

FORM 10-Q

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

For the quarterly period ended March 31, 2022

Commission file number 1-32737



KOPPERS HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Pennsylvania
(State of incorporation)

20-1878963
(IRS Employer Identification No.)

436 Seventh Avenue
Pittsburgh, Pennsylvania 15219
(Address of principal executive offices)

(412) 227-2001
(Registrant's telephone number, including area code)

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	KOP	The New York Stock Exchange

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards 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

Common Stock, par value \$0.01 per share, outstanding at April 29, 2022 amounted to 21,143,087 shares.

PART I—FINANCIAL INFORMATION**ITEM 1. FINANCIAL STATEMENTS**

KOPPERS HOLDINGS INC.

CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS AND COMPREHENSIVE INCOME

	<i>Three Months Ended March 31,</i>	
	<i>2022</i>	<i>2021</i>
<i>(Dollars in millions, except per share amounts)</i>	<i>(Unaudited)</i>	<i>(Unaudited)</i>
Net sales	\$ 459.3	\$ 407.5
Cost of sales	370.3	319.3
Depreciation and amortization	14.2	16.1
(Gain) on sale of assets	(2.5)	(7.5)
Impairment and restructuring charges	0.0	1.2
Selling, general and administrative expenses	39.1	34.5
Operating profit	38.2	43.9
Other income, net	0.6	1.0
Interest expense	9.8	10.2
Income from continuing operations before income taxes	29.0	34.7
Income tax provision	9.7	8.5
Income from continuing operations	19.3	26.2
Loss on sale of discontinued operations, net of tax benefit of \$0.0 and \$0.1	(0.5)	(0.4)
Net income	18.8	25.8
Net loss attributable to noncontrolling interests	0.0	(0.1)
Net income attributable to Koppers	\$ 18.8	\$ 25.9
Earnings (loss) per common share attributable to Koppers common shareholders:		
Basic -		
Continuing operations	\$ 0.91	\$ 1.24
Discontinued operations	(0.02)	(0.02)
Earnings per basic common share	\$ 0.89	\$ 1.22
Diluted -		
Continuing operations	\$ 0.89	\$ 1.20
Discontinued operations	(0.02)	(0.02)
Earnings per diluted common share	\$ 0.87	\$ 1.18
Comprehensive income	\$ 20.5	\$ 31.8
Comprehensive loss attributable to noncontrolling interests	0.0	(0.1)
Comprehensive income attributable to Koppers	\$ 20.5	\$ 31.9
Weighted average shares outstanding (in thousands):		
Basic	21,151	21,142
Diluted	21,692	21,907

The accompanying notes are an integral part of these condensed consolidated financial statements.

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED BALANCE SHEET

	March 31, 2022	December 31, 2021
<i>(Dollars in millions, except per share amounts)</i>		
<i>(Unaudited)</i>		
Assets		
Cash and cash equivalents, including restricted cash (Note 4)	\$ 49.2	\$ 45.5
Accounts receivable, net of allowance of \$3.5 and \$3.3	223.5	182.8
Inventories, net	329.7	313.8
Derivative contracts	55.0	61.0
Other current assets	26.8	25.0
Total current assets	684.2	628.1
Property, plant and equipment, net	509.7	489.1
Operating lease right-of-use assets	87.8	91.2
Goodwill	296.9	296.0
Intangible assets, net	128.1	131.5
Deferred tax assets	14.7	15.0
Other assets	10.4	11.0
Total assets	\$ 1,731.8	\$ 1,661.9
Liabilities		
Accounts payable	\$ 189.6	\$ 171.9
Accrued liabilities	88.8	90.5
Current operating lease liabilities	21.4	21.3
Current maturities of long-term debt	0.0	2.0
Total current liabilities	299.8	285.7
Long-term debt	829.4	781.5
Accrued postretirement benefits	38.1	38.6
Deferred tax liabilities	32.0	33.4
Operating lease liabilities	66.9	70.3
Other long-term liabilities	42.6	41.6
Total liabilities	1,308.8	1,251.1
Commitments and contingent liabilities (Note 18)		
Equity		
Senior Convertible Preferred Stock, \$0.01 par value per share; 10,000,000 shares authorized; no shares issued	0.0	0.0
Common Stock, \$0.01 par value per share; 80,000,000 shares authorized; 24,459,766 and 24,026,844 shares issued	0.2	0.2
Additional paid-in capital	253.4	249.5
Retained earnings	318.7	300.9
Accumulated other comprehensive loss	(38.3)	(40.0)
Treasury stock, at cost, 3,316,679 and 2,930,694 shares	(115.1)	(104.0)
Total Koppers shareholders' equity	418.9	406.6
Noncontrolling interests	4.1	4.2
Total equity	423.0	410.8
Total liabilities and equity	\$ 1,731.8	\$ 1,661.9

The accompanying notes are an integral part of these condensed consolidated financial statements.

KOPPERS HOLDINGS INC.
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

	Three Months Ended March 31,	
	2022	2021
(Dollars in millions)	(Unaudited)	(Unaudited)
Cash provided by (used in) operating activities:		
Net income	\$ 18.8	\$ 25.8
Adjustments to reconcile net cash used in operating activities:		
Depreciation and amortization	14.2	16.1
Stock-based compensation	3.5	3.5
Change in derivative contracts	0.3	(2.6)
Non-cash interest expense	0.7	0.7
(Gain) on sale of assets	(2.5)	(7.5)
Insurance proceeds	(0.4)	0.0
Deferred income taxes	0.3	(0.2)
Change in other liabilities	1.0	3.2
Other - net	2.4	(0.6)
Changes in working capital:		
Accounts receivable	(40.0)	(21.3)
Inventories	(13.5)	0.0
Accounts payable	13.0	(8.5)
Accrued liabilities	(4.5)	(10.9)
Other working capital	(1.3)	(5.1)
Net cash used in operating activities	(8.0)	(7.4)
Cash (used in) provided by investing activities:		
Capital expenditures	(26.2)	(24.2)
Insurance proceeds received	0.4	0.0
Cash provided by sale of assets	3.8	4.7
Net cash used in investing activities	(22.0)	(19.5)
Cash provided by (used in) financing activities:		
Net increase in credit facility borrowings	47.4	36.6
Repayments of long-term debt	(2.0)	(2.5)
Issuances of Common Stock	0.3	1.1
Repurchases of Common Stock	(11.1)	(1.8)
Payment of debt issuance costs	(0.1)	0.0
Dividends paid	(1.1)	0.0
Net cash provided by financing activities	33.4	33.4
Effect of exchange rate changes on cash	0.3	(0.8)
Net increase in cash and cash equivalents	3.7	5.7
Cash and cash equivalents at beginning of period	45.5	38.5
Cash and cash equivalents at end of period	\$ 49.2	\$ 44.2
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflow from operating leases	\$ 7.4	\$ 7.9
Supplemental disclosure of non-cash investing and financing activities:		
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 1.5	\$ 4.8
Supplemental disclosure of cash flow information:		
Non-cash investing activities		
Accrued capital expenditures	\$ 11.5	\$ 5.2

The accompanying notes are an integral part of these condensed consolidated financial statements.

1. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements and related disclosures have been prepared in accordance with accounting principles generally accepted in the United States applicable to interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments considered necessary for a fair presentation of Koppers Holdings Inc.'s and its subsidiaries' ("Koppers", "Koppers Holdings", the "Company", "we" or "us") financial position and interim results as of and for the periods presented have been included. All such adjustments are of a normal recurring nature unless disclosed otherwise. Because our business is seasonal, results for interim periods are not necessarily indicative of those that may be expected for a full year. The Condensed Consolidated Balance Sheet as of December 31, 2021 has been summarized from the audited balance sheet contained in the Annual Report on Form 10-K as of and for the year ended December 31, 2021. Certain prior period amounts in the condensed consolidated financial statements and notes to the condensed consolidated financial statements have been reclassified to conform to the current period's presentation.

The financial information included herein should be read in conjunction with our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2021.

COVID-19 Assessment

In March 2020, the World Health Organization categorized the coronavirus disease ("COVID-19") as a pandemic. COVID-19 continues to impact the United States and other countries across the world. There remains a level of uncertainty over the economic and operational impacts of COVID-19, and as a result the related future financial impact cannot be reasonably estimated at this time. Our consolidated financial statements presented in this report reflect certain estimates and assumptions made by management that affect the reported amounts of assets and liabilities and disclosure of such assets and liabilities at the date of the consolidated financial statements and reported amounts of revenue and expenses during the reporting periods presented.

Such estimates and assumptions affect, among other things, our goodwill, long-lived asset and intangible asset valuation; inventory valuation; assessment of the annual effective tax rate; valuation of deferred income taxes; the allowance for doubtful accounts; and measurement of cash incentive plans. Events and changes in circumstances arising after March 31, 2022, including those resulting from the impacts of COVID-19, will be reflected in management's estimates for future periods.

2. New Accounting Pronouncements

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting. This update provides temporary optional expedients and exceptions to U.S. GAAP on contract modifications, hedging relationships, and other transactions affected by reference rate reform to ease entities' financial reporting burdens as the market transitions from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. The guidance was effective upon issuance and may be applied prospectively to contract modifications made, hedging relationships entered into, and other transactions affected by reference rate reform, evaluated on or before December 31, 2022, beginning during the reporting period in which the guidance has been elected. Our debt agreements include the use of alternate rates when LIBOR is not available and we do not maintain hedging relationships applicable to this ASU. We do not expect the application of this update to have a material impact on our financial statements and, to the extent we enter into modifications of agreements that are impacted by the LIBOR phase-out, we will apply such guidance to those contract modifications.

3. Plant Closures and Divestitures

We have restructured our Carbon Materials and Chemicals (“CMC”) segment in order to concentrate our facilities in regions where we believe we hold key competitive advantages to better serve our global customers. The recent restructuring activities which had an impact on our reported results include:

- In February 2021, we sold our closed Follansbee, West Virginia coal tar distillation facility and we recorded a gain on sale of \$5.7 million, consisting of \$2.6 million from cash proceeds in addition to the assumption of certain liabilities by the buyer.
- In September 2020, we sold Koppers (Jiangsu) Carbon Chemical Company Limited (“KJCC”). Refer to Note 4 – “Discontinued Operations” for more details.
- In October 2018, we sold our closed Clairton, Pennsylvania coal tar distillation facility. In the first quarter of 2021, certain post-sale conditions were achieved and the buyer of the property released cash held in escrow to us resulting in a gain on sale of \$1.8 million.

Other closure and divestiture activity relates to our Railroad and Utility Products and Services (“RUPS”) segment, including:

- In January 2022, we began curtailing operations at our utility pole treating facility in Sweetwater, Tennessee. We sold the facility in March 2022 and recorded a gain on sale of \$2.5 million.
- In October 2021, we sold our closed Denver, Colorado crosstie treating facility and recorded a gain on sale of \$23.4 million. As part of the sales agreement, we may receive additional contingent post-closing payments secured by a guaranty from the buyer after applicable redevelopment milestones are reached. At this time, we are unable to estimate how much, if any, of these additional funds will ultimately be paid to us.

4. Discontinued Operations

On September 30, 2020, we sold KJCC to Fangda Carbon New Material Co., Ltd and C-Chem Co., Ltd., a subsidiary of Nippon Steel Chemical & Material Co., Ltd. (the “Buyers”). KJCC was located in Pizhou, Jiangsu Province, China and was a 75 percent-owned coal tar distillation company which was part of our CMC segment. Restricted cash of \$2.3 million is being held in an escrow account and is recorded within cash and cash equivalents as of March 31, 2022 to cover potential customary indemnity claims by the Buyers. On December 23, 2021 and March 31, 2022, the Buyers issued various claims, which after negotiation were settled in April 2022 for \$0.9 million, of which our share is \$0.7 million. After reduction for the settlement, we expect the escrow amount will be fully released by the end of the second quarter.

