MINERALS TECHNOLOGIES

Innovative Technologies.
Essential Solutions.™

2024 ANNUAL REPORT

MINERALS TECHNOLOGIES

INNOVATIVE TECHNOLOGIES, ESSENTIAL SOLUTIONS.™

For more than 30 years, **Minerals Technologies Inc.** (MTI) has been delivering technologies and solutions that enhance essential products used for daily life around the world.

We combine our differentiated global mineral reserves — comprised of bentonite, calcium carbonate, and other specialty industrial minerals — with our deep understanding of customer and industry needs and our innovation focus on secular and sustainable trends.

This unlocks new opportunities for growth across all of our end markets and makes our customers' products and processes more effective, efficient, and sustainable.

We put people at the center of everything we do, working safely, communicating openly, and managing our resources and businesses responsibly.

Our ability to deliver solid long-term financial performance is built upon an ingrained culture of Operational Excellence and continuous improvement as well as our passionate teams around the world.

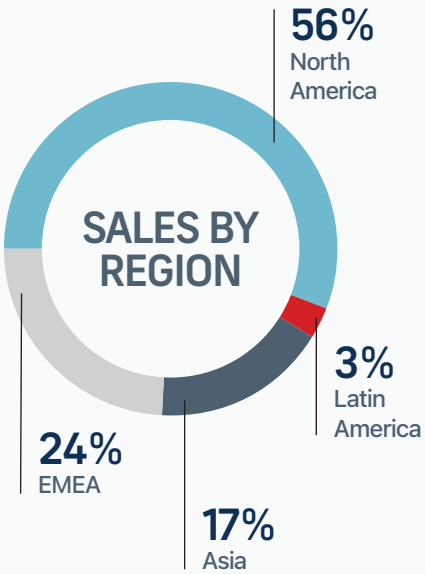
2024 NUMBERS AT A GLANCE

$2.1B
NET SALES

~4,000
EMPLOYEES

34
COUNTRIES

12
R&D CENTERS



WHAT SETS MTI APART

- Leading market positions across all four product lines
- Balanced portfolio of consumer and industrial businesses
- Multiple levers for long-term growth
- Attractive financial profile and strong cash generation
- Experienced leadership with extensive industry expertise

LETTER FROM THE CEO

Douglas T. Dietrich

Chairman of the Board and CEO

2024 was another record year for MTI. It was the first full year after our re-segmentation and one in which we saw the true power of our new organization unfold.

It was also an impactful year in which we enhanced our financial stability, demonstrated the effectiveness of our business systems, and continued to prove the value that we bring to our customers.

A PEOPLE-FIRST CULTURE

I am very proud of what our teams around the world achieved and their ongoing dedication to delivering outstanding results.

One of the true differentiators of MTI is our unique culture — one that is consistent across all of our facilities around the world and that we collectively work hard to maintain. Whether team members are based in an office in China, a plant in Turkey, or an R&D facility in Pennsylvania, we all adhere to a consistent set of values as well as a commitment to the principles of Operational Excellence.

These principles range from a relentless focus on continuous improvement and personal goal-setting to a system of encouraging ongoing suggestions, no matter how small, for how we can work safer, more efficiently, and more effectively. Sometimes these suggestions are pinned to bulletin boards in break rooms, and sometimes they arrive digitally via a global suggestion box. No matter the channel, every suggestion is seriously evaluated, and I am proud that in 2024 alone, we implemented more than 80% of the 60,000 suggestions we received from our employees around the globe.

This culture of continually re-assessing and improving our systems and processes is one of the key factors driving shareholder value across all facets of our organization.

CONTINUED FINANCIAL STRENGTH

2024 was the second consecutive year in which we had record operating income. Our solid execution on growing our higher margin products, disciplined pricing, capturing cost savings, and improving productivity led to an operating margin of 15% in 2024, a target we had planned to achieve by the end of 2025.

2024 was also the second consecutive year of record EBITDA (excluding special items), reaching over $400 million.

Full year earnings per share, excluding special items, were also a record, increasing 18%.

We sustained our strong cash flow generation and strengthened our balance sheet. We increased returns to shareholders by completing our previous $75 million share buyback program, further increasing dividends by 10%, and authorizing a new $200 million share repurchase program. Our strong cash generation profile continues to provide us with significant financial strength and options to drive value. Over the past four years, we have acquired three companies, paid down debt keeping leverage at or below our target levels, and returned over $240 million to shareholders.

STRATEGIC PILLARS IN SUPPORT OF SUSTAINABLE GROWTH

Two years ago, we realigned our organization to enhance operational efficiencies, speed up decision making, and better align accountability. This change continues to pay off with strong results.

All of our actions are underpinned by three strategic pillars: to grow in consumer-oriented markets, expand our positions in our core markets and extend them geographically, and continuously introduce new, innovative, higher-margin products to the market.

Innovation, in particular, has proven to be key to driving sustainable growth: in 2024, revenue as a percent of sales from our newest products was 18%, and we intend to increase that number.

We also continue to execute on our own sustainability targets. We achieved ten out of the twelve environmental goals we established in 2018 and reported in our latest Sustainability Report, and continue to push ourselves to find new solutions that enhance not only our performance as an organization, but also its sustainability. And we are helping our customers along on this journey as well, as 66% of our newest products have a sustainable profile ranging from natural solutions to emissions and waste reduction to pollution prevention to filtration and mitigation products.

We are excited to build on our strong performance, which lays the foundation for future growth, and look forward to what is coming next. On behalf of MTI, thank you for your continued support and interest in our company.

Douglas T. Dietrich
Chairman of the Board and CEO

GROWTH STRATEGY

STRONG EXECUTION

- Record operating income and earnings per share*
- Reached operating margin of 15%, a year ahead of target
- Sustained strong cash flow generation and strengthened our balance sheet
- Further increased dividends and authorized a new $200M share repurchase program
- Continued to progress on our growth strategies

$316M ↑16%†
OPERATING INCOME*

$6.15 ↑18%
EARNINGS PER SHARE*

14.9% ↑200BPS
OPERATING MARGIN*

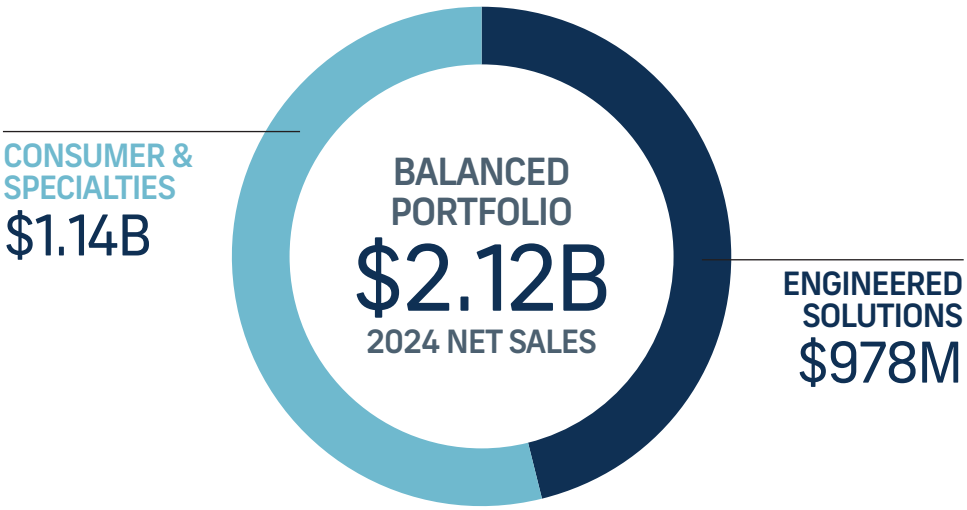
$147M
FREE CASH FLOW

1.6X
NET LEVERAGE RATIO

* excluding special items
† on underlying basis

THE THREE PILLARS OF OUR ORGANIC GROWTH STRATEGY

- Expansion in higher-growth consumer-oriented markets
- Deepening positions in core markets and geographies
- Continuous introduction of innovative, higher-margin products to the market



CONSUMER & SPECIALTIES

TOUCHING MILLIONS OF LIVES DAILY

Our Consumer & Specialties segment includes the Household & Personal Care and Specialty Additives product lines, which touch millions of lives every day through a variety of household, personal care, and industrial goods.

