we expect it to unfold. We have reviewed numerous potential scenarios in connection with the impact of COVID-19 on the global economy and the semiconductor industry. Based on our analysis, we believe our existing balances of domestic cash and cash equivalents and our currently anticipated operating cash flows, after taking into account the anticipated issuance of the 2029 Notes and the use of net proceeds, cash on hand and borrowings to fund the redemption of the 2026 Notes, 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 2021, we have not experienced difficulty accessing the capital and credit markets as evidenced by our recent announcement of our $400 million note offering; however, future volatility in the capital and credit markets may increase costs associated with issuing debt instruments or affect our ability to access those markets. In addition, it is possible that our ability to access the capital and credit markets could be limited at a time when we would like, or need, to do so, which could have an adverse impact on our ability to refinance maturing debt and/or react to changing economic and business conditions.

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

	Three months ended	
(in thousands)	April 3, 2021	March 28, 2020
Net cash provided by operating activities	$ 53,115	$ 11,403
Net cash used in investing activities	(43,258)	(98,210)
Net cash (used in) provided by financing activities	(39,375)	71,685
Decrease in cash and cash equivalents	(32,373)	(16,834)

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 $53.1 million in the three months ended April 3, 2021, compared to $11.4 million in the three months ended March 28, 2020. The increase in cash provided by operating activities was primarily due to higher net income and a lower 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 operations of $80.8 million for the three months ended April 3, 2021 compared to a decrease of $97.0 million for the three months ended March 28, 2020.

Changes in working capital and other assets and liabilities for the three months ended April 3, 2021 were driven primarily by increases in inventories, accounts receivable and accounts payable and decreases in accrued liabilities. The change for accounts receivable was primarily due to the timing of collections. The change for inventory was driven by an increase in business activity. The change for accounts payable and accrued liabilities was primarily driven by a higher accounts payables due to timing of payments and higher accrued bonuses in 2021, partially offset by a higher payment of the previous year incentive compensation.

Investing activities Cash flows used in investing activities totaled $43.3 million in the three months ended April 3, 2021, compared to $98.2 million in the three months ended March 28, 2020. The change was due to less cash paid for acquisitions of businesses, partially offset by higher cash paid for acquisition of property, plant and equipment.

Acquisition of property, plant and equipment totaled $43.3 million in the three months ended April 3, 2021, which primarily reflected investments in equipment and tooling, compared to $22.6 million in the three months ended March 28, 2020, which primarily reflected investments in equipment and tooling.

In the three months ended March 28, 2020, the Company acquired Sinmat. The cash used to acquire Sinmat for the three months ended March 28, 2020 was $75.6 million, net of cash acquired. The transaction is described in further detail in note 3 to the Company's condensed consolidated financial statements.

As of April 3, 2021, the Company expects its full-year capital expenditures in 2021 to be approximately $225.0 million for growth capacity investments and the initial phase of the previously announced investment in our new facility in Taiwan. As of April 3, 2021, the Company had outstanding capital purchase obligations of $55.5 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.

Financing activities Cash flows used in financing activities totaled $39.4 million during the three months ended April 3, 2021, compared to $71.7 million during the three months ended March 28, 2020. The change was primarily due to absence of net short-term debt activity during the three months ended April 3, 2021, compared to a net source of cash of $142.0 million in the comparable period in 2020, and a $3.6 million increase in cash used to pay taxes for net share settlements of equity awards, offset in part by the absence of a $16.1 million deferred acquisition payment related to our acquisition of Digital Specialty Chemicals in 2020 and a decrease of $14.6 million in repurchases of the Company's common stock.

Our total dividend payments were $10.9 million in the three months ended April 3, 2021, compared to $10.8 million in the three months ended March 28, 2020. We have paid a cash dividend in each of the past 14 quarters. On April 14, 2021, the Board declared a quarterly cash dividend of $0.08 per share of common stock, payable on May 19, 2021 to stockholders of record on April 28, 2021.

Other Liquidity and Capital Resources Considerations

The Company's Term Loan Facility matures on November 6, 2025 and bore interest at a rate per annum of 2.1% at April 3, 2021. As of April 3, 2021, the aggregate principal amount outstanding under the Term Loan Facility was $145.0 million.

The Company's Revolving Facility provides for lending commitments in an aggregate principal amount of up to $300.0 million, maturing on November 6, 2023. 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. In connection with our issuance of the 2029 Notes, we intend to amend the Revolving Facility to provide for lending commitments in an aggregate principal amount of up to $400.0 million and to extend the maturity to April 30, 2026. At April 3, 2021, there was no balance outstanding under the Revolving Facility and we had undrawn outstanding letters of credit of $0.2 million.

As of April 3, 2021, we had $550.0 million aggregate principal amount of 2026 Notes and $400.0 million aggregate principal amount of 4.375% senior unsecured notes due April 15, 2028 outstanding.

Through April 3, 2021, the Company was in compliance with all applicable financial covenants under its credit facilities.