The sale of KJCC represented a strategic shift that had a major effect on our operations and accordingly is classified as discontinued operations in our condensed consolidated financial statements and notes.

In addition, we ceased carbon black production at our CMC facility located in Kurnell, Australia during 2011. This entity is also reflected as a discontinued operation in our condensed consolidated financial statements and notes.

5. Fair Value Measurements

Carrying amounts and the related estimated fair values of our financial instruments as of March 31, 2022 and December 31, 2021 are as follows:

	March 31, 2022		December 31, 2021	
	Fair Value	Carrying Value	Fair Value	Carrying Value
<i>(Dollars in millions)</i>				
Financial assets:				
Investments and other assets	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3
Financial liabilities:				
Long-term debt (including current portion)	\$ 837.3	\$ 834.4	\$ 804.1	\$ 789.1

Investments and other assets – Represents the broker-quoted cash surrender value on universal life insurance policies. This asset is classified as Level 2 in the valuation hierarchy and is measured from values received from financial institutions.

Debt – The fair value of our long-term debt is estimated based on the market prices for the same or similar issuances or on the current rates offered to us for debt of the same remaining maturities (Level 2). The fair value of our Credit Facility approximates carrying value due to the variable rate nature of this instrument.

6. Comprehensive Income and Equity

Total comprehensive income for the three months ended March 31, 2022 and 2021 is summarized in the table below:

	<i>Three Months Ended March 31,</i>	
	2022	2021
<i>(Dollars in millions)</i>		
Net income	\$ 18.8	\$ 25.8
Changes in other comprehensive income:		
Currency translation adjustment	5.8	(7.2)
Unrealized (loss) gain on cash flow hedges, net of tax benefit (expense) of \$2.1 and \$(4.5)	(4.3)	12.9
Unrecognized pension net loss, net of tax expense of \$(0.1) and \$(0.1)	0.2	0.3
Total comprehensive income	20.5	31.8
Comprehensive loss attributable to noncontrolling interests	0.0	(0.1)
Comprehensive income attributable to Koppers	\$ 20.5	\$ 31.9

Amounts reclassified from accumulated other comprehensive loss to net income consist of amounts shown for changes in or amortization of unrecognized pension net loss. This component of accumulated other comprehensive loss is included in the computation of net periodic pension cost as disclosed in Note 13 – “Pensions and Post-Retirement Benefit Plans.” Other amounts reclassified from accumulated other comprehensive loss related to derivative financial instruments, net of tax, of \$10.1 million for the three months ended March 31, 2022, and \$7.2 million for the three months ended March 31, 2021.

The following tables present the change in equity for the three months ended March 31, 2022 and 2021, respectively:

<i>(Dollars in millions)</i>	<i>Common Stock</i>	<i>Additional Paid-In Capital</i>	<i>Retained Earnings</i>	<i>Accumulated Other Comprehensive Loss</i>	<i>Treasury Stock</i>	<i>Noncontrolling Interests</i>	<i>Total Equity</i>
Balance at December 31, 2021	\$ 0.2	\$ 249.5	\$ 300.9	\$ (40.0)	\$ (104.0)	\$ 4.2	\$ 410.8
Net income	0.0	0.0	18.8	0.0	0.0	0.0	18.8
Dividends	0.0	0.0	(1.0)	0.0	0.0	0.0	(1.0)
Issuance of common stock	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Repurchases of common stock	0.0	0.0	0.0	0.0	(11.1)	0.0	(11.1)
Employee stock plans	0.0	3.6	0.0	0.0	0.0	0.0	3.6
Other comprehensive income (loss)							
Currency translation adjustment	0.0	0.0	0.0	5.9	0.0	(0.1)	5.8
Unrealized loss on cash flow hedges	0.0	0.0	0.0	(4.3)	0.0	0.0	(4.3)
Unrecognized pension net loss	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Balance at March 31, 2022	\$ 0.2	\$ 253.4	\$ 318.7	\$ (38.3)	\$ (115.1)	\$ 4.1	\$ 423.0

<i>(Dollars in millions)</i>	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Noncontrolling Interests	Total Equity
Balance at December 31, 2020	\$ 0.2	\$ 234.1	\$ 215.8	\$ (15.9)	\$ (92.5)	\$ 4.3	\$ 346.0
Net income (loss)	0.0	0.0	25.9	0.0	0.0	(0.1)	25.8
Issuance of common stock	0.0	1.2	0.0	0.0	0.0	0.0	1.2
Repurchases of common stock	0.0	0.0	0.0	0.0	(1.8)	0.0	(1.8)
Employee stock plans	0.0	3.6	0.0	0.0	0.0	0.0	3.6
Other comprehensive (loss) income							
Currency translation adjustment	0.0	0.0	0.2	(7.2)	0.0	0.0	(7.0)
Unrealized gain on cash flow hedges	0.0	0.0	0.0	12.9	0.0	0.0	12.9
Unrecognized pension net loss	0.0	0.0	0.0	0.3	0.0	0.0	0.3
Balance at March 31, 2021	\$ 0.2	\$ 238.9	\$ 241.9	\$ (10.0)	\$ (94.3)	\$ 4.2	\$ 380.9

For the three months ended March 31, 2022, we declared dividends totaling \$0.05 per common share. On May 5, 2022, we declared a quarterly dividend of \$0.05 per common share, payable on June 13, 2022 to shareholders of record as of May 27, 2022.

7. Earnings per Common Share

The computation of basic earnings per common share for the periods presented is based upon the weighted average number of common shares outstanding during the periods. The computation of diluted earnings per common share includes the effect of non-vested nonqualified stock options and restricted stock units assuming such options and stock units were outstanding common shares at the beginning of the period. The effect of antidilutive securities is excluded from the computation of diluted loss per common share, if any.

The following table sets forth the computation of basic and diluted earnings per common share:

<i>(Dollars in millions, except share amounts, in thousands)</i>	<i>Three Months Ended March 31,</i>	
	2022	2021
Net income attributable to Koppers	\$ 18.8	\$ 25.9
Less: Loss on sale of discontinued operations, net of tax benefit of \$0.0 and \$0.1	(0.5)	(0.4)
Income from continuing operations attributable to Koppers	\$ 19.3	\$ 26.3
Weighted average common shares outstanding:		
Basic	21,151	21,142
Effect of dilutive securities	541	765
Diluted	21,692	21,907
Earnings per common share – continuing operations:		
Basic earnings per common share	\$ 0.91	\$ 1.24
Diluted earnings per common share	0.89	1.20
Other data:		
Antidilutive securities excluded from computation of diluted earnings per common share	965	445

8. Stock-based Compensation

We have outstanding stock-based compensation awards that were granted under the amended and restated 2005 Long-Term Incentive Plan (the "2005 LTIP"), the 2018 Long-Term Incentive Plan (the "2018 LTIP") and the 2020 Long-Term Incentive Plan, as amended (the "2020 LTIP"). The 2005 LTIP, the 2018 LTIP and the 2020 LTIP are collectively referred to as the "LTIP". The LTIP provides for the grant to eligible persons of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance awards, dividend equivalents and other stock-based awards, which are collectively referred to as the "awards."

Restricted Stock Units and Performance Stock Units

Under the LTIP, the board of directors grants restricted stock units and performance stock units to certain employee participants (collectively, the "stock units"). Compensation expense for non-vested stock units is recorded over the vesting period based on the fair value at the date of grant. The fair value of restricted stock units is the market price of the underlying common stock on the date of grant and the fair value of performance stock units is determined using a Monte Carlo valuation model. For grants to most employees, the restricted stock units vest in four equal annual installments. Restricted stock units that have one-year vesting periods are also issued under the LTIP to members of the board of directors in connection with annual director compensation and, from time to time, are issued to employees in connection with employee compensation with vesting periods of typically two years or less.

Performance stock units have vesting based upon a market condition. These performance stock units have multi-year performance objectives and a three-year period for vesting (if the applicable performance objectives are achieved). The applicable performance objective is based on our total shareholder return relative to the Standard & Poor's SmallCap 600 Materials Index. The number of performance stock units granted represents the target award and participants have the ability to earn between zero and 200 percent of the target award based upon actual performance. If minimum performance criteria are not achieved, no performance stock units will vest. We have the discretion to settle the award in cash rather than shares, although we currently expect that all awards will be settled by the issuance of shares.

We calculated the fair value of the performance stock unit awards on the date of grant using the assumptions listed below:

	January 2022 Grant		January 2021 Grant		March 2020 Grant		March 2019 Grant	
Grant date price per share of performance award	\$	32.19	\$	29.84	\$	19.63	\$	26.63
Expected dividend yield per share		0.00%		0.00%		0.00%		0.00%
Expected volatility		66.90%		68.70%		45.60%		39.00%
Risk-free interest rate		1.10%		0.16%		0.72%		2.50%
Look-back period in years		3.00		3.00		2.83		2.82
Grant date fair value per share	\$	45.19	\$	41.50	\$	11.56	\$	40.30

Dividends declared, if any, on our common stock during the period prior to vesting of the stock units are credited at equivalent value as additional stock units and become payable as additional common shares upon vesting. In the event of termination of employment, other than retirement, death or disability, any non-vested stock units are forfeited, including additional stock units credited from dividends. In the event of termination of employment due to retirement, death or disability, pro-rata vesting of the stock units over the service period will result. There are special vesting provisions for the stock units related to a change in control.

The following table shows a summary of the performance stock units as of March 31, 2022:

<i>Performance Period</i>	<i>Minimum Shares</i>	<i>Target Shares</i>	<i>Maximum Shares</i>
2020 – 2022	0	74,475	148,994
2021 – 2023	40,998	138,773	236,566
2022 – 2024	0	151,236	302,472

The following table shows a summary of the status and activity of non-vested stock units for the three months ended March 31, 2022:

	Restricted Stock Units	Performance Stock Units	Total Stock Units	Weighted Average Grant Date Fair Value per Unit
Non-vested at December 31, 2021	505,905	474,166	980,071	\$ 30.79
Granted	181,160	151,236	332,396	\$ 38.04
Performance share adjustment	0	2,010	2,010	\$ 14.13
Vested	(162,365)	(256,956)	(419,321)	\$ 34.77
Forfeited	(11,146)	(5,972)	(17,118)	\$ 26.75
Non-vested at March 31, 2022	513,554	364,484	878,038	\$ 31.68

Stock Options

Stock options to executive officers vest and become exercisable in four equal annual installments. The stock options have a term of ten years. In the event of termination of employment, other than retirement, death or disability, any non-vested options are forfeited. In the event of termination of employment due to retirement, death or disability, pro-rata vesting of the options over the service period will result. There are special vesting provisions for the stock options related to a change in control.