HOUSEHOLD & PERSONAL CARE

Mineral-to-market products that improve performance and enhance consumer experiences in consumer-oriented end markets including cat litter, household and personal care, natural oil purification for edible oils and renewable fuel, animal health, and agriculture.

$530M IN SALES

SPECIALTY ADDITIVES

Mineral-based technologies for improved functionality of consumer and industrial products in the paper and packaging, food and pharma, residential construction, automotive and other markets.

$610M IN SALES

$1.14B

SALES

$166M

OPERATING INCOME*

Performance Highlights

- Completed the integration of the largest global private label pet care business under a single brand, SIVO™
- Leveraged trends toward natural ingredients, expanding sales in high-growth applications such as natural delivery systems for personal care and natural feed additives for animal health
- Expanded market share in filtration for edible oils and renewable fuels
- Capitalizing on growing opportunities in the packaging industry

* excluding special items

ENGINEERED SOLUTIONS

IMPROVING OUR CUSTOMERS' MANUFACTURING PROCESSES

Our Engineered Solutions segment includes the High-Temperature Technologies and Environmental & Infrastructure product lines, which offer advanced process technologies and solutions designed to improve our customers' manufacturing processes and projects with foundry, steelmaking, environmental, and infrastructure applications.

HIGH-TEMPERATURE TECHNOLOGIES

Specially formulated products and application technologies custom-tailored to solve complex challenges in high-temperature industries including metalcasting and steelmaking.

$713M IN SALES

ENVIRONMENTAL & INFRASTRUCTURE

Project-based products and solutions for environmental, remediation, water treatment, building materials, and infrastructure applications supporting water remediation and vital infrastructure projects worldwide.

$265M IN SALES

$978M

SALES

$162M

OPERATING INCOME*

Performance Highlights

- Expanded foundry sales in underpenetrated markets in Asia
- Continued to deploy our automation solutions and new products for steelmaking
- Grew our solutions in environmental remediation and infrastructure applications, including PFAS remediation solutions

* excluding special items

BENEFICIAL ATTRIBUTES AND FUNCTIONALITIES

- Odor elimination
- Ad/absorption

- Lightweighting
- Strengthening
- CO_2 sequestration
- Calcium fortification

- Energy savings
- Recyclability
- Productivity improvement

- Rheology modification
- Water and fluid filtration

SECULAR & SUSTAINABLE TRENDS

INCREASED PET OWNERSHIP

ENHANCED FOCUS ON SUSTAINABLE SOLUTIONS

GROWING NEEDS FOR ADVANCED SOLUTIONS IN DEVELOPING ECONOMIES

PRODUCT AND SOLUTIONS ALIGNED WITH KEY TRENDS

CONTINUED FOCUS ON NATURAL INGREDIENTS AND SOLUTIONS

GROWING NEED FOR WASTE REDUCTION AND REMEDIATION

GLOBAL AWARENESS OF HUMAN HEALTH AND SAFETY NEEDS

66%

OF NEW PRODUCTS HAVE A SUSTAINABLE PROFILE

Household & Personal Care

- Pet and animal health
- Natural personal care solutions
- Renewable fuels purification

Specialty Additives

- Recycling solutions for paper and packaging
- Energy savings through mineral applications for packaging
- Biodegradable additives

High-Temperature Technologies

- Emission reduction
- Automation and data analytics

Environmental & Infrastructure

- Wastewater and drinking water remediation
- Drilling solutions for geothermal/ sustainable energy
- Hardening of grid

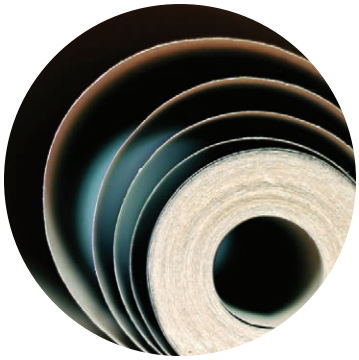
PRODUCT INNOVATION

CONSUMER & SPECIALTIES

INNOVATION THAT MEETS EVOLVING MARKET NEEDS

SIVO™

Unique combination of high-quality global mineral reserves and our capabilities to deliver innovative solutions meet practical and emotional needs of cats and their owners.



NEW YIELD™

Proprietary technology for paper and packaging manufacturers converts waste streams from pulping operations into functional filler pigments and delivers improved bulk, opacity, strength, and smoothness.

EMForce™

New specialty polymer additive technology for bioplastic market.

ENGINEERED SOLUTIONS

- Innovation is a key pillar of our growth strategy across our entire portfolio.
- In 2024, revenue as a percent of sales from our newest products was 18%.

MINSCAN LSC

Automation and robotics solutions for refractory maintenance.

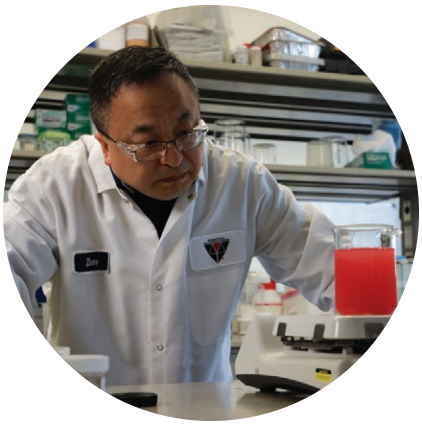
FLUORO-SORB® ADSORBENT

A proprietary technology specifically formulated to deliver an effective, versatile, and economical solution to removing per- and polyfluoroalkyl substances from the ground and drinking water.

OUR PEOPLE & CULTURE

A STRONG FOUNDATION

Our culture is built upon the strong foundation of our values and our team's commitment to safety, Operational Excellence, and always winning with integrity.



OUR VALUES:

- ☑ PEOPLE
- ☑ HONESTY
- ☑ CUSTOMER FOCUS
- ☑ ACCOUNTABILITY
- ☑ EXCELLENCE

SAFETY

The safety of our employees is our top priority — and we are always working toward achieving zero injuries by strengthening our safety culture, empowering our employees to stop unsafe conditions, and ensuring that each of us remains accountable for keeping each other safe.

SAFETY PEFORMANCE (INJURIES/100 EMPLOYEES)

90%
OF OPERATING SITES INJURY-FREE

0.78
RECORDABLE INJURY RATE

0.13
LOST WORKDAY INJURY RATE

OUR PEOPLE

MTI has about 4,000 employees in 34 countries. Diversity and inclusion are integrated into our core values and sustainability strategy, and we are committed to hiring from a diverse pool of candidates to ensure that we attract the best talent. We believe that a diverse workforce, inclusive culture, and empowered teams who confidently express their viewpoints are integral to helping us drive long-term shareholder value.