The Company also has a line of credit with one bank that provides for borrowings of Japanese yen for the Company's Japanese subsidiary, equivalent to an aggregate of approximately $9.0 million. There were no outstanding borrowings under this line of credit at April 3, 2021.

As of April 3, 2021, the Company's sources of available funds were its cash and cash equivalents of $548.5 million, funds available under the Revolving Facility and international credit facilities and cash flow generated from operations. As of April 3, 2021, the amount of cash and cash equivalents held in certain of our foreign operations totaled approximately $376.6 million. If we repatriate such funds, we will be required to pay income taxes in certain U.S. states and applicable foreign withholding taxes on those amounts during the period when such repatriation occurs. We have accrued taxes for the tax effect of repatriating the funds to the United States.

Off-Balance Sheet Arrangements

As of April 3, 2021, we did not have any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Obligations

There have been no significant changes to the contractual obligations reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

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, a non-GAAP financial measure, is defined by the Company as net income before, as applicable, (1) income tax expense, (2) interest expense, (3) interest income, (4) other (income) expense, 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, another non-GAAP financial measure, 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, a non-GAAP financial measure, 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 debt extinguishment, (6) amortization of intangible assets, (7) tax effect of legal entity restructuring and (8) the tax effect of the foregoing adjustments to net income, stated on a per share basis.

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.

Table of Contents

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

	Three months ended	
(In thousands)	April 3, 2021	March 28, 2020
Net sales	$ 512,844	$ 412,327
Net income	$ 84,676	$ 61,006
Net income - as a % of net sales	16.5 %	14.8 %
Adjustments to net income		
Income tax expense	13,391	8,622
Interest expense	11,652	10,559
Interest income	(71)	(321)
Other expense, net	4,330	878
GAAP – Operating income	113,978	80,744
Operating margin -as a % of net sales	22.2 %	19.6 %
Charge for fair value write-up of acquired inventory sold	—	361
Deal and transaction costs	—	1,431
Integration costs	2,044	48
Severance and restructuring costs	143	843
Amortization of intangible assets	11,871	16,211
Adjusted operating income	128,036	99,638
Adjusted operating margin - as a % of net sales	25.0 %	24.2 %
Depreciation	22,095	20,648
Adjusted EBITDA	$ 150,131	$ 120,286
Adjusted EBITDA – as a % of net sales	29.3 %	29.2 %

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

	Three months ended	
(In thousands, except per share data)	April 3, 2021	March 28, 2020
Net income	$ 84,676	$ 61,006
Adjustments to net income		
Charge for fair value write-up of acquired inventory sold	—	361
Deal and transaction costs	—	1,431
Integration costs	2,044	48
Severance and restructuring costs	143	843
Amortization of intangible assets	11,871	16,211
Tax effect of adjustments to net income and certain discrete tax items[1]	(3,221)	(4,329)
Non-GAAP net income	$ 95,513	$ 75,571
Diluted earnings per common share	$ 0.62	$ 0.45
Effect of adjustments to net income	0.08	0.11
Diluted non-GAAP earnings per common share	$ 0.70	$ 0.55

[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 $3.1 million and $1.5 million for the quarter ended April 3, 2021 and March 28, 2020.

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 23.5% and 22.8% of the Company's 2021 and 2020 sales for the quarters ended April 3, 2021 and March 28, 2020, respectively, are denominated in these currencies, respectively. 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 3, 2021 and March 28, 2020, revenue for the quarters would have been negatively impacted by approximately $12.5 million and $9.4 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 3, 2021, 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 3, 2021. 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 3, 2021, 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.

The Company acquired GMTI on July 10, 2020. GMTI is not significant to the Company's financial statements. The Company is continuing to integrate GMTI into the Company's internal control over financial reporting, and the foregoing evaluation of the effectiveness of the Company's disclosure controls and procedures does not include an assessment of those disclosure controls and procedures of GMTI that are subsumed by internal control over financial reporting.

PART II

OTHER INFORMATION

Item 1. Legal Proceedings

As of April 3, 2021, 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 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Issuer Purchases of Equity Securities

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 replaced the previous repurchase program, which was originally approved in February 2020 and which expired pursuant to its terms on February 15, 2021. The previous program had substantially the same terms.

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
January 1, 2021 - February 6, 2021	55,600	$102.65	55,600	$83,177,579
February 7, 2021 - March 6, 2021	41,800	$102.57	41,800	$121,792,050
March 7, 2021 - April 3, 2021	47,624	$105.10	47,624	$116,786,872
Total	145,024	$103.43	145,024	$116,786,872

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.

Table of Contents

Item 6. Exhibits

EXHIBIT INDEX

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)

* A management contract or compensatory plan

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 27, 2021

/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 27, 2021

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer
(Principal Executive 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 3, 2021 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 27, 2021

/s/ Bertrand Loy
Bertrand Loy
Chief Executive Officer

/s/ Gregory B. Graves
Gregory B. Graves
Chief Financial 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 27, 2021

/s/ Gregory B. Graves

Gregory B. Graves
Chief Financial Officer
(Principal Financial Officer)