Compensation expense for non-vested stock options is recorded over the vesting period based on the fair value at the date of grant. We calculated the fair value of stock options on the date of grant using the Black-Scholes-Merton model and the assumptions listed below:

	January 2022 Grant	January 2021 Grant	March 2020 Grant	March 2019 Grant
Grant date price per share of stock option award	\$ 32.19	\$ 29.84	\$ 19.63	\$ 26.63
Expected dividend yield per share	0.00%	0.00%	0.00%	0.00%
Expected life in years	6.76	6.64	6.40	6.14
Expected volatility	54.50%	54.80%	42.85%	39.44%
Risk-free interest rate	1.52%	0.59%	0.87%	2.53%
Grant date fair value per share of option awards	\$ 17.58	\$ 15.79	\$ 8.42	\$ 11.29

Prior to February 2022, we had not declared a dividend since 2014. The expected life in years is based on historical exercise data of options previously granted by us. Expected volatility is based on the historical volatility of our common stock and the historical volatility of certain other similar public companies. The risk-free interest rate is based on U.S. Treasury bill rates for the expected life of the option.

The following table shows a summary of the status and activity of stock options for the three months ended March 31, 2022:

	Options	Weighted Average Exercise Price per Option	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2021	1,054,166	\$ 26.89		
Granted	98,108	\$ 32.19		
Expired	(30,138)	\$ 38.21		
Outstanding at March 31, 2022	1,122,136	\$ 27.05	5.37	\$ 5.0
Exercisable at March 31, 2022	843,475	\$ 26.99	4.27	\$ 4.3

Stock Compensation Expense

Total stock-based compensation expense recognized under our LTIP and employee stock purchase plan for the three months ended March 31, 2022 and 2021 is as follows:

	Three Months Ended March 31,	
	2022	2021
<i>(Dollars in millions)</i>		
Stock-based compensation expense recognized:		
Selling, general and administrative expenses	\$ 3.5	\$ 3.5
Less related income tax benefit	1.2	0.9
Decrease in net income attributable to Koppers	\$ 2.3	\$ 2.6
Intrinsic value of exercised stock options	\$ 0.0	\$ 0.9
Cash received from the exercise of stock options	\$ 0.0	\$ 1.0

As of March 31, 2022, total future compensation expense related to non-vested stock-based compensation arrangements is expected to total \$26.7 million and the weighted-average period over which this expense is expected to be recognized is approximately 32 months.

9. Segment Information

We have three reportable segments: RUPS, Performance Chemicals ("PC") and CMC. Our reportable segments contain multiple aggregated business units since management believes the long-term financial performance of these business units is affected by similar economic conditions. The reportable segments are each managed separately because they manufacture and distribute distinct products with different production processes.

Our RUPS segment sells treated and untreated wood products, manufactured products and services primarily to the railroad and public utility markets. Railroad products and services include procuring and treating items such as crossties, switch ties and various types of lumber used for railroad bridges and crossings and the manufacture of rail joint bars. Utility products include transmission and distribution poles and pilings. The segment also operates a railroad services business that conducts engineering, design, repair and inspection services for railroad bridges, a business related to the recovery of used crossties and a business related to the inspection of utility poles.

Our PC segment develops, manufactures, and markets wood preservation chemicals and wood treatment technologies and services a diverse range of end-markets including infrastructure, residential and commercial construction, and agriculture.

Our CMC segment is primarily a manufacturer of creosote, carbon pitch, naphthalene, phthalic anhydride and carbon black feedstock. Creosote is used in the treatment of wood and carbon black feedstock is used in the production of carbon black. Carbon pitch is used in the production of aluminum and steel in electric arc furnaces. Naphthalene is used for the production of phthalic anhydride and as a surfactant in the production of concrete. Phthalic anhydride is used in the production of plasticizers, polyester resins and alkyd paints.

Our primary measure of segment profitability is adjusted earnings before interest, income taxes, depreciation, amortization and certain non-cash and/or non-recurring items that do not contribute directly to management's evaluation of our operating results (as defined by us, "adjusted EBITDA"). These items include impairment, restructuring and plant closure costs, mark-to-market commodity hedging, gain on sale of assets and non-cash LIFO effects. This presentation is consistent with how our chief operating decision maker evaluates the results of operations and makes strategic decisions about the business. In addition, adjusted EBITDA is the primary measure used to determine the level of achievement of management's short-term incentive goals and related payout. For these reasons, we believe that adjusted EBITDA represents the most relevant measure of segment profit and loss.

Consolidated adjusted EBITDA is reconciled to net income, the most directly comparable financial measure determined and reported in accordance with U.S. GAAP. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. Intersegment transactions are eliminated in consolidation.

Contract Balances

The timing of revenue recognition results in both billed accounts receivable and unbilled receivables, both classified as accounts receivable, net of allowance within the condensed consolidated balance sheet. Contract assets of \$5.4 million and \$7.9 million are recorded within accounts receivable, net of allowance within the condensed consolidated balance sheet as of March 31, 2022 and December 31, 2021, respectively.

The following table sets forth certain sales and operating data, net of all intersegment transactions, for our segments for the periods indicated:

	<i>Three Months Ended March 31,</i>	
	2022	2021
<i>(Dollars in millions)</i>		
Revenues from external customers:		
Railroad and Utility Products and Services	\$ 183.4	\$ 191.9
Performance Chemicals	136.4	123.6
Carbon Materials and Chemicals	139.5	92.0
Total	\$ 459.3	\$ 407.5
Intersegment revenues:		
Performance Chemicals	\$ 4.0	\$ 3.5
Carbon Materials and Chemicals	18.6	17.8
Total	\$ 22.6	\$ 21.3
Depreciation and amortization expense:		
Railroad and Utility Products and Services	\$ 5.4	\$ 6.3
Performance Chemicals	3.9	4.8
Carbon Materials and Chemicals	4.9	5.0
Total	\$ 14.2	\$ 16.1
Adjusted EBITDA:		
Railroad and Utility Products and Services	\$ 11.6	\$ 16.4
Performance Chemicals	20.9	27.8
Carbon Materials and Chemicals	20.1	10.4
Items excluded from the determination of segment profit:		
Impairment, restructuring and plant closure costs	(0.1)	(3.3)
Gain on sale of assets	2.5	7.5
LIFO expense	(1.7)	(1.0)
Mark-to-market commodity hedging (losses) gains	(0.3)	2.6
Corporate unallocated	0.0	0.5
Interest expense	(9.8)	(10.1)
Depreciation and amortization	(14.2)	(16.1)
Income tax provision	(9.7)	(8.5)
Discontinued operations	(0.5)	(0.4)
Net income	\$ 18.8	\$ 25.8

The following table sets forth revenues for significant product lines, net of all intersegment transactions, for our segments for the periods indicated:

	<i>Three Months Ended March 31,</i>	
	2022	2021
<i>(Dollars in millions)</i>		
Railroad and Utility Products and Services:		
Railroad treated products	\$ 105.3	\$ 108.9
Utility poles	56.2	62.8
Railroad infrastructure services	9.3	8.9
Rail joints	6.8	5.5
Other products	5.8	5.8
Total	183.4	191.9
Performance Chemicals:		
Wood preservative products	130.4	119.2
Other products	6.0	4.4
Total	136.4	123.6
Carbon Materials and Chemicals:		
Pitch and related products	77.8	51.2
Phthalic anhydride and other chemicals	25.3	16.5
Creosote and distillates	19.0	13.1
Naphthalene	8.6	4.5
Other products	8.8	6.7
Total	139.5	92.0
Total	\$ 459.3	\$ 407.5

The following table sets forth assets and goodwill allocated to each of our segments as of the dates indicated:

	<i>March 31,</i>	<i>December 31,</i>
	2022	2021
<i>(Dollars in millions)</i>		
Segment assets:		
Railroad and Utility Products and Services	\$ 614.2	\$ 594.1
Performance Chemicals	626.2	586.9
Carbon Materials and Chemicals	460.6	447.1
All other	30.8	33.8
Total	\$ 1,731.8	\$ 1,661.9
Goodwill:		
Railroad and Utility Products and Services	\$ 121.0	\$ 120.9
Performance Chemicals	175.9	175.1
Total	\$ 296.9	\$ 296.0

10. Income Taxes

Effective Tax Rate

The income tax provision for interim periods is comprised of an estimated annual effective income tax rate applied to current year ordinary income and tax associated with discrete items. These discrete items generally relate to excess stock compensation deductions, changes in tax laws, adjustments to unrecognized tax benefits and changes of estimated tax liability to the actual liability determined upon filing income tax returns. To determine the annual effective tax rate, management is required to make estimates of annual pretax income in each domestic and foreign jurisdiction in which we conduct business. Entities that have historical pre-tax losses and current year estimated pre-tax losses that are not projected to generate a future benefit are excluded from the estimated annual effective income tax rate.

The estimated annual effective income tax rate, excluding discrete items, was 32.9 percent and 25.8 percent for three months ended March 31, 2022 and 2021, respectively. The estimated annual effective income tax rate differs from the U.S. federal statutory tax rate due to:

	<i>March 31,</i>	
	<i>2022</i>	<i>2021</i>
Federal income tax rate	21.0%	21.0%
Foreign earnings taxed at different rates	5.2	2.6
Interest expense deduction limitation	3.7	0.0
Nondeductible expenses	1.3	1.1
GILTI inclusion, net of foreign tax credits	0.7	0.5
State income taxes, net of federal tax benefit	0.6	0.5
Change in tax contingency reserves	0.4	0.1
Estimated annual effective income tax rate	32.9%	25.8%

Income taxes as a percentage of pretax income were 33.4 percent for the three months ended March 31, 2022. This is higher than the estimated annual effective income tax rate due to various discrete items, which were not material in the aggregate or individually.

The interest expense deduction limitation is limited to 30 percent of adjusted taxable income as defined under the tax regulations. Starting January 1, 2022, the calculation of adjusted taxable income excludes an addback for depreciation and amortization whereas previous years' determination of adjusted taxable income included an addback for depreciation and amortization. This change in the determination of adjusted taxable income has decreased the amount of interest expense we can deduct and has had a significant unfavorable impact on our estimated annual effective income tax rate for the current year.

Income taxes as a percentage of pretax income were 24.5 percent for the three months ended March 31, 2021. This was lower than the estimated annual effective income tax rate due primarily to an excess tax deduction for vested stock awards.

During the year, management regularly updates estimates of pre-tax income and income tax expense based on changes in pre-tax income projections by taxable jurisdiction, repatriation of foreign earnings, unrecognized tax benefits and other tax matters. To the extent that actual results vary from these estimates, the actual annual effective income tax rate at the end of the year could be materially different from the estimated annual effective income tax rate for the three months ended March 31, 2022.

Unrecognized Tax Benefits

We file income tax returns in the U.S. federal jurisdiction, individual U.S. state jurisdictions and non-U.S. jurisdictions. With few exceptions, we are no longer subject to U.S. federal, U.S. state, or non-U.S. income tax examinations by tax authorities for years prior to 2016.

Unrecognized tax benefits totaled \$1.5 million as of March 31, 2022 and December 31, 2021. The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate, was approximately \$1.5 million as of March 31, 2022 and December 31, 2021. We recognize interest expense and any related penalties from unrecognized tax benefits in income tax expense. As of March 31, 2022 and December 31, 2021, we had accrued approximately \$0.4 million for interest and penalties.

We do not anticipate material changes to the amount of unrecognized tax benefits within the next twelve months.