8,500+
KAIZENS
PROBLEM-SOLVING EVENTS
~30 Kaizens per day

Indicative of an agile company with a culture of continuous improvement

60,000+
EMPLOYEE SUGGESTIONS
~15 suggestions per person

Truly engaged workforce of ~4,000 employees

81%
OF SUGGESTIONS IMPLEMENTED

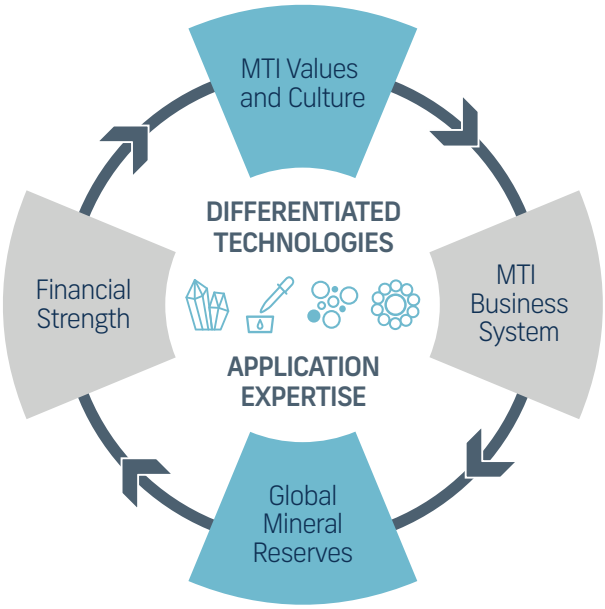
Constantly refining our processes to deliver value to our customers

BUSINESS MODEL

STRONG BUSINESS MODEL YIELDING SIGNIFICANT VALUE

We are well positioned for long-term growth through our balanced portfolio, our core technologies, and application expertise supported by our high-quality mineral reserves.

Our strategies, combined with our business model and strong financial profile, will continue to generate significant shareholder value.



Balanced and stable growth portfolio
- Expansion in higher growth consumer-oriented markets
- Deepening positions in core markets and geographies
- Innovation across all product lines

Broad-based margin expansion
- Expansion through growth in higher-margin products and leveraging fixed cost

Strong cash flow profile
- Strong cash conversion levels (targeting free cash flow 7% of sales on average)
- Maintaining a solid balance sheet
- Returning capital to shareholders while preserving M&A flexibility

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

FORM 10-K

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

For the fiscal year ended December 31, 2024

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

For the transition period from _____ to _____

Commission file number 1-11430

MINERALS TECHNOLOGIES INC.

(Exact name of registrant as specified in its charter)

Delaware	25-1190717
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
622 Third Avenue, 38th Floor **New York, New York**	10017-6707
(Address of principal executive office)	(Zip Code)

(212) 878-1800
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.10 par value	MTX	New York Stock Exchange LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes ☒ No ☐

Indicate by check mark if Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.
Yes ☐ No ☒

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, 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 ☐** **Emerging Growth Company ☐**
Non-accelerated Filer ☐ **Smaller Reporting Company ☐**

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2024, the aggregate market value of the voting stock held by non-affiliates of the Registrant (based upon the closing price at which the stock was sold as of June 28, 2024) was approximately $1.9 billion. Solely for the purposes of this calculation, shares of common stock held by officers, directors and beneficial owners of 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 7, 2025, the Registrant had outstanding 31,897,554 shares of common stock, all of one class.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2025 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K.

MINERALS TECHNOLOGIES INC.
2024 FORM 10-K ANNUAL REPORT
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PART I

Item 1. Business

Minerals Technologies Inc. (together with its subsidiaries, the "Company", "we", "MTI", "us" or "our") is a leading, technology-driven specialty minerals company that develops, produces, and markets a broad range of mineral and mineral-based products, related systems and services. The Company serves globally a wide range of consumer and industrial markets, including household and personal care, paper and packaging, food and pharmaceutical, automotive, construction, steel and foundry, environmental, and infrastructure.

At December 31, 2024, the Company reported our operations in the following two reportable business segments under which we managed our operations, assessed performance and reported earnings: Consumer & Specialties and Engineered Solutions.

- The Consumer & Specialties segment serves consumer end markets directly with mineral-to-market finished products and also provides specialty mineral-based solutions and technologies that are an essential component of our customers' finished products.
- The Engineered Solutions segment serves industrial end markets with engineered systems, mineral blends, and technologies that are designed to improve our customers' manufacturing processes and projects.

The Company is focused on executing our growth strategy of expanding our business into faster-growing markets and geographies and strengthening our leadership positions in existing markets. In addition, the Company maintains a research and development focus by accelerating the development of advanced new products and technologies to satisfy the changing customer requirements and creating market opportunities.

The following table sets forth the percentage of our revenues generated from each segment for each of our last three fiscal years:

	2024	2023	2022
Percentage of Net Sales			
Consumer & Specialties	54%	54%	53%
Engineered Solutions	46%	46%	47%
Total	100%	100%	100%

See Note 21 to the Consolidated Financial Statements for additional details on our two business segments.

CONSUMER & SPECIALTIES SEGMENT

The Consumer & Specialties segment provides technologically enhanced products to consumer-driven end markets, including mineral-to-market household products, as well as specialty additives that become functional components in a variety of consumer and industrial goods. This segment includes two product lines: Household & Personal Care and Specialty Additives

Household & Personal Care Products and Markets

The Household & Personal Care product line delivers mineral-to-market products to a variety of consumer-oriented markets, including pet litter, personal care, fabric care, edible oil and renewable fuel purification, animal health, and agricultural. The core technology used in this product line is called, "Functional Additives," which is the use of unique minerals and additives to deliver functionality to our products and our customers' products. The principal products of this product line are marketed under various registered trade names, including PREMIUM CHOICE®, VitaLife®, Sivocat™,SIVO™, RAFINOL™ and ENERSOL®.

The Company's cat litter products include sodium bentonite-based scoopable (clumping), traditional and alternative cat litters sold to grocery and drug stores, mass merchandisers, wholesale clubs and pet specialty stores throughout North America, Europe, and Asia. The Company's scoopable products' clump-forming capability traps urine, thereby reducing waste by allowing for easy removal of only the odor-producing elements from the litter box. The Company is a provider of private-label cat litter to retail partners, as well as a provider of bulk cat litter to national brands and other private label packaging companies. The Company's internal transportation group provides logistics services and is a key component of our capability in supplying customers on a national basis. The Company has completed a number of acquisitions of cat litter manufacturers over the past several years in both the European and North American markets.

The Company also manufactures personal care ingredients for cosmetic anti-aging formulations and advanced delivery system technologies for sustained-release of retinoid and other actives in cosmetic, OTC and prescription formulations. It also produces mineral ingredients providing improved feel and viscosity control in cosmetic formulations. The Company has been a market leader in retinol-based delivery systems and supplies liquid retinoid products. Products range from ingredient sales to fully formulated finished goods.

The Company supplies fabric care products and additives consisting of high-grade, agglomerated bentonite and other mineral additives that perform as softening agents in certain powdered-detergent formulations or act as carriers for colorants, surfactants, and fragrances. These fabric care products are formulated to adapt to our customers' changing technical requirements.

In addition, the Company produces several other bentonite and leonardite-based proprietary solutions for consumer and industrial applications, such as:

- Natural bentonite feed additives to improve animals' digestive health through gastrointestinal binding of mycotoxins.
- Filtration media for edible oil, renewable fuels, and beverages where the Company's unique mineral reserves and differentiated process targets removal of specific contaminants.
- Agricultural products to improve plant harvests, plant health and soil that enhance crop yield.
- Advanced performance additives, including organoclays, used in flame retardants, plastic packaging, rubber mold release, paints, coatings and ink manufacturing processes.

The Company's Household & Personal Care net sales were $530.0 million, $517.6 million and $476.2 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Specialty Additives Products and Markets

The Specialty Additives product line delivers mineral additives to a variety of consumer and industrial end markets, including paper and packaging, food and pharmaceutical, sealants and adhesives, paints and coatings, and plastics. The core technology used in this product line is called, "Crystal Engineering," which involves proprietary processes to synthesize crystal type, size, and morphology to achieve specific functionality.

The Company manufactures customized Precipitated Calcium Carbonate (PCC) and Ground Calcium Carbonate (GCC) products using proprietary processes for the paper, paperboard and fiber-based packaging industry. Each product is designed to provide optimum balance of paper properties including brightness, opacity, bulk, strength, and improved printability. The majority of this product line's sales are to papermakers from "satellite" plants. A satellite plant is a manufacturing facility located near a paper mill thereby eliminating costs of transporting product from remote production sites to the paper mill.

The Company's research and development and technical service staff focuses on expanding sales from its existing and potential new satellite plants, as well as developing new technologies for new applications. These technologies include, among others, OPACARB® PCC, a family of products for paper coating, our FulFill® family of products, a system of high-filler technologies that offers papermakers a variety of efficient, flexible solutions which decrease dependency on natural fibers, and NewYield® and ENVIROFIL® waste stream process technologies, innovative technologies that convert paper and pulp mill waste streams into functional pigments for filling paper and paperboard.

The Company owns, operates and maintains all of its satellite facilities and owns or licenses the related technology. Generally, the Company and its customers enter into long-term evergreen agreements, initially ten to fifteen years in length, pursuant to which the Company supplies substantially all of the customer's requirements. The Company is generally permitted to sell to third-parties products produced at a satellite plant in excess of the host mill's requirements.

The Company estimates that the packaging market is approximately three times the size of the printing and writing paper market. Growth in the packaging segment is driven by growth trends in consumption, e-commerce and demand for sustainable packaging solutions. The Company offers mineral solutions for filler and coating applications in both the containerboard and cartonboard packaging.

The Company also produces and sells a full range of specialized PCC products on a merchant basis for non-paper applications, including surface-treated and untreated grades of PCC to the polymer industry for use in automotive and construction applications, and to the adhesives and printing inks industries. The Company's PCC is also used by the pharmaceutical industries as a source of calcium, as a buffering agent in tablets, food applications, and as a mild abrasive in toothpaste.

In addition, the Company mines and processes GCC products at its reserves in the eastern and western parts of the United States. GCC is used and sold in the construction, automotive and consumer markets in addition to packaging applications. Our high-quality limestone and dolomitic limestone are defined primarily by the chemistry and color characteristics of the ore bodies. Ore samples are analyzed by x-ray fluorescence (XRF) and other techniques to determine purity and more generally by Hunter brightness measurement to determine dry brightness and the Hunter yellowness (b) value. We serve multiple markets from each of our operations, each of which has different requirements relating to a combination of chemical and physical properties.

The Company's Specialty Additives net sales were $610.2 million, $642.6 million and $648.4 million for the years ended December 31, 2024, 2023 and 2022, respectively.

ENGINEERED SOLUTIONS SEGMENT

The Engineered Solutions segment provides advanced process technologies and solutions that are designed to improve our customers' manufacturing processes and projects. This segment includes two product lines: High-Temperature Technologies and Environmental & Infrastructure.

High-Temperature Technologies Products and Markets

The High-Temperature Technologies product line delivers mineral-based blends, technologies, and systems to the foundry, steel, glass, aluminum and other high-temperature processing industries. The core technology used in this product line is called "Engineered Blends," which is the development of tailored blends of specific minerals and additives to enhance customer processes and product performance.

For the foundry industry, this product line produces custom-blended mineral and non-mineral products to strengthen sand molds for casting for auto and heavy truck parts, agriculture and construction equipment, municipal, infrastructure and other industrial castings markets. These products help our customers in the foundry industry to improve productivity by reducing scrap from defects and poor surface quality. The ADDITROL® blends also improve the efficiency and recycling of sand blends in mold sand systems by lowering clay consumption and improve air quality by reducing volatile organic compound emissions. Our mine to mold operational capability has resulted in providing a consistent high-quality product, technical support and reliable on-time delivery service valued by our customers.

The Company also offers a broad range of monolithic and pre-cast refractory products and related systems and services for the steel industry.

The Company's proprietary application equipment is used to apply refractory materials to the walls of steel-making furnaces and other high temperature vessels to maintain and extend their useful life. MINSCAN® refractory application machines allow for remote-controlled application of the Company's refractory products in steel-making furnaces, as well as in steel ladles. This helps the steel-making industry to achieve their employee safety goals and increase productivity. These application systems and the technologically advanced refractory materials developed in the Company's research laboratories have been well accepted by the Company's customers. These solutions allow steel makers to improve their performance through, among other things, the application of monolithic refractories to furnace linings while the furnace is at operating temperature, thereby eliminating the need for furnace cool-down periods and steel-production interruption. The result is a lower overall cost for steel makers.

The Company sells the following refractory products:

- Gunnable monolithic refractory products and application systems to users of basic oxygen furnaces and electric arc furnaces for application on furnace walls to prolong the life of furnace linings.
- Monolithic refractory materials and pre-cast refractory shapes for iron and steel ladles, vacuum degassers, continuous casting tundishes, blast furnaces and reheating furnaces.
- Refractory shapes and linings to the glass, cement, aluminum, petrochemicals, power generation and other non-steel industries.

Refractory product sales are often supported by Company-supplied proprietary application equipment, laser measurement systems and on-site technical service support. The Company's technical service staff and application equipment assist customers to achieve desired productivity objectives. The Company's technicians are also able to conduct laser measurement of refractory wear, sometimes in conjunction with robotic application tools, to improve refractory performance at many customer locations. The Company believes that these services, together with its refractory product offerings, provide it with a strategic marketing advantage. The Company also produces a number of other technologically advanced products for the steel industry, including calcium metal, metallurgical wire products and a number of metal treatment specialty products.

The Company also produces a specialized line of carbon composites and PYROID® pyrolitic graphite, primarily to the aerospace and electronics industries.

The Company's High-Temperature Technologies net sales were $713.2 million, $720.9 million and $702.5 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Environmental & Infrastructure Products and Markets

The Environmental & Infrastructure product line provides environmental, construction and remediation solutions. These include geosynthetic clay lining systems, vapor intrusion mitigation products, sub surface waterproofing systems, green roofs, wastewater remediation and drinking water purification technologies as well as drilling products for both the construction and infrastructure markets as well as the oil and gas exploration and production industries. The core technology used in this product line is called, "Particle Surface Modification," which is the modification of the outer layer of our minerals through chemistry.

The Company's geosynthetic clay lining systems are marketed under the RESISTEX® and BENTOMAT® trade names principally for lining and capping landfills, mine waste disposal sites and industrial waste storage sites, such as bauxite residue and coal ash waste. The Company also provides associated geosynthetic materials for these applications, including geotextiles and drainage geocomposites. The vapor intrusion mitigation applications include specialized technologies to prevent gas vapor intrusion in new building construction. Products offered include Liquid Boot® vapor barrier, a spray applied system that works as a stand alone or in conjunction with various membrane systems to provide best in class performance.

Additionally, the Company offers a wide variety of both active and passive waterproofing and greenroof technologies for use in protecting structures from groundwater intrusion. Our products include our VOLTEX® waterproofing composite, which is comprised of two polypropylene geotextiles needle punched around a sodium bentonite core. Similarly, our ULTRASEAL® waterproofing membrane is an advanced membrane product built around unique active polymer core; and our COREFLEX® waterproofing membrane is an award winning active polymer core and heat welded PVC membrane for protection of critical infrastructure. The newest offering we have in this space is our VINTEGRA® waterproofing membrane, a product that takes our proven active polymer core and layers it between an ethylene vinyl alcohol copolymer (EVOH) membrane that provides the highest level of both gas and water vapor protection. The VINTEGRA® membrane is available as both an active and passive system. In addition to these membrane products, we also provide a variety of sealants and other accessories required to create a functional waterproofing system. The end-users of these products are specialty subcontractors trained by the company in the proper installation of all our products.