11. Inventories

Net inventories as of March 31, 2022 and December 31, 2021 are summarized in the table below:

	<i>March 31,</i>		<i>December 31,</i>	
	<i>2022</i>		<i>2021</i>	
<i>(Dollars in millions)</i>				
Raw materials	\$	275.5	\$	266.8
Work in process		11.1		12.6
Finished goods		122.5		112.1
	\$	409.1	\$	391.5
Less revaluation to LIFO		79.4		77.7
Net	\$	329.7	\$	313.8

12. Property, Plant and Equipment

Property, plant and equipment as of March 31, 2022 and December 31, 2021 are summarized in the table below:

	<i>March 31,</i>		<i>December 31,</i>	
	<i>2022</i>		<i>2021</i>	
<i>(Dollars in millions)</i>				
Land	\$	14.5	\$	15.2
Buildings		76.2		75.8
Machinery and equipment		864.8		836.8
	\$	955.5	\$	927.8
Less accumulated depreciation		445.8		438.7
Net	\$	509.7	\$	489.1

13. Pensions and Post-Retirement Benefit Plans

We maintain a number of defined benefit and defined contribution plans to provide retirement benefits for employees in the United States, as well as employees outside the United States. These plans are maintained and contributions are made in accordance with the Employee Retirement Income Security Act of 1974 ("ERISA"), local statutory law or as determined by the board of directors. The defined benefit pension plans generally provide benefits based upon years of service and compensation. Pension plans are funded except for three domestic non-qualified defined benefit pension plans for certain key executives.

In the United States, all qualified and two of the non-qualified defined benefit pension plans for salaried and hourly employees have been frozen and are closed to new participants. Accordingly, these pension plans no longer accrue additional years of service or recognize future increases in compensation for benefit purposes.

With respect to our defined benefit pension plan in the United Kingdom, in 2021 we entered into a buy-in bulk annuity insurance policy in exchange for a premium payment of \$67.8 million, which is subject to adjustment as a result of subsequent data cleansing activities. Under the terms of this buy-in insurance policy, the insurer is liable to pay the benefits of our defined benefit pension plan in the United Kingdom, but the plan still retains full legal responsibility to pay the benefits to the members of the plan using the insurance payments. The buy-in policy will be treated as a plan asset going forward until such time as the buy-in policy is converted to a buy-out policy, which is when individual insurance policies will be assigned to each member of the plan and the plan will no longer have legal responsibility to pay the benefits to the members. The data cleansing effort is expected to be completed in late 2022 or early 2023 at which time the pension obligation will be irrevocably settled. Upon that event, we will recognize a pre-tax pension settlement loss of approximately \$22 million.

The defined contribution plans generally provide retirement assets to employee participants based upon employer and employee contributions to the participant's individual investment account. We also provide retiree medical insurance coverage to certain U.S. employees and a life insurance benefit to most U.S. employees. For salaried employees, the retiree medical and retiree insurance plans have been closed to new participants.

The following table provides the components of net periodic benefit cost for the pension plans for the three months ended March 31, 2022 and 2021:

	<i>Three Months Ended March 31,</i>	
	<i>2022</i>	<i>2021</i>
<i>(Dollars in millions)</i>		
Service cost	\$ 0.3	\$ 0.4
Interest cost	1.4	1.2
Expected return on plan assets	(2.0)	(1.8)
Amortization of net loss	0.5	0.4
Net periodic benefit cost	\$ 0.2	\$ 0.2
Defined contribution plan expense	\$ 2.5	\$ 1.7

14. Debt

Debt as of March 31, 2022 and December 31, 2021 was as follows:

	Weighted Average Interest Rate	Maturity	March 31, 2022	December 31, 2021
<i>(Dollars in millions)</i>				
Term Loan	2.88%	2024	\$ 0.0	\$ 2.0
Revolving Credit Facility	2.88%	2024	334.4	287.1
Senior Notes due 2025	6.00%	2025	500.0	500.0
Debt			834.4	789.1
Less short-term debt and current maturities of long-term debt			0.0	2.0
Less unamortized debt issuance costs			5.0	5.6
Long-term debt			\$ 829.4	\$ 781.5

Credit Facility

We maintain a \$600.0 million senior secured revolving credit facility and a \$100.0 million secured term loan facility (collectively, the "Credit Facility"), as amended. The secured term loan had a quarterly amortization of \$2.5 million and the interest rate on the Credit Facility was variable and based on LIBOR. As of March 31, 2022, the secured term loan has been fully repaid.

Borrowings under the Credit Facility are secured by a first priority lien on substantially all of the assets of Koppers Inc., Koppers Holdings Inc. and their material domestic subsidiaries. The Credit Facility contains certain covenants for Koppers Inc. and its restricted subsidiaries that limit capital expenditures, additional indebtedness, liens, dividends, investments or acquisitions. In addition, such covenants give rise to events of default upon the failure by Koppers Inc. and its restricted subsidiaries to meet certain financial ratios.

As of March 31, 2022, we had \$257.8 million of unused revolving credit availability for working capital purposes after restrictions from certain letter of credit commitments and other covenants. As of March 31, 2022, \$7.8 million of commitments were utilized by outstanding undrawn letters of credit.

Senior Notes due 2025

Koppers Inc.'s \$500 million Senior Notes due 2025 (the "2025 Notes") are senior obligations of Koppers Inc., are unsecured and are guaranteed by Koppers Holdings Inc. and certain of Koppers Inc.'s domestic subsidiaries. The 2025 Notes pay interest semi-annually in arrears on February 15 and August 15 and will mature on February 15, 2025 unless earlier redeemed or repurchased. We are entitled to redeem all or a portion of the 2025 Senior Notes at a redemption price of 101.5 percent of principal value as of February 15, 2022 until April 15, 2023 when the 2025 Notes are redeemable at principal value.

The indenture governing the 2025 Senior Notes includes customary covenants that restrict, among other things, the ability of Koppers Inc. and its restricted subsidiaries to incur additional debt, pay dividends or make certain other restricted payments, incur liens, merge or sell all or substantially all of the assets of Koppers Inc. or its subsidiaries or enter into various transactions with affiliates.

15. Asset Retirement Obligations

We recognize asset retirement obligations for the removal and disposal of residues; dismantling of certain tanks required by governmental authorities; cleaning and dismantling costs for owned railcars; cleaning costs for leased rail-cars and barges; and site demolition, when required by governmental authorities or by contract. The following table reflects changes in the carrying values of asset retirement obligations:

	March 31, 2022	December 31, 2021
<i>(Dollars in millions)</i>		
Asset retirement obligation at beginning of year	\$ 13.2	\$ 19.8
Accretion expense	0.3	1.0
Revision in estimated cash flows	0.2	(0.3)
Cash expenditures	(0.1)	(7.3)
Balance at end of period	\$ 13.6	\$ 13.2

16. Leases

We recognize lease obligations and associated right-of-use assets for existing non-cancelable leases. We have non-cancelable operating leases primarily associated with railcars, office and manufacturing facilities, storage tanks, ships, production equipment and vehicles. Many of our leases include both lease (e.g., fixed rent) and non-lease components (e.g., maintenance and services). For certain asset classes such as railcars, storage tanks and ships, we have separated the lease and non-lease components based on the estimated stand-alone price for each component. For the remaining asset classes, we have elected to account for these components as a single lease component. In addition, we exclude leases expiring within twelve months from balance sheet recognition.

Many of our leases include one or more options to renew. We evaluate renewal options at the lease commencement date and regularly thereafter to determine if we are reasonably certain to exercise the option, in which case we include the renewal period in our lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on information available to determine the present value of the lease payments.

Lease expense for operating leases is recognized on a straight-line basis over the lease term. Variable lease expense is recognized in the period in which the obligation for those payments is incurred. Operating lease costs were \$7.5 million and \$7.7 million during the three months ended March 31, 2022 and 2021, respectively. Variable lease costs were \$0.8 million during the three months ended March 31, 2022 and 2021.

The following table presents information about the amount and timing of cash flows arising from our operating leases as of March 31, 2022:

<i>(Dollars in millions)</i>		
2022	\$	20.9
2023		22.2
2024		18.3
2025		14.8
2026		10.7
Thereafter		25.2
Total lease payments	\$	112.1
Less: Interest		(23.8)
Present value of lease liabilities	\$	88.3

Supplemental condensed consolidated balance sheet information related to leases is as follows:

	<u>March 31,</u>		<u>December 31,</u>	
	2022		2021	
<i>(Dollars in millions)</i>				
Operating leases:				
Operating lease right-of-use assets	\$	87.8	\$	91.2
Current operating lease liabilities	\$	21.4	\$	21.3
Operating lease liabilities		66.9		70.3
Total operating lease liabilities	\$	88.3	\$	91.6
Weighted average remaining lease term, in years		5.7		5.8
Weighted average discount rate		7.4%		7.4%

17. Derivative Financial Instruments

We utilize derivative instruments to manage exposures to risks that have been identified, measured and are capable of being mitigated. The primary risks that we manage by using derivative instruments are commodity price risk associated with copper and foreign currency exchange risk associated with a number of currencies, principally the U.S. dollar, the Euro and British pounds. Swap contracts on copper are used to manage the price risk associated with forecasted purchases of materials used in our manufacturing processes. Generally, we will not hedge cash flow exposures for durations longer than 36 months and we have hedged certain volumes of copper through the end of 2022. We enter into foreign currency forward contracts to manage foreign currency risk associated with our receivable and payable balances in addition to foreign-denominated sales. Generally, we enter into master netting arrangements with the counterparties and offset net derivative positions with the same counterparties. Currently, our agreements do not require cash collateral.

The Company recognizes all derivative instruments as either assets or liabilities at fair value in the balance sheet. Derivative instruments' fair value is determined using significant other observable inputs, or Level 2 in the fair value hierarchy. We designate certain of our commodity swaps as cash flow hedges of forecasted purchases of commodities. For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income and is reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative instruments representing hedge ineffectiveness are recognized in current earnings.

For those commodity swaps where hedge accounting is not elected, the fair value of the commodity swap is recognized as an asset or liability in the consolidated balance sheet and the related gain or loss on the derivative is reported in current earnings. These amounts are classified in cost of sales in the condensed consolidated statement of operations.

As of March 31, 2022 and December 31, 2021, we had outstanding copper swap contracts of the following amounts:

	Units Outstanding (in Pounds)		Net Fair Value - Asset (in Dollars)	
	March 31, 2022	December 31, 2021	March 31, 2022	December 31, 2021
<i>(Amounts in millions)</i>				
Cash flow hedges	22.3	29.0	\$ 48.1	\$ 53.8
Contracts where hedge accounting was not elected	4.6	6.1	\$ 6.7	7.1
Total	26.9	35.1	\$ 54.8	\$ 60.9

As of March 31, 2022 and December 31, 2021, the fair value of the outstanding copper swap contracts is recorded in the balance sheet as follows:

	March 31, 2022	December 31, 2021
<i>(Dollars in millions)</i>		
Derivative contracts	\$ 54.8	\$ 60.9
Accumulated other comprehensive gain, net of tax	\$ 36.8	\$ 40.6

In the next twelve months, we estimate that \$36.8 million of unrealized gains, net of tax, related to commodity price hedging will be reclassified from other comprehensive income into earnings.

See Note 6 – “Comprehensive Income and Equity”, for amounts recorded in other comprehensive income and for amounts reclassified from accumulated other comprehensive loss into net income for the periods specified below.

For the three months ended March 31, 2022 and 2021, the unrealized (loss) gain from contracts where hedge accounting was not elected is as follows:

	Three Months Ended March 31,	
	2022	2021
<i>(Dollars in millions)</i>		
(Loss) gain from contracts where hedge accounting was not elected	(0.3)	2.6

The fair value associated with forward contracts related to foreign currency that are not designated as hedges are immediately charged to earnings. These amounts are classified in cost of sales in the condensed consolidated statement of operations and comprehensive income.