The Company is also well known in the environmental remediation industry providing technologies that address a variety of complex and aggressive contaminants in soil, groundwater, and marine sediment. These products are marketed under the ORGANOCLAY™ trademark. The reactive capping technologies and solutions containing ORGANOCLAY™ compositions are used to effectively contain residual contamination and to reduce costs associated with ex-situ remedies. Products offered include our REACTIVE CORE-MAT™ composite geotextile, an in-situ sediment capping material and our QUIKSOLID® polymer, a super absorbent media. The Company also specializes in treating soil, groundwater, landfill leachate, surface waters and drinking water sources contaminated with Per-and polyfluoroalkyl substances (PFAS) and Perfluorooctane sulfonate (PFOS) with our FLUORO-SORB® absorbent.

The Company's drilling products are used in environmental and geotechnical drilling applications, horizontal directional drilling, mineral exploration and foundation construction, as well as in oil and gas well drilling. Bentonite imparts thickening and suspension properties that facilitate the transport of rock cuttings to the surface during the drilling process. It also contributes to a drilling fluid's ability to lubricate the drill bit and coat the underground formations to prevent hole collapse and drill-bit seizing. Our primary trademark for this application is PREMIUM GEL®.

Additionally, within this product line, the Company provides offshore filtration and well testing services to improve the production, cost, compliance, and environmental impact of activities performed globally in the oil and gas industry.

The Company's Environmental & Infrastructure net sales were $265.1 million, $288.8 million and $298.4 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Marketing and Sales

The Company relies principally on its worldwide direct sales force to market its products. The direct sales force is augmented by technical service teams that are familiar with the industries to which the Company markets its products, and by several regional distributors. The Company's sales force works closely with the Company's technical service staff to solve technical and other issues faced by the Company's customers.

In the Consumer & Specialties segment, the Company's commercial sales team sells our private-label cat litter to retail partners, as well as to national brands and other private label packaging companies. In addition, the Company's sales team and technical services staff assist paper producers in ongoing evaluations of the use of PCC for paper coating and filling applications as well as PCC and GCC use in the packaging, automotive, construction and household goods markets.

In the Engineered Solutions segment, the Company relies on industry-specialized technically oriented salespersons. For the foundry market, these sales teams provide expertise to educate our customers on the bentonite blend properties and to aid them in producing castings efficiently. Certain other products are distributed through networks of distributors and representatives, who warehouse specific products at strategic locations. In addition, the Company's technical service personnel advise on the use of refractory materials, and, in many cases pursuant to service agreements, apply the refractory materials to the customers' furnaces and other vessels. Our staff includes sales professionals and technical support engineers who analyze the suitability of our products in relation to the customer's specific application and the conditions that products will endure or the environment in which they will operate.

The continued use of skilled technical service teams is an important component of the Company's business strategy. The Company works closely with its customers to ensure that their requirements are satisfied, and it often trains and supports customer personnel in the use of the Company's products. The Company oversees domestic marketing and sales activities principally from Bethlehem, Pennsylvania and Hoffman Estates, Illinois, and from regional sales offices located elsewhere in the United States. The Company's international marketing and sales efforts are directed from regional centers located in Brazil, China, Germany, India, Japan, Turkey and the United Kingdom. The Company believes that its worldwide network of sales personnel and manufacturing sites facilitates continued international expansion.

Raw Materials

The Company depends in part on having an adequate supply of raw materials for its manufacturing operations, particularly lime and carbon dioxide for the Specialty Additives product line, and magnesia and alumina for the High-Temperature Technologies' operations. We also depend on having an adequate supply of bentonite, leonardite and limestone. Supplies of bentonite, leonardite and limestone are mainly provided through the Company's own mining operations and we depend on having adequate access to ore reserves of appropriate quality at such mining operations.

The Company uses lime in the production of PCC and is a significant purchaser of lime worldwide. Generally, the lime utilized in our business is readily available from numerous sources and we purchase lime under long-term supply contracts from unaffiliated suppliers located in close geographic proximity to the Company's PCC plants. We currently supply some quantities of lime to third parties that are in close proximity to our Adams, Massachusetts plant and could supply small quantities of lime to certain of our PCC satellite facilities that are in close geographic proximity to the Adams plant. Carbon dioxide is readily available in exhaust gas from the host paper mills, or other operations at our merchant facilities.

The principal raw materials used in the Company's monolithic refractory products are refractory-grade magnesia and various forms of alumina silicates. Approximately 55% of the Company's magnesia requirements were purchased from sources in China over the past five years. The price and availability of bulk raw materials from China are subject to fluctuations that could affect the Company's sales to its customers. In addition, the volatility of transportation costs has also affected the delivered cost of raw materials imported from China to North America and Europe. The Company has developed alternate sources of magnesia that have diversified our supply of magnesia. The amount sourced from China and other locations can vary from year to year depending upon price and availability from each source. The alumina we utilize in our business is readily available from numerous sources. The Company also purchases calcium metal, calcium silicide, graphite, calcium carbide and various alloys for use in the production of metallurgical wire products and uses lime and aluminum in the production of calcium metal.

In addition to bentonite and leonardite provided through our mining operations, our High-Temperature Technologies segment's principal raw materials are coal, soda ash, chromite, and woven and unwoven polyester material, all of which are readily available from numerous sources.

Mineral Reserves and Mining Process

The Company relies on access to bentonite reserves. The Company has reserves of sodium and calcium bentonite at various locations in the U.S., including Wyoming, Montana, South Dakota, Nevada and Alabama, as well as in Australia, China, Slovakia, and Turkey. Through the Company's affiliations and joint ventures, the Company also has access to bentonite deposits in Mexico. The Company owns or controls the properties on which the bentonite reserves are located through long-term leases, royalty agreements (including easement and right of way agreements) and patented and unpatented mining claims. No single or group of mining claims or leases is significant or material to the financial condition or operations of our Company or our segments.

In general, our bentonite reserves are immediately adjacent to, or within sixty miles of, one of the related processing plants. All of the properties on which our reserves are located are either physically accessible for the purposes of mining and hauling or the cost of obtaining physical access would not be material. Access to processing facilities from the mining areas is generally by private road, public highways, or railroads. For most of our leased properties and mining claims, there are multiple means of access.

The Specialty Additives product line is supported by the Company's limestone reserves located in the western and eastern parts of the United States. The Company generally owns and surface mines these reserves and processes its products at nearby processing plants.

The Company has ongoing exploration and development activities for all of its mineral interests with the intent to increase its proven and probable reserves.

See Item 2, "Properties," for more information with respect to these facilities and mines.

The Company relies on shipping bulk cargos of bentonite within and from the United States, Turkey and China to customers, as well as our own subsidiaries, and we are sensitive to our ability to recover these shipping costs.

Competition

The Company is continually engaged in efforts to develop new products and technologies and refine existing products and technologies in order to remain competitive and to position itself as a market leader. The company is a world leader in bentonite and PCC.

The Company competes on the basis of product quality, service, technical support, price, product availability and logistics. There are numerous major producers of competing products and various regional suppliers in the areas the Company serves. Within the Consumer & Specialties segment, the Company is a global leader in private label cat litter, North America bulk clumping cat litter and European premium cat litter. With respect to its PCC products, the Company competes for sales to the paper and packaging industry with other minerals, such as GCC and kaolin, based in large part upon technological know-how, patents and processes that allow the Company to deliver PCC that it believes imparts gloss, brightness, opacity and other properties to paper and packaging on an economical basis. The Company is the leading manufacturer and supplier of PCC to the paper industry and specialty PCC in North America. The Company competes in sales of its limestone based primarily upon quality, price, and geographic location.

With respect to the Company's High-Temperature Technologies products, competitive conditions vary by geographic region. Competition is based upon the performance characteristics of the product (including strength, consistency, thermal durability and ease of application), price, and the availability of technical support. The company is the world's largest producer and supplier of Green Sand Bonds, as well as the leader in monolithic refractories and solid core calcium wire in North America.

With respect to the Environmental & Infrastructure product line, the Company competes with geosynthetic clay liner manufacturers worldwide, several suppliers of alternative lining technologies, and providers of soil and environmental remediation solutions and products. In addition, the filtration and well-testing products compete with other oil and gas services companies. In building materials applications, the Company competes in a highly fragmented market comprised of a wide variety of alternative technologies. A number of integrated bentonite companies compete with the Company's drilling products.

Seasonality

Some of our products in the Engineered Solutions segment, within the Environmental & Infrastructure product line are impacted by weather and soil conditions. Many of the products cannot be applied in wet or winter weather conditions and, as such, sales and profits tend to be greater during the period from April through October. Sales in our Specialty Additives product line, within Consumer & Specialties segment, are subject to similar seasonal patterns. In addition, the oil and gas production facilities are subject to natural disasters, such as hurricanes, which could lead to lower sales in the June to November months within this product line.

Research and Development

Many of the Company's product lines are technologically advanced. The Company's internal research team has dedicated years of experience into analyzing properties of minerals and synthetic materials while developing processes and applications to enhance their performance. Our expertise in our core technologies of crystal engineering, engineered blends, functional additives and particle surface modification apply to and support our product lines. The Company's business strategy for growth in sales and profitability depends, to a substantial extent, on the continued success of its research and development activities. The Company will continue to seek out new and innovative technologies, developed mainly by our internal research team, to incorporate into our product lines.

The Company's Consumer & Specialties segment provides a portfolio of functional components, custom blended compounds, formulations and technologies for a variety of consumer and industrial goods and has two product lines, Household & Personal Care and Specialty Additives.

- In the Household & Personal Care product line, the Company's research and development efforts employ our functional additive core technologies to support both our private label and branded products. Our initiatives include formulation development and packaging collaboration with our customers on the development of functional and aesthetically pleasing private label cat litters and our branded cat litters, including Premium Choice® and Sivocat™. In our personal care product group, we develop and formulate ingredients and delivery systems, including Microsponge® poly beads and Poly-Pore® and Poly-Trap® polymers which are proprietary systems of microparticles that entrap active ingredients for sustained release to enhance their performance in topical dermatological products. We also collaborate with our customers on their private label personal care products. Our in-house research & development team specializes in formulation development and collaborates with our partners to create products that meet their specifications. After validation of the formulas through analytics and stability testing, our packaging engineers evaluate the formula and packaging compatibility. Additionally, our Rafinol™ oil purification agents purify and remove contaminates in edible oils and renewable fuels, including renewable diesel, biodiesel and sustainable aviation fuel; our KWK® bentonite purifies and clarifies wine and juices; and our Enersol® soil enhancer and Agro-Lig® humic acid are agricultural additives that promote sustainable growth and optimal yield of commercial crops by adding best-in-kind organic materials to the soil. Our research with bentonite clays includes a wide variety of applications including animal health, fabric care, personal care, paints, ink, asphalt emulsions and coating functional additives.

- In the Specialty Additives product line, the Company's research and development efforts include: the satellite precipitated calcium carbonate (PCC) and satellite ground calcium carbonate (GCC) plant concepts and applying our crystal engineering core technologies to create specific PCC and GCC particles for paper filling and coating applications, with our FulFill® high filler technology systems, NewYield® Waste Stream Process Technology, and ENVIROFIL® Waste Stream Process Technology. The FulFill® brand High Filler Technology is a portfolio of high-filler technologies that offers papermakers a variety of efficient, flexible solutions that decrease dependency on fiber and optimize cost and quality; NewYield® Waste Stream Process Technology cost-effectively converts a pulp mill waste stream into a functional pigment for paper and packaging filling, while eliminating the cost and environmental impact of disposal and remediation of certain waste streams to papermakers; ENVIROFIL® Waste Stream Process Technology allows cost-effective recovery of mineral pigments from de-inking waste materials by converting these materials into a functional pigment for filling paper while eliminating the cost and environmental impact of disposal and remediation. Our Specialty PCC and process mineral solutions include our Thixocarb® PCC, Vicality® USP PCC, EMforce™ calcium carbonate.

Our Engineered Solutions segment provides products and services that are designed to improve our customers' manufacturing processes and commercial projects and has two product lines, High Temperature Technologies and Environmental & Infrastructure.

- In the High Temperature Technologies product line, our main objective is designing products and applications based on customer's needs using our engineered blend core technologies. Voice of the customer has driven our achievements in developing our Scantrol® automated gunning technology. This technology combines our industry leading LACAM® laser-based refractory measurement systems and our MINSCAN® application technology with advance automation software to deliver the safest and most efficient furnace and steel ladle maintenance system in the steel industry. Our SURE-CAL® calcium metal injection technology provides the most efficient and reliable method of calcium treatment in steelmaking that enhances steel quality and productivity to our customer's operation. Our DURACRETE™ line of shotcretes and castables provide our customers with the highest performance of refractory and safety against loss of containment. The Company continues to make diligent efforts in providing the safest, highest performance and most effective solutions required to meet our customer's needs. Our ADDITROL® greensand bond formulations are custom blends and meet the need of both ferrous and non-ferrous applications. Our Volclay®, Maxibond™, and Panther Creek® products are used in green sand molding applications ranging from the production of iron and steel castings to the production of non-ferrous castings. The Hevi-Sand® specialty chromite sand prevents metal penetration and can be used with most foundry binders in molds and cores.

- In the Environmental & Infrastructure product line, particle surface modification core technologies are used to develop products to meet critical performance criteria for a variety of customers. The Bentomat® and RESISTEX™ lining technologies are engineered to withstand the full continuum of leachate chemistries, including increasingly aggressive leachates from Mining and Coal Combustion Byproduct applications. We protect the commercial building envelope from water ingress with our waterproofing products, including Voltex® flexible barrier sheets, Core-Flex® waterproofing membranes, and Waterstop RX® waterproofing compositions, and our Vintegra® membranes, which are our newest innovation for combined waterproofing and gas vapor protection membranes. Additionally, our company has several advanced water treatment technologies. The Crudesorb® filtration media, CrudeSep® water treatment, Hi-Flow® filtration media, MOST® water treatment system, and ORGANOCLAY technologies offer highly effective solutions solidifying aqueous waste or for removing oils, greases and other low solubility organic compounds, solids and metals from aqueous streams. The Company's FLUORO-SORB® adsorbent is a proprietary, patented, NSF-certified product designed to globally support remediation efforts surrounding per- and polyflouroalkyl substances (PFAS) and Perflourooctane sulfonate (PFOS).

For the years ended December 31, 2024, 2023 and 2022, the Company spent approximately $23.0 million, $21.2 million and $20.4 million, respectively, on research and development. The Company's research and development spending as a percentage of sales was approximately 1.1%, 1.0% and 1.0% for 2024, 2023 and 2022, respectively.

The Company maintains its primary research facilities in Bethlehem and Easton, Pennsylvania and Hoffman Estates, Illinois. It also has research and development facilities in China, England, Germany, Ireland, Japan, Turkey and additional sites in the United States. Approximately 221 employees worldwide are engaged in research and development.

The Company has an active new product and process development program. Each year, numerous new product and process ideas are submitted and undergo a rigorous stage gate evaluation process. As a result, the Company commercializes a number of these products each year. Our products also contribute to improving our customer's sustainability profile.

Patents and Trademarks

The Company owns or has the right to use approximately 240 patents and approximately 1,810 trademarks related to its business. Our patents expire between 2025 and 2041. Our trademarks continue indefinitely. The Company believes that its rights under its existing patents, patent applications and trademarks are of value to its operations, but no one patent, application or trademark is material to the conduct of the Company's business as a whole.

Insurance

The Company maintains liability and property insurance and insurance for business interruption in the event of damage to its production facilities and certain other insurance covering risks associated with its business. The Company believes such insurance is adequate for the operation of its business. There is no assurance that in the future the Company will be able to maintain the coverage currently in place or that the premiums will not increase substantially.