As of March 31, 2022 and December 31, 2021, the fair value of outstanding foreign currency forward contracts is recorded in the balance sheet as follows:

	March 31, 2022	December 31, 2021
<i>(Dollars in millions)</i>		
Derivative contracts	\$ 0.2	\$ 0.1
Accrued liabilities	(0.5)	(0.4)
Net liability on balance sheet	\$ (0.3)	\$ (0.3)

As of March 31, 2022 and December 31, 2021, the net currency units outstanding for these contracts were:

	March 31, 2022	December 31, 2021
<i>(In millions)</i>		
United States Dollars	USD 24.5	USD 21.4

18. Commitments and Contingent Liabilities

We are involved in litigation and various proceedings relating to environmental laws and regulations, product liability and other matters. Certain of these matters are discussed below. The ultimate resolution of these contingencies is subject to significant uncertainty and should we fail to prevail in any of these legal matters or should several of these legal matters be resolved against us in the same reporting period, these legal matters could, individually or in the aggregate, be material to the condensed consolidated financial statements.

Legal Proceedings

Coal Tar Pitch Cases. Koppers Inc. is one of several defendants in lawsuits filed in two states in which the plaintiffs claim they suffered a variety of illnesses (including cancer) as a result of exposure to coal tar pitch sold by the defendants. There were 57 plaintiffs in 30 cases pending as of March 31, 2022, compared to 59 plaintiffs in 31 cases pending as of December 31, 2021. As of March 31, 2022, there were 29 cases pending in the Court of Common Pleas of Allegheny County, Pennsylvania, and one case pending in the Circuit Court of Knox County, Tennessee.

The plaintiffs in all 30 pending cases seek to recover compensatory damages. Plaintiffs in 25 of those cases also seek to recover punitive damages. The plaintiffs in the 29 cases filed in Pennsylvania seek unspecified damages in excess of the court's minimum jurisdictional limit. The plaintiff in the Tennessee state court case seeks damages of \$15.0 million. The other defendants in these lawsuits vary from case to case and include companies such as Beazer East, Inc. ("Beazer East"), Honeywell International Inc., Graftech International Holdings, Dow Chemical Company, UCAR Carbon Company, Inc., and SGL Carbon Corporation. Discovery is proceeding in these cases. No trial dates have been set in any of these cases.

We have not provided a reserve for the coal tar pitch lawsuits because, at this time, we cannot reasonably determine the probability of a loss, and the amount of loss, if any, cannot be reasonably estimated. The timing of resolution of these cases cannot be reasonably determined. Although Koppers Inc. is vigorously defending these cases, an unfavorable resolution of these matters may have a material adverse effect on our business, financial condition, cash flows and results of operations.

Environmental and Other Litigation Matters

We are subject to federal, state, local and foreign laws and regulations and potential liabilities relating to the protection of the environment and human health and safety including, among other things, the cleanup of contaminated sites, the treatment, storage and disposal of wastes, the discharge of effluent into waterways, the emission of substances into the air and various health and safety matters. We expect to incur substantial costs for ongoing compliance with such laws and regulations. We may also face governmental or third-party claims, or otherwise incur costs, relating to cleanup of, or for injuries resulting from, contamination at sites associated with past and present operations. We accrue for environmental liabilities when a determination can be made that a liability is probable and reasonably estimable.

Environmental and Other Liabilities Retained or Assumed by Others. We have agreements with former owners of certain of our operating locations under which the former owners retained, assumed and/or agreed to indemnify us against certain environmental and other liabilities. The most significant of these agreements was entered into at Koppers Inc.'s formation on December 29, 1988 (the "Acquisition"). Under the related asset purchase agreement between Koppers Inc. and Beazer East, subject to certain limitations, Beazer East retained the responsibility for and agreed to indemnify Koppers Inc. against certain liabilities, damages, losses and costs, including, with certain limited exceptions, liabilities under and costs to comply with environmental laws to the extent attributable to acts or omissions occurring prior to the Acquisition and liabilities related to products sold by Beazer East prior to the Acquisition (the "Indemnity"). Beazer Limited, the parent company of Beazer East, unconditionally guaranteed Beazer East's performance of the Indemnity pursuant to a guarantee (the "Guarantee"). The Indemnity provides different mechanisms, subject to certain limitations, by which Beazer East is obligated to indemnify Koppers Inc. with regard to certain environmental, product and other liabilities and imposes certain conditions on Koppers Inc. before receiving such indemnification, including, in some cases, certain limitations regarding the time period as to which claims for indemnification can be brought. In July 2004, Koppers Inc. and Beazer East agreed to amend the environmental indemnification provisions of the December 29, 1988 asset purchase agreement to extend the indemnification period for pre-closing environmental liabilities, subject to the following paragraph, and agreed to share toxic tort litigation defense arising from any sites acquired from Beazer East.

Qualified expenditures under the Indemnity are not subject to a monetary limit. Qualified expenditures under the Indemnity include (i) environmental cleanup liabilities required by third parties, such as investigation, remediation and closure costs, relating to pre-December 29, 1988 (“Pre-Closing”) acts or omissions of Beazer East or its predecessors; (ii) environmental claims by third parties for personal injuries, property damages and natural resources damages relating to Pre-Closing acts or omissions of Beazer East or its predecessors; (iii) punitive damages for the acts or omissions of Beazer East and its predecessors without regard to the date of the alleged conduct and (iv) product liability claims for products sold by Beazer East or its predecessors without regard to the date of the alleged conduct. The indemnification period ended July 14, 2019 (the “Claim Deadline”) and Beazer East may now tender certain third-party claims described in sections (i) and (ii) above to Koppers Inc. However, to the extent the third-party claims described in sections (i) and (ii) above were tendered to Beazer East by the Claim Deadline, Beazer East will continue to be required to pay the costs arising from such claims under the Indemnity. Furthermore, the Claim Deadline did not change the provisions of the Indemnity with respect to indemnification for non-environmental claims, such as product liability claims, which claims may continue to be tendered by Koppers Inc. to Beazer East.

The Indemnity provides for the resolution of issues between Koppers Inc. and Beazer East by an arbitrator on an expedited basis upon the request of either party. The arbitrator could be asked, among other things, to make a determination regarding the allocation of environmental responsibilities between Koppers Inc. and Beazer East. Arbitration decisions under the Indemnity are final and binding on the parties.

Contamination has been identified at most manufacturing and other sites of our subsidiaries. One site currently owned and operated by Koppers Inc. in the United States is listed on the National Priorities List promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”). Currently, at the properties acquired from Beazer East (which includes the National Priorities List site and all but one of the sites permitted under the Resource Conservation and Recovery Act (“RCRA”)), a significant portion of all investigative, cleanup and closure activities are being conducted and paid for by Beazer East pursuant to the terms of the Indemnity. In addition, other of Koppers Inc.’s sites are or have been operated under RCRA and various other environmental permits, and remedial and closure activities are being conducted at some of these sites.

To date, the parties that retained, assumed and/or agreed to indemnify us against the liabilities referred to above, including Beazer East, have performed their obligations in all material respects. We believe that, for the last three years ended December 31, 2021, amounts paid by Beazer East as a result of its environmental remediation obligations under the Indemnity have averaged, in total, approximately \$6.4 million per year. Periodically, issues have arisen between Koppers Inc. and Beazer East and/or other indemnitors that have been resolved without arbitration. Koppers Inc. and Beazer East engage in discussions from time to time that involve, among other things, the allocation of environmental costs related to certain operating and closed facilities.

If for any reason (including disputed coverage or financial incapability) one or more of such parties fail to perform their obligations and we are held liable for or otherwise required to pay all or part of such liabilities without reimbursement, the imposition of such liabilities on us could have a material adverse effect on our business, financial condition, cash flows and results of operations. Furthermore, we could be required to record a contingent liability on our balance sheet with respect to such matters, which could result in a negative impact to our business, financial condition, cash flows and results of operations.

Domestic Environmental Matters. Koppers Inc. has been named as one of the potentially responsible parties (“PRPs”) at the Portland Harbor CERCLA site located on the Willamette River in Oregon. Koppers Inc. operated a coal tar pitch terminal near the site. Koppers Inc. has responded to an EPA information request and has executed a PRP agreement which outlines a private process to develop an allocation of past and future costs among more than 80 parties to the site. Koppers Inc. believes it is a *de minimis* contributor at the site.

The EPA issued its Record of Decision (“ROD”) in January 2017 for the Portland Harbor CERCLA site. The selected remedy includes a combination of sediment removal, capping, enhanced and monitored natural recovery and riverbank improvements. The ROD does not determine who is responsible for remediation costs. At that time, the net present value and undiscounted costs of the selected remedy as estimated in the ROD are approximately \$1.1 billion and \$1.7 billion, respectively. These costs may increase given the remedy will not be implemented for several years. Responsibility for implementing and funding that work will be decided in the separate private allocation process which is ongoing.

Additionally, Koppers Inc. is involved in two separate matters involving natural resource damages at the Portland Harbor site. One matter involves claims by the trustees to recover damages based upon an assessment of damages to natural resources caused by the releases of hazardous substances to the Willamette River. The assessment serves as the foundation to estimate liabilities for settlements of natural resource damages claims or litigation to recover from those who do not settle with the trustee groups. Koppers Inc. has been engaged in a process to resolve its natural resource damage liabilities for the assessment area. A second matter involves a lawsuit filed in January 2017 by the Yakama Nation in Oregon federal court. Yakama Nation seeks recovery for response costs and the costs of assessing injury to natural resources to waterways beyond the current assessment area. Following the most recent court rulings, the Yakama Nation case has been stayed pending completion of the private allocation process for the Portland Harbor CERCLA site.

In September 2009, Koppers Inc. received a general notice letter notifying it that it may be a PRP at the Newark Bay CERCLA site. In January 2010, Koppers Inc. submitted a response to the general notice letter asserting that Koppers Inc. is a *de minimis* party at this site.

We have accrued the estimated costs of participating in the PRP group at the Portland Harbor and Newark Bay CERCLA sites and estimated *de minimis* contributor settlement amounts at the sites totaling \$3.4 million as of March 31, 2022. The actual cost could be materially higher as there has not been a determination of how those costs will be allocated among the PRPs at the sites. Accordingly, an unfavorable resolution of these matters may have a material adverse effect on our business, financial condition, cash flows and results of operations.

There are two plant sites related to the Performance Chemicals business and one plant site related to the Utility and Industrial Products business in the United States where we have recorded environmental remediation liabilities for soil and groundwater contamination which occurred prior to our acquisition of the businesses. As of March 31, 2022, our estimated environmental remediation liability for these acquired sites totals \$4.0 million.

Foreign Environmental Matters. There is one plant site related to the Performance Chemicals business located in Australia where we have recorded an environmental remediation liability for soil and groundwater contamination which occurred prior to the acquisition of the business. As of March 31, 2022, our estimated environmental remediation liability for the acquired site totals \$1.4 million.

Environmental Reserves Rollforward. The following table reflects changes in the accrual for environmental remediation. A total of \$2.6 million and \$2.8 million are classified as current liabilities as of March 31, 2022 and December 31, 2021:

	<u>Period ended</u>	
	<u>March 31,</u> <u>2022</u>	<u>December 31,</u> <u>2021</u>
<i>(Dollars in millions)</i>		
Balance at beginning of year	\$ 10.7	\$ 11.0
Expense	0.0	0.3
Reversal of reserves	0.0	(0.1)
Cash expenditures	(0.3)	(0.4)
Currency translation	0.0	(0.1)
Balance at end of period	\$ 10.4	\$ 10.7

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This report and any documents incorporated herein by reference contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and may include, but are not limited to, statements about sales levels, acquisitions, restructuring, declines in the value of Koppers assets and the effect of any related impairment charges, profitability and anticipated expenses and cash outflows. All forward-looking statements involve risks and uncertainties. All statements contained herein that are not clearly historical in nature are forward-looking, and words such as "believe," "anticipate," "expect," "estimate," "may," "will," "should," "continue," "plans," "potential," "intends," "likely," or other similar words or phrases are generally intended to identify forward-looking statements. Any forward-looking statement contained herein, in press releases, written statements or documents filed with the Securities and Exchange Commission, or in Koppers communications and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, regarding future dividends, expectations with respect to sales, earnings, cash flows, operating efficiencies, restructurings, product introduction or expansion, the benefits of acquisitions and divestitures, or other matters as well as financings and debt reduction, are subject to known and unknown risks, uncertainties and contingencies. Many of these risks, uncertainties and contingencies are beyond our control, and may cause actual results, performance or achievements to differ materially from anticipated results, performance or achievements. Factors that might affect such forward-looking statements, include, among other things, the impact of changes in commodity prices, such as oil and copper, on product margins; general economic and business conditions; existing and future adverse effects as a result of the coronavirus (COVID-19) pandemic; disruption in the U.S. and global financial markets; potential difficulties in protecting our intellectual property; the ratings on our debt and our ability to repay or refinance our outstanding indebtedness as it matures; our ability to operate within the limits of our debt covenants; potential impairment of our goodwill and/or long-lived assets; demand for Koppers goods and services; competitive conditions; interest rate and foreign currency rate fluctuations; availability and costs of key raw materials, such as coal tar, and unfavorable resolution of claims against us, as well as those discussed more fully elsewhere in this report and in documents filed with the Securities and Exchange Commission by Koppers, particularly our latest annual report on Form 10-K and subsequent filings. We caution you that the foregoing list of important factors may not contain all of the material factors that are important to you. In addition, in light of these risks and uncertainties, the matters referred to in the forward-looking statements contained in this report and the documents incorporated by reference herein may not in fact occur. Any forward-looking statements in this report speak only as of the date of this report, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after that date or to reflect the occurrence of unanticipated events.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited financial statements and related notes included in Item 1 of this Part I as well as the audited consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2021.

Overview

We are a leading integrated global provider of treated wood products, wood preservation chemicals and carbon compounds. Our products and services are used in a variety of niche applications in a diverse range of end-markets, including the railroad, specialty chemical, utility, residential lumber, agriculture, aluminum, steel, rubber and construction industries. We serve our customers through a comprehensive global manufacturing and distribution network, with manufacturing capabilities in North America, South America, Australasia and Europe.

We operate three principal businesses: RUPS, PC and CMC. Through our RUPS business, we believe that we are the largest supplier of wood crossties to the Class I railroads in North America. Our other treated wood products include utility poles for the electric, telephone, and broadband utility industries in the United States and Australia and construction pilings in the U.S. We also provide rail joint bar products as well as various services to the railroad industry in North America.

Through our PC business, we believe that we are the global leader in developing, manufacturing and marketing wood preservation chemicals and wood treatment technologies for use in the pressure treating of lumber for residential, industrial and agricultural applications.

Our CMC business processes coal tar into a variety of products, including creosote, carbon pitch, carbon black feedstock, naphthalene and phthalic anhydride, which are intermediate materials necessary in the pressure treatment of wood, and the production of aluminum, carbon black, high-strength concrete, plasticizers and specialty chemicals, respectively.

Non-GAAP Financial Measures

We utilize certain financial measures that are not in accordance with U.S. generally accepted accounting principles (U.S. GAAP) to analyze and manage the performance of our business. We believe that adjusted EBITDA provides information useful to investors in understanding the underlying operational performance of the company, our business and performance trends, and facilitates comparisons between periods. The exclusion of certain items permits evaluation and a comparison of results for business operations, and it is on this basis that our management internally assesses our performance. In addition, our board of directors and executive management team use adjusted EBITDA as a performance measure under the company's annual incentive plans.

Although we believe that these non-GAAP financial measures enhance investors' understanding of our business and performance, these non-GAAP financial measures should not be considered an alternative to GAAP basis financial measures and should be read in conjunction with the relevant GAAP financial measures. Other companies in a similar industry may define or calculate these measures differently than we do, limiting their usefulness as comparative measures. Because of these limitations, these non-GAAP financial measures should not be considered in isolation or as substitutes for performance measures calculated in accordance with GAAP.

Adjusted EBITDA is a non-GAAP financial measure defined as net income from continuing operations before interest, income taxes, depreciation, amortization and other adjustments. These adjustments are items that we believe are not representative of underlying business performance. Adjusted items typically include certain expenses associated with impairment, restructuring and plant closure costs, significant gains and losses on asset disposals or business combinations, LIFO and mark-to-market commodity hedging and other unusual items. Adjusted EBITDA is the primary measure of profitability we use to evaluate our businesses. Refer to Note 9 – "Segment Information" for reconciliations from adjusted EBITDA to net income on a consolidated basis.

Outlook

Trend Overview

Our businesses and results of operations are affected by various competitive and other factors including (i) the impact of global economic conditions on demand for our products, including the impact of imported products from competitors in certain regions where we operate; (ii) raw material pricing and availability, in particular the cost and availability of hardwood lumber for railroad crossties, softwood lumber for utility poles, scrap copper prices, and the cost and amount of coal tar available in global markets, which is negatively affected by reductions in blast furnace steel production and currently by the Russian invasion of Ukraine; (iii) volatility in oil prices, which impacts the cost of coal tar and certain other raw materials, as well as selling prices and margins for certain of our products including carbon black feedstock, phthalic anhydride, and naphthalene; (iv) competitive conditions in global carbon pitch markets; and (v) changes in foreign exchange rates.

The Infrastructure Investment and Jobs Act, which was signed into law on November 15, 2021, will usher in more than a trillion dollars in new spending across eight years to improve the nation's roads, bridges, rail, internet, water systems and more. As a global leader in water- and oil-borne preservatives serving many end markets with our wood-treatment technologies, we believe we are well-positioned to benefit from the new legislation. Our products are used in multiple infrastructure applications, including utility poles, railroad ties, highway and construction concrete, steel, aluminum, and wood for construction projects.

Effects of COVID-19 on our operations

Our operating results may fluctuate due to a variety of factors that are outside of our control, including from the effects of the current pandemic. The COVID-19 outbreak began to have a global effect in the first quarter of 2020 and continues to have a significant impact on global markets driven by supply chain and production disruptions, workforce restrictions, trends in spending patterns and other factors. During the COVID-19 pandemic, substantially all of our global businesses have continued to operate without significant disruption. In the United States, Koppers was designated as an essential business, as determined by the Cybersecurity and Infrastructure Security Agency (CISA) within the Department of Homeland Security. As a result, we have been able to meet the demands of our customers in the various markets we serve by continuing to operate to help our customers transport critical goods, provide power and connectivity to homes and businesses, and keep our infrastructure running reliably.

Our condensed consolidated financial statements and discussion and analysis of financial condition and results of operations reflect estimates and assumptions made by us as of March 31, 2022, including those related to COVID-19. Events and changes in circumstances arising after March 31, 2022, including those resulting from the impacts of COVID-19, will be reflected in our estimates for future periods.

Historically, North American demand for crossties had been in the range of 22 million to 25 million crossties annually. However, the crosstie replacement market has been significantly lower in recent years. According to the Railway Tie Association (“RTA”), the estimated total crosstie installations in 2021 were approximately 18.3 million, of which 14.2 million were for Class I railroads. Throughout the pandemic, some sawmills were operating at 50 percent or less of their production capacity. Sawmills provide raw materials to several industries beyond the wood crosstie market and as demand and pricing for construction lumber increased significantly throughout 2021 and continuing into 2022, overall crosstie production output thus far has been lower than forecasted. Crosstie prices increased significantly as a result of limited supply and railroad customers are deferring their purchases. Given continuing economic uncertainties, including those related to COVID-19, the RTA is forecasting a slight increase in 2022 of 1.9 percent, or 18.7 million crossties, primarily from the commercial market while Class I volumes are expected to remain at relatively similar demand levels. In 2023, the outlook continues to be modest with a projected increase of 2.0 percent, or 19.0 million crossties, primarily from the Class I railroads.

According to the Association of American Railroads (“AAR”), rail traffic for the first three months of 2022 was mixed compared with the prior year period. For the first quarter of 2022, total U.S. carload traffic increased 2.6 percent from the prior year, while intermodal units declined by 6.9 percent. The combined U.S. traffic for carloads and intermodal units was lower than the prior year by 2.7 percent. In March, the trends were conflicting as carloads for certain categories such as chemicals, crushed stone and sand, food products, lumber, and motor vehicles were higher than prior months; however, carloads for grain, petroleum products, and paper products were down.

With respect to our utility products business, the installed base for wood distribution poles in the U.S. is approximately 150 million and nearly half of this total are 40 years old. Industry demand has historically been in the range of two million to three million poles annually. On an overall basis, we believe that the rate at which utilities purchase utility poles will grow as they continue replacement programs within their service territories. As a whole, the key factors that drive growth in the utility pole market include growing global energy consumption as well as expansion of the global telecommunication industry. Generally, utilities need to maintain their infrastructure to avoid interruptions in service due to extreme weather events that are occurring more frequently. At the same time, the need for digital connectivity remains strong given that portions of the population are continuing to work remotely. As long as there are not any extended supply chain disruptions, we anticipate that 2022 demand for pole replacements will be relatively stable to slightly higher, as the overall industry is trending toward expanded and upgraded transmission networks. In addition, there is a developing trend in the industry for utilities to maintain some additional inventory to prepare for potential damaging storms.

With respect to raw materials, we expect the cost of poles to be affected as lumber for other uses continue to be in high demand and, consequently, lead to increased costs for pole material. Also, transportation costs, which include fuel costs, are expected to experience some upward pressure and affect the price of pole material delivered to the pole peelers from the forest. As a result of these inflationary factors, we are implementing price increases to pass on higher costs to end customers.

Longer term, we are evaluating opportunities to potentially expand our market presence in the United States as well as certain overseas markets. We believe there remains an overall need for sustained investment in infrastructure and capacity expansion and with our vertical integration capabilities in wood treatment and strong customer relationships, we will ultimately benefit from increased demand.

As part of optimizing our business, we continue to evaluate a number of opportunities to improve efficiencies in our operational processes, people and facilities. With our 14 North American RUPS treating facilities operating at less than full utilization, our goal is to either capture more volume through the existing facilities or consolidate our operating footprint. In January 2022, we began curtailing operations at our Sweetwater, Tennessee plant. We sold the plant in March 2022 and recorded a gain of \$2.5 million on the sale. During 2021, we exited the Texas Electric Cooperatives’ Jasper, Texas facility and relocated the production of utility products to our Somerville, Texas plant. Separately, in the third quarter of 2020, we permanently closed our Denver, Colorado wood treatment facility. Concurrent with the decision to close the Denver facility, we announced our plan to modernize and upgrade parts of our treating network, specifically at our facility in North Little Rock, Arkansas, which would be primarily funded through proceeds from the sale of non-core assets, including the Denver facility. In October 2021, we sold our closed Denver, Colorado crosstie treating facility and recorded a gain on sale of \$23.4 million. In addition, as part of the sales agreement, we may receive additional contingent post-closing payments secured by a guaranty from the buyer after applicable redevelopment milestones are reached. At this time, we are unable to estimate how much, if any, of these additional funds will ultimately be paid to us.