Human Capital Resources

Our people power the success of MTI. They are the cornerstone of our operational excellence and safety-first culture, key to our ability to execute on our growth strategies, and vital to our success. Our core values — people, excellence, honesty, customer focus and accountability — guide our actions.

Workforce Demographics

As of December 31, 2024, the Company employed 3,891 persons globally, located in over 30 countries. Of these, 1,812 (47%) were located in North America, 992 (25%) were located in Asia, 902 (23%) were located in Europe, and 185 (5%) were located in Latin America.

Focus on Safety

Safety comes first at MTI. The health and safety of our people, partners, and communities is our top priority. Our "safety first" culture has been built through dedication, continuous improvement and active engagement. Creating a safe work environment by continuously identifying and reducing workplace risks and by reinforcing safe behaviors means that employees will return to their families every day in the same condition in which they came to work. While we believe zero-injuries is attainable, we have set goals of 1.00 for Total Recordable Incident Rate (TRIR, which is the number of recordable injuries per 100 employees) and 0.10 for Lost Workday Injury Rate (LWIR, which is the number of lost workday injuries per 100 employees), and we continue to make strides to drive incidents below these levels. In 2024, our TRIR was 0.78 and our LWIR was 0.13. This safety-first mindset helps us attract and retain top talent from around the world and drives continuous improvement in our manufacturing operations.

Operational Excellence Culture

Our Operational Excellence (OE) journey, rooted in the active engagement of our employees, began more than a decade ago when we developed a comprehensive and highly structured business system of lean principles closely integrated with safe and reliable work practices. We've significantly advanced OE across all aspects of our company, fostering a culture of continuous improvement where each employee recognizes the importance of applying these people-focused principles and tools to solve challenges, constantly refine our processes, identify and remove risk and waste, and deliver value to our customers. Every day, MTI employees show their engagement and apply their skills in ways that deliver measurable outcomes and create both business and social value.

Human Capital Strategy and Total Rewards

Our people are essential to the successful delivery of the MTI strategy and to sustaining superior business performance. Our people strategy and programs are designed and implemented in support of our business and strategic objectives. We accelerate the development of our employees, strengthen our leadership capabilities, and enhance employee performance through a wide variety of formal and informal training initiatives, development programs and regular succession plan reviews.

MTI recognizes that its employees are most likely to thrive when they have the resources to meet their needs in both their professional and personal lives. In support of this belief, the Company is committed to providing compensation that is competitive, equitable, and allows employees to share in the Company's success through various incentive compensation programs. We design compensation programs and strategies that are built upon the foundational philosophies of market competitiveness and performance. We also offer a comprehensive and valuable benefits program that promotes physical, emotional and financial wellness with the goal of supporting employees and their families. While offerings vary around the world, employees can access medical, dental, vision and free life insurance on the first day of employment. Additional benefits include 100% company paid tuition assistance, free counseling through our Employee Assistance Program and a robust fertility and family building benefit, paid time off and paid maternity leave.

Diversity, Equity and Inclusion

The Company is committed to increasing diverse representation at every level, fostering an inclusive work environment and culture and supporting equitable pay and access to opportunity for all employees. As a global company, we are committed to cultivating a work environment where everyone feels respected, valued, free to be their authentic selves and share ideas. We believe that our culture of diversity, equity and inclusion is a competitive advantage that fuels innovation and enhances our ability to attract and retain talent. Through our Global Inclusion Council, which is chaired by our CEO, we continually evaluate how we promote and support diversity in all forms to develop strategies and meaningful programs to achieve our objectives.

Environmental, Health and Safety Matters and Government Regulation

The Company's operations are subject to federal, state, local and foreign laws and regulations relating to the environment and health and safety. In particular, we are subject to certain requirements under the Clean Air Act. In addition, certain of the Company's operations involve and have involved the use and release of substances that have been and are classified as toxic or hazardous within the meaning of these laws and regulations. Environmental operating permits are, or may be, required for certain of the Company's operations and such permits are subject to modification, renewal and revocation. We are also subject to land reclamation requirements relating to our mining operations. In addition to environmental and health and safety laws and regulations, we are subject to a wide variety of other federal, state, local and foreign laws and regulations in the countries where we conduct business. The Company regularly monitors and reviews its operations, procedures and policies for compliance with these laws and regulations. Compliance with these laws and regulations often requires the dedication of time and effort of employees, as well as financial resources. The Company believes its operations are in substantial compliance with these laws and regulations and that there are no violations that would have a material effect on the Company. Despite these compliance efforts, some risk of environmental and other damage is inherent in the Company's operations, as it is with other companies engaged in similar businesses, and there can be no assurance that material violations will not occur in the future. In fiscal 2024, compliance with the regulations applicable to us did not have a material effect on our capital expenditures, earnings, or competitive position, and the cost of compliance with these laws and regulations is not expected to have a material adverse effect on the Company in the future.

Sustainability is core to who we are and the foundation of how we operate our company. At MTI, we are focused on providing the safest workplace for our employees, reducing our environmental impact, preserving natural resources and making positive contributions to our local communities — all of which are ingrained in our values. For the past 16 years, MTI has published an annual Corporate Responsibility and Sustainability Report that describes our efforts in continuous improvement regarding our safety culture, environmental performance, social impact, new product development, and community engagement. Over the past several years, we've taken meaningful steps to advance our broad range of sustainability initiatives, including establishing 2025 environmental reduction targets in six focus areas: Scope 1 and Scope 2 CO_2 emissions, airborne pollutants, water used, water discharged, and process waste landfilled, each on an absolute basis and per ton of production for each of our focus areas. By 2023, we met or exceeded our targets in ten out of twelve total environmental emission and discharge reduction targets.

Laws and regulations are subject to change. See Item 1A, Risk Factors, for information regarding the possible effects that compliance with new laws and regulations, including those relating to climate change, may have on our businesses and operating results.

Under the terms of certain agreements entered into in connection with the Company's initial public offering in 1992, Pfizer Inc. ("Pfizer") agreed to indemnify the Company against certain liabilities being retained by Pfizer and its subsidiaries including, but not limited to, pending lawsuits and claims, and any lawsuits or claims brought at any time in the future alleging damages or injury from the use, handling of or exposure to any product sold by Pfizer's specialty minerals business prior to the closing of the initial public offering.

Available Information

The Company maintains an internet website located at http://www.mineralstech.com. Its reports on Forms 10-K, 10-Q and 8-K, and amendments to those reports, as well as its Proxy Statement and filings under Section 16 of the Securities Exchange Act of 1934 are available free of charge through the Investor Relations page of its website, as soon as reasonably practicable after they are filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Investors may access these reports through the Company's website by navigating to "Investors", then to "Financials", and then to "SEC Filings."

Item 1A. Risk Factors

Our business faces significant risks. Set forth below are all risks that we believe are material at this time. Our business, financial condition and results of operations could be materially adversely affected by any of these risks. These risks should be read in conjunction with the other information in this Annual Report on Form 10-K.

Industry and Market Risks

Worldwide general economic, business, and industry conditions may have an adverse effect on the Company's results.