Performance Chemicals

As most of the products sold by PC are copper-based products, changes in the price and availability of copper can have a significant impact on product pricing and margins. We attempt to moderate the variability in copper pricing over time by entering into hedging transactions for the majority of our copper needs, which primarily range from six months up to 36 months. These hedges typically match expected customer purchases and from time to time, we enter into forward transactions based upon long-term forecasted needs of copper. Copper prices began to reach peak levels in mid-2021 boosted by pent-up demand as home repair and remodeling growth accelerated when pandemic lockdowns were eased, and the market faced tight supplies. In 2022, thus far copper prices have remained high but projections for future copper prices are mixed and are contingent on supply and demand dynamics as well as the impact of higher interest rates on economic growth.

Product demand for our PC business has historically been closely associated with consumer spending on home repair and remodeling projects in North America, and therefore, trends in existing home sales serve as a leading indicator. In recent months, the market for existing homes seems to be slowing. According to the National Association of Realtors® (“NAR”), total existing-home sales decreased in March by 2.7 percent compared with February and 4.5 percent compared with the prior year, marking two consecutive months of declines. The housing market is expected to be impacted by rising interest rates and inflation, which in turn, are having unfavorable effects on purchasing power.

According to the Leading Indicator of Remodeling Activity (“LIRA”) reported by the Joint Center for Housing Studies of Harvard University, home renovation and repair expenditures increased by 11.5 percent year-over-year in the first quarter of 2022. The LIRA projects that expenditures for improvements and repairs to the owner-occupied housing stock are expected to grow throughout 2022 and into early next year. The year-over-year increases in residential renovation and maintenance spending are estimated to reach 19.7 percent in the third quarter of 2022 before decreasing to 15.1 percent in the first quarter of 2023. While annual improvement and repair spending is projected to reach \$450 billion by the first quarter of 2023, headwinds such as the rising costs of project financing, construction materials, and labor, as well as growing concerns about a broader economic slowdown or recession may further slow remodeling growth.

The Conference Board Consumer Confidence Index® was 107.2 in March, increasing slightly from 105.7 in February. While economic growth continued late into the first quarter of 2022, consumers are indicating a weakened outlook and purchasing intentions for big-ticket items such as automobiles are softening somewhat over the past few months as expectations for interest rates have risen.

Although the market data and projections for home improvements are continually changing, we anticipate ongoing demand for residential treated wood and residential renovation markets is remaining favorable.

Carbon Materials and Chemicals

The primary products produced by CMC are creosote, which is a registered pesticide in the United States and used primarily in the pressure treatment of railroad cross-ties, and carbon pitch, which is sold primarily to the aluminum industry for the production of carbon anodes used in the smelting of aluminum. We have realigned capacity in our CMC plants in North America and Europe over the past several years to levels required to meet creosote demand in North America for the treatment of railroad cross-ties. The CMC business currently supplies our North American RUPS business with its creosote requirements.

The availability of coal tar, the primary raw material for our CMC business, is linked to levels of metallurgical coke production. As the global steel industry, excluding Asia, has reduced the production of steel using metallurgical coke, the volumes of coal tar have been reduced. Coal tar raw material supply remains constrained globally due to reductions in blast furnace steel capacity in addition to near term supply restrictions resulting from the Russian invasion of Ukraine in March 2022. Our European CMC business typically receives approximately 20 percent of its annual coal tar requirements from Russia and Ukraine. We have ceased purchasing coal tar from Russian suppliers and we are currently unable to purchase coal tar from Ukrainian suppliers due to the conflict. Currently, the financial impact of volume reductions in our coal tar supply have been offset by higher prices in our end markets for that region and are not expected to materially impact operating results.

For the external markets served by our CMC business, we anticipate some slowdown in manufacturing. According to IHS Markit Automotive Group (IHS), the global auto production forecast was updated in March to reflect the impact of Russia's invasion of Ukraine and in April, the forecast was further downgraded. This was due to some additional challenges that have arisen, including a sluggish recovery in semiconductor supplies, the impact of further COVID lockdowns in China, and the longer-term influence of high raw material prices that will put added pressure on new vehicle affordability. Currently, the forecast reflects noteworthy reductions for several markets, with the most significant reductions focused on Europe and China.

Seasonality and Effects of Weather on Operations

Our quarterly operating results fluctuate due to a variety of factors that are outside of our control, including inclement weather conditions, which in the past have affected operating results. Operations at some of our facilities have at times been reduced during the winter months. Moreover, demand for some of our products declines during periods of inclement weather. As a result of the foregoing, we anticipate that we may experience material fluctuations in quarterly operating results. Historically, our operating results have been significantly lower in the first and fourth calendar quarters as compared to the second and third calendar quarters.

Results of Operations – Comparison of Three Months Ended March 31, 2022 and 2021

Consolidated Results

Net sales for the three months ended March 31, 2022 and 2021 are summarized by segment in the following table:

(Dollars in millions)	Three Months Ended March 31,		Net Change
	2022	2021	
Railroad and Utility Products and Services	\$ 183.4	\$ 191.9	-4%
Performance Chemicals	136.4	123.6	10%
Carbon Materials and Chemicals	139.5	92.0	52%
	\$ 459.3	\$ 407.5	13%

RUPS net sales decreased by \$8.5 million, or four percent, compared to the prior year period. The sales decrease was largely related to volume decreases in our utility pole business as a result of transitioning production from the Texas Electric Cooperatives' Jasper, Texas plant to our Somerville, Texas plant along with volume decreases of untreated crossties for certain Class I customers and volume decreases in the commercial crosstie market. These decreases were offset, in part, by pricing increases in various markets within the segment and volume increases in our maintenance-of-way businesses. Foreign currency changes compared to the prior year period had an unfavorable impact on sales in the current year period of \$0.6 million, mainly from our Australian utility pole business.

PC net sales increased by \$12.8 million, or ten percent, compared to the prior year period. The sales increase was primarily due to global price increases in the current year period for our copper-based preservatives and higher demand for preservatives in some of our international markets. The increases were offset, in part, by volume decreases for preservatives in Canada as high lumber prices, excess treated inventory from prior year and a return to normal consumer spending habits have tempered customer demand compared to extremely high levels of pandemic-fueled demand in the first half of 2021. Foreign currency changes compared to the prior year period had a de minimis impact on sales in the current year period.

CMC net sales increased by \$47.5 million, or 52 percent, compared to the prior year period due mainly to higher sales prices and volumes for carbon pitch, phthalic anhydride and carbon black feedstock along with higher sales prices for naphthalene in the current year period. Foreign currency changes compared to the prior year period from our international markets had an unfavorable impact on sales in the current year period of \$5.3 million.

Cost of sales as a percentage of net sales was 81 percent for the quarter ended March 31, 2022 compared to 78 percent in the prior year quarter. Gross margin was unfavorably impacted in the current year period primarily by an increase in raw material costs, fuel costs and shipping costs along with a decrease in absorption due to lower utilization at some of our plants in the current year period as sales volumes and throughput at RUPS has declined compared to the prior year period.

Depreciation and amortization charges for the quarter ended March 31, 2022 were \$1.9 million lower when compared to the prior year period mainly due to an increase in an asset retirement obligation in our European CMC operations in the first quarter of 2021.

Gain on sale of assets for the quarter ended March 31, 2022 was \$2.5 million and was related to the sale of our utility pole treating facility in Sweetwater, Tennessee while the gain on sale of assets for the quarter ended March 31, 2021 was \$7.5 million and was related to the sales of two previously decommissioned plants as described in Note 3 – "Plant Closures and Divestitures".

Impairment and restructuring charges for the quarter ended March 31, 2022 were \$1.2 million lower when compared to the prior year period. The prior year period included accelerated depreciation, demolition and other plant closure period costs related to the closure of our Denver, Colorado facility.

Selling, general and administrative expenses for the quarter ended March 31, 2022 were \$4.6 million higher when compared to the prior year period due mainly to an increase of \$1.6 million for consulting and professional services, \$1.4 million for employee benefit related expenses and \$1.0 million for travel and entertainment expenses.

Interest expense for the quarter ended March 31, 2022 was consistent with the prior year period.

Income tax expense for the quarter ended March 31, 2022 was \$9.7 million, an increase of \$1.2 million when compared to the prior year quarter. The increase in the current year period is due to an increase in the estimated annual effective income tax rate when compared to the prior year period. The increase is attributable to the geographical mix of earnings as well as an increase in the interest expense deduction limitation due to a tax law change that went into effect January 1, 2022.

Segment Results.

Segment adjusted EBITDA and adjusted EBITDA margin for the three months ended March 31, 2022 and 2021 is summarized by segment in the following table:

(Dollars in millions)	Three Months Ended March 31,		% Change
	2022	2021	
Adjusted EBITDA:			
Railroad and Utility Products and Services	\$ 11.6	\$ 16.4	-29%
Performance Chemicals	20.9	27.8	-25%
Carbon Materials and Chemicals	20.1	10.4	93%
Corporate unallocated	0.0	0.5	-100%
Total Adjusted EBITDA	\$ 52.6	\$ 55.1	-5%
Adjusted EBITDA margin as a percentage of GAAP sales:			
Railroad and Utility Products and Services	6.3%	8.5%	-26%
Performance Chemicals	15.3%	22.5%	-32%
Carbon Materials and Chemicals	14.4%	11.3%	27%
Total Adjusted EBITDA margin	11.5%	13.5%	-15%

RUPS adjusted EBITDA decreased by \$4.8 million compared to the prior year period. Adjusted EBITDA as a percentage of net sales decreased to 6.3 percent from 8.5 percent in the prior year period and was unfavorably impacted in our domestic utility pole business by higher raw material, freight and fuel costs, as well as driver shortages and labor inefficiencies driven by the current labor shortage. In addition, unfavorability in our railroad crosstie business was driven by higher raw material costs and lower absorption of fixed costs due to lower tie throughput as a result of decreased purchasing activity of untreated crossties by our Class I customers driven by the impact that higher lumber prices had on the hardwood market. Finally, travel expenses have also increased over the prior year period as we emerge from in-person restrictions related to the pandemic. These unfavorable factors were partially offset by price increases implemented across our businesses.

PC adjusted EBITDA decreased by \$6.9 million compared to the prior year period. Adjusted EBITDA as a percentage of net sales decreased to 15.3 percent from 22.5 percent in the prior year period. The current year period was unfavorably impacted primarily by an increase in raw material costs, including scrap copper, net of gains realized from our copper-hedging program. This was offset, in part, by global price increases in the current year period for our copper-based preservatives and higher demand for preservatives in some of our other international markets.

CMC adjusted EBITDA increased by \$9.7 million compared to the prior year period. Adjusted EBITDA as a percentage of net sales increased to 14.4 percent from 11.3 percent in the prior year period. The current year period was favorably impacted by higher sales prices and volumes for carbon pitch, phthalic anhydride and carbon black feedstock along with higher sales prices for naphthalene. These increases were offset, in part, by an increase in raw material costs and selling, general and administrative costs in the current year period.

The following table reconciles net income to adjusted EBITDA on a consolidated basis as calculated by us for the periods indicated below:

(Dollars in millions)	Three Months Ended March 31,	
	2022	2021
Net income	\$ 18.8	\$ 25.8
Interest expense	9.8	10.1
Depreciation and amortization	14.2	16.1
Income tax provision	9.7	8.5
Discontinued operations	0.5	0.4
Sub-total	53.0	60.9
Adjustments to arrive at adjusted EBITDA:		
Impairment, restructuring and plant closure costs(1)	0.1	3.3
(Gain) on sale of assets	(2.5)	(7.5)
LIFO expense	1.7	1.0
Mark-to-market commodity hedging losses (gains)	0.3	(2.6)
Total adjustments	(0.4)	(5.8)
Adjusted EBITDA	\$ 52.6	\$ 55.1

(1) Includes costs associated with restructuring, sales and closures of certain RUPS and CMC facilities as described in Note 3 – “Plant Closures and Divestitures”.

Cash Flow

Net cash used in operating activities for the three months ended March 31, 2022 was \$8.0 million compared to net cash used in operating activities of \$7.4 million in the prior year period as higher working capital usage of \$0.5 million in the current year period was a result of an increase in accounts receivable consistent with our increase in sales and an increase in inventory due to increased levels and raw material costs offset, in part, by a corresponding increase in accounts payable. Operating profit, excluding gain on sale of assets, was consistent with the prior year period.

Net cash used in investing activities for the three months ended March 31, 2022 was \$22.0 million compared to net cash used in investing activities of \$19.5 million in the prior year period. Capital expenditures for both periods include increased investment in growth projects, primarily in our crosstie business, such as the expansion of our RUPS facility in North Little Rock, Arkansas. In addition, the current year period included \$3.8 million of cash provided by the sale of our utility pole treating facility in Sweetwater, Tennessee while the prior year period included \$4.7 million of cash provided by the sales of two previously decommissioned CMC plants.

Net cash provided by financing activities was \$33.4 million for the three months ended March 31, 2022 and March 31, 2021. The cash provided by financing activities in the three months ended March 31, 2022 reflected net borrowings of \$45.4 million partially offset by repurchases of common stock and dividends paid of \$12.2 million. The cash provided by financing activities in the prior year period primarily reflected net borrowings of debt of \$34.1 million.

Liquidity and Capital Resources

The Credit Facility includes a \$600.0 million senior secured revolving credit facility and a \$100.0 million secured term loan facility as described in Note 14 “Debt.” As of March 31, 2022, the secured term loan has been fully repaid.

Restrictions on Dividends to Koppers Holdings

Koppers Holdings depends on the dividends from the earnings of Koppers Inc. and its subsidiaries to generate the funds necessary to meet its financial obligations, including the payment of any declared dividend of Koppers Holdings. The Credit Facility prohibits Koppers Inc. from making dividend payments to Koppers Holdings unless (1) such dividend payments are permitted by the indenture governing the “2025 Notes”, (2) no event of default or potential default has occurred or is continuing under our Credit Facility, and (3) we are in pro forma compliance with our fixed charge coverage ratio covenant after giving effect to such dividend. The indenture governing the 2025 Notes restricts Koppers Inc.’s ability to finance our payment of dividends if (1) a default has occurred or would result from such financing, (2) Koppers Inc., or a restricted subsidiary of Koppers Inc. which is not a guarantor under the indenture, is not able to incur additional indebtedness (as defined in the indenture), and (3) the sum of all restricted payments (as defined in the indenture) have exceeded the permitted amount (which we refer to as the “basket”) at such point in time.

At March 31, 2022, the basket totaled \$281.2 million. Notwithstanding such restrictions, the indenture governing the 2025 Notes permits an additional aggregate amount of \$0.30 per share each fiscal quarter to finance dividends on the capital stock of Koppers Holdings, whether or not there is any basket availability, provided that at the time of such payment, no default in the indenture has occurred or would result from financing the dividends. In addition, certain required coverage ratios in the Credit Facility may restrict the ability of Koppers Inc. to pay dividends.

Liquidity

The following table summarizes our estimated liquidity as of March 31, 2022 (*dollars in millions*):

Cash and cash equivalents ⁽¹⁾	\$	46.9
Amount available under Credit Facility		257.8
Total estimated liquidity	\$	304.7

(1) Cash includes approximately \$46.2 million held by foreign subsidiaries and excludes approximately \$2.3 million of restricted cash.

Our liquidity was \$348.4 million as of December 31, 2021.

Our need for cash in the next twelve months relates primarily to contractual obligations which include debt service, pension plan funding, purchase commitments and operating leases, as well as working capital, capital maintenance programs, the funding of plant consolidation and rationalizations, dividends and share repurchases. We may also use cash to pursue other potential strategic acquisitions or voluntary pension plan contributions. Capital expenditures in 2022, excluding acquisitions, if any, are expected to total approximately \$95 million and are expected to be funded by cash from operations. We anticipate that our liquidity will continue to be adequate to fund our cash requirements for the next twelve months.

We manage our working capital to increase our flexibility to pay down debt. Debt will fluctuate throughout any operating period based upon the timing of receipts from customers and payments to vendors. As of March 31, 2022 and December 31, 2021, approximately 80 percent and 75 percent of accounts payable was current, approximately 15 percent and 20 percent was 1-30 days past due and approximately five percent was past due greater than 30 days, respectively.

Debt Covenants

The covenants under the Credit Facility may affect availability of the facility or restrict the ability of Koppers Inc. to pay dividends, including the following financial ratios:

- The fixed charge coverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to be less than 1.10. The fixed charge coverage ratio as of March 31, 2022 was 1.31.
- The total secured leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 2.75. The total secured leverage ratio as of March 31, 2022 was 1.43.
- The total leverage ratio, calculated as of the end of each fiscal quarter for the four fiscal quarters then ended, is not permitted to exceed 4.75. The total leverage ratio as of March 31, 2022 was 3.57.

We are currently in compliance with all covenants governing the Credit Facility. Our continued ability to meet these financial ratios can be affected by events beyond our control; however, excluding possible acquisitions, we currently expect that our net cash flows from operating activities and funds available from our Credit Facility will be sufficient to provide for our working capital needs and capital spending requirements over the next twelve months.

Legal Matters

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of this Part I is incorporated herein by reference.

Recently Issued Accounting Guidance

The information set forth in Note 2 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of this Part I is incorporated herein by reference.

Critical Accounting Policies

There have been no material changes to our critical accounting policies as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2021.

Environmental and Other Matters

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of this Part I is incorporated herein by reference.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There are no material changes to the disclosure on this matter made in our Annual Report on Form 10-K for the year ended December 31, 2021.

ITEM 4. CONTROLS AND PROCEDURES

Our management, with the participation of the Chief Executive Officer and Chief Financial Officer and utilizing the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework (2013), have evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that these controls and procedures were effective as of the end of the period covered by this report. There were no changes in our internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that occurred during the quarter ended March 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We have not experienced any material impact to our internal controls over financial reporting despite the fact that a portion of our employees are working remotely due to the COVID-19 pandemic. We are continually monitoring and assessing the impact of the COVID-19 outbreak on our internal controls over financial reporting to minimize the impact, if any, on their design and operating effectiveness.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The information set forth in Note 18 to the Condensed Consolidated Financial Statements of Koppers Holdings Inc. included in Item 1 of Part I of this report is incorporated herein by reference.

Koppers Holdings, Inc. (the “Company”) is cooperating with an investigation by the staff of the Division of Enforcement (the “Division”) of the U.S. Securities and Exchange Commission (“Commission”) into the Company’s public non-GAAP financial metrics disclosures regarding the Company’s debt reduction target and net leverage ratio for Fiscal Year 2019 and the related management of its accounts payable (the “Inquiry”). The Company and several of its current and former officers and employees, including Leroy M. Ball, the Company’s President and Chief Executive Officer and a director of the Company, received subpoenas for information and testimony (the “Subpoenas”), pursuant to a non-public formal order of investigation for the Inquiry dated February 14, 2021.

The Company understands that a former officer of the Company has received a “Wells Notice” from the Division setting forth a preliminary determination by the Division to recommend an enforcement action against the former officer. A Wells Notice is a notice of an intent on the part of the Division staff to recommend an enforcement action and not a finding of wrongdoing. Upon receipt of a Wells Notice, the recipient is afforded an opportunity to present its positions with respect to the Division staff’s recommendations prior to any decision by the Commission on whether enforcement proceedings will be authorized or any finding by the Commission with respect to any wrongdoing. Any enforcement action would need to be approved by the Commission before formally being brought. As of the date of this Quarterly Report on Form 10-Q, neither the Company nor, to the Company’s knowledge, any of its current officers and employees have received from the Division or otherwise a “Wells Notice” setting forth any preliminary determination by the Division to recommend any enforcement action to the Commission.

The Company maintains that the actions of the Company and its current and former officers and employees were appropriate and did not violate the federal securities laws. The Company and its current and former officers and employees are cooperating with the Division in connection with the Inquiry, and the Company’s counsel has engaged in discussions with the Division regarding a potential resolution of this matter. Further, the Company has made productions of information to the Division and made witnesses available for testimony pursuant to the Subpoenas. The Company will continue to comply with the requests of the Division in connection with the Inquiry.

The Company cannot predict the ultimate outcome of the Inquiry and any related legal and administrative proceedings which could include a variety of outcomes including the institution of administrative or civil injunctive proceedings involving the Company and/or current or former employees and/or officers, including the Company’s CEO, Mr. Ball, the imposition of fines and other penalties, remedies and/or sanctions, modifications to business practices and compliance programs, and/or referral to other governmental agencies for other actions. It is not possible to accurately predict at this time when matters relating to the Inquiry will be completed, what if any actions may be taken by the Commission or by other governmental agencies, or the effect that such actions may have on our business, prospects, operating results and financial condition, which could be material.

ITEM 1A. RISK FACTORS

There have been no material changes to the Risk Factors previously disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table sets forth information regarding Koppers Holdings' repurchases of shares of its common stock during the three months ended March 31, 2022:

<i>Period</i>	<i>Total Number of Common Shares Purchased ⁽¹⁾</i>	<i>Average Price paid per Common Share</i>	<i>Total Number of Common Shares Purchased as Part of Publicly Announced Plans or Programs</i>	<i>Approximate Dollar Value of Common Shares that May Yet be Purchased Under the Plans or Programs (Dollars in Millions)</i>
January 1 - January 31	0	\$ 0.00	0	\$ 90.6
February 1 - February 28	0	\$ 0.00	0	\$ 90.6
March 1 - March 31	225,683	\$ 28.52	225,683	\$ 84.2
Total	225,683	\$ 28.52	225,683	\$ 84.2

(1) On August 6, 2021, we announced the board of directors approved a \$100 million share repurchase program. The repurchase program has no expiration date.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

- 31.1* [Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
31.2* [Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
32.1* [Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)

- 101.INS* Inline 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.SCH* Inline XBRL Taxonomy Extension Schema Document
101.CAL* Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF* Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB* Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE* Inline XBRL Taxonomy Extension Presentation Linkbase Document
104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Filed herewith.

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.

Date: May 6, 2022

KOPPERS HOLDINGS INC.
(REGISTRANT)

By: /s/ JIMMI SUE SMITH

Jimmi Sue Smith
Chief Financial Officer
(Principal Financial Officer and Duly Authorized Officer)

CERTIFICATIONS

I, Leroy M. Ball, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Koppers Holdings 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-5(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.

Date: May 6, 2022

/s/ LEROY M. BALL
Leroy M. Ball
President and Chief Executive Officer

CERTIFICATIONS

I, Jimmi Sue Smith, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Koppers Holdings 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-5(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.

Date: May 6, 2022

/s/ JIMMI SUE. SMITH
Jimmi Sue Smith
Chief Financial Officer

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 of Koppers Holdings Inc. (the "Company") on Form 10-Q for the quarter ending March 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his or her capacity as an officer of the Company, 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.

/s/ LEROY M. BALL
Leroy M. Ball
President and Chief Executive Officer
May 6, 2022

/s/ JIMMI SUE SMITH
Jimmi Sue Smith
Chief Financial Officer
May 6, 2022