The Company's business and operating results are affected by worldwide and regional economic, business, and industry conditions. In recent years, we have experienced, among other things, declining consumer and business confidence, volatile raw material prices, instability in credit markets, high unemployment, fluctuating interest and exchange rates, and other challenges in the countries in which we operate. Uncertainty or a deterioration in the economic conditions affecting the businesses to which, or geographic areas in which, we sell products could reduce demand for our products and inflationary pressures may increase our costs. The Company's customers and potential customers may experience deterioration of their businesses, cash flow shortages, and difficulty obtaining financing. As discussed below, the industries we serve have in the past been adversely affected by the uncertain global economic climate due to the cyclical nature of their businesses. As a result, existing or potential customers may reduce or delay their growth and investments and their plans to purchase products, pursue inventory reduction measures, and may not be able to fulfill their obligations in a timely fashion. Further, suppliers could experience similar conditions, which could affect their ability to fulfill their obligations to the Company. We may also experience pricing pressure on products and services, or be unsuccessful in passing along to our customers an increase in our raw materials costs or energy prices, which could decrease our revenues and have an adverse effect on our financial condition and cash flows. Adversity within capital markets may also impact the Company's results of operations by negatively affecting the amount of expense the Company records for its pension and other postretirement benefit plans. Actuarial valuations used to calculate income or expense for the plans reflect assumptions about financial market and other economic conditions – the most significant of which are the discount rate and the expected long-term rate of return on plan assets. Such actuarial valuations may change based on changes in key economic indicators. Global economic markets remain uncertain, and there can be no assurance that market conditions will improve in the near future. Future weakness in the global economy could materially and adversely affect our business and operating results.

A number of our customers' businesses are cyclical or have changing regional demands. Our operations are subject to these trends, and we may not be able to mitigate these risks.

A significant portion of the sales of the High-Temperature product line of our Engineered Solutions segment are derived from the metalcasting market. The metalcasting market is dependent upon the demand for castings for automobile components, farm and construction equipment, oil and gas production equipment, power generation turbine castings, and rail car components. Many of these types of equipment are sensitive to fluctuations in demand during periods of recession or difficult economic conditions. This product line also serves the steel industry. In recent years, global steel production has been volatile. These trends have affected and may continue to affect the demand for our Engineered Solutions segment's products and services. We expect steel consumption to be similar to 2024 levels.

In the paper industry, which is served by the Specialty Additives product line of our Consumer & Specialties segment, production levels for uncoated freesheet within North America and Europe, our two largest markets, are projected to continue to decrease. The reduced demand for premium writing paper products has resulted in closures and conversions of mills in both North America and Europe. We expect paper consumption to remain similar to prior year levels in both regions.

The Environmental & Infrastructure product line of our Engineered Solutions segment serves the commercial construction, infrastructure and oil & gas markets. In addition, the Specialty Additives product line of our Consumer & Specialties segment is affected by the domestic residential building and construction markets, as well as the automotive market.

Demand for our products is subject to trends in these markets. During periods of economic slowdown, our customers often reduce their capital expenditure and defer or cancel pending projects. Such developments occur even amongst customers that are not experiencing financial difficulties. In addition, these trends could cause our customers to face liquidity issues or bankruptcy, which could deteriorate the aging of our accounts receivable, increase our bad debt exposure and possibly trigger impairment of assets or realignment of our businesses. The Company has taken steps to reduce its exposure to variations in its customers' businesses, including by diversifying its portfolio of products and services through geographic expansion, growth in less cyclical consumer-oriented markets, and by structuring most of its long-term satellite contracts to provide a degree of protection against declines in the quantity of product purchased, since the price per ton of our products generally rises as the number of tons purchased declines. In addition, many of our product lines lower our customers' costs of production or increase their productivity, which should encourage them to use our products. However, there can be no assurance that these efforts will mitigate the risks of our dependence on these industries. Continued weakness in the industries we serve has had, and may in the future have, an adverse effect on sales of our products and our results of operations. A continued or renewed economic downturn in one or more of the industries or geographic regions that the Company serves, or in the worldwide economy, could cause actual results of operations to differ materially from historical and expected results.

The Company operates in very competitive industries, which could adversely affect our profitability.

The Company has many competitors. Some of our principal competitors have greater financial and other resources than we have. Accordingly, these competitors may be better able to withstand economic downturns and changes in conditions within the industries in which we operate and may have significantly greater operating and financial flexibility than we do. We also face competition for some of our products from alternative products, and some of the competition we face comes from competitors in lower-cost production countries like China and India. As a result of the competitive environment in the markets in which we operate, we currently face and will continue to face pressure on the sales prices of our products from competitors, which could reduce profit margins.

The Company's sales could be adversely affected by consolidation in customer industries.

Several consolidations in the paper industry have taken place in recent years and such consolidation could continue in the future. These consolidations could result in partial or total closure of some paper mills where the Company operates satellite plants. Such closures would reduce the Company's sales, except to the extent that they resulted in shifting paper production and associated purchases of calcium carbonate to another location served by the Company. Similarly, consolidations have occurred in the foundry and steel industries. Such consolidations in the major industries we serve concentrate purchasing power in the hands of a smaller number of manufacturers, enabling them to increase pressure on suppliers, such as the Company. This increased pressure could have an adverse effect on the Company's results of operations in the future.

The Company's sales could be adversely affected by our failure to renew or extend long-term sales contracts for our satellite operations.

The Company's sales of calcium carbonate to paper customers are typically pursuant to long-term evergreen agreements, initially ten years in length, with paper mills where the Company operates satellite plants. Sales pursuant to these contracts represent a significant portion of our sales in the Specialty Additives product line of the Consumer & Specialties segment. The terms of many of these agreements have been extended or renewed in the past, often in connection with an expansion of the satellite plant. However, failure of a number of the Company's customers to renew or extend existing agreements on terms as favorable to the Company as those currently in effect, or at all, could have a substantial adverse effect on the Company's results of operations, and could also result in impairment of the assets associated with the satellite plant.

Financial Risks

Servicing the Company's debt will require a significant amount of cash. This could reduce the Company's flexibility to respond to changing business and economic conditions or fund capital expenditures or working capital needs. Our ability to generate cash depends on many factors beyond our control.

At December 31, 2024, the Company had $971.3 million aggregate principal amount of total indebtedness (consisting primarily of $575.0 million aggregate principal amount of loans under our term facility, $400.0 million aggregate principal amount of notes and $4.5 million outstanding under our revolving credit facility) and an additional $386.4 million of borrowing capacity under the revolving credit facility (after giving effect to $9.1 million of outstanding letters of credit). Our outstanding indebtedness will require a significant amount of cash to make interest payments. Further, the interest rate on a significant portion of our borrowings under our senior secured credit facility is based on SOFR interest rates, which has resulted in and could continue to result in higher interest expense in the event of continued increases in interest rates. Our ability to pay interest on our debt and to satisfy our other debt obligations will depend in part upon our future financial and operating performance and upon our ability to renew or refinance borrowings. Prevailing economic conditions and financial, business, competitive, regulatory and other factors, many of which are beyond our control, will affect our ability to make these payments. We cannot guarantee that our business will generate sufficient cash flow from operations or that future borrowings will be available to us in an amount sufficient to enable us to fund our liquidity needs. If we are unable to generate sufficient cash flow to meet our debt service obligations, we will have to pursue one or more alternatives, such as reducing or delaying capital or other expenditures, refinancing debt, selling assets, or raising equity capital. Further, the requirement to make significant interest payments may reduce the Company's flexibility to respond to changing business and economic conditions or fund capital expenditure or working capital needs and may increase the Company's vulnerability to adverse economic conditions.

The agreements and instruments governing our debt contain various covenants that could significantly impact our ability to operate our business.

The agreement governing our senior secured credit facility and the indenture that governs our 5.0% Senior Notes due 2028 contain a number of significant covenants that, among other things, limit our ability to: incur or guarantee additional indebtedness, pay dividends or make other distributions or repurchase or redeem capital stock, prepay, redeem or repurchase certain debt, issue certain preferred stock or similar equity securities, make loans and investments, sell or otherwise dispose of assets, incur liens, enter into transactions with affiliates, enter into agreements restricting our subsidiaries' ability to pay dividends and consolidate, merge or sell all or substantially all of our assets. In addition, we are required to comply with specific financial ratios, including a maximum net leverage ratio, under which we are required to achieve specific financial results. Our ability to comply with these provisions may be affected by events beyond our control. A breach of any of these covenants would result in a default under the applicable agreements. In the event of any default under our senior secured credit facility, our lenders could elect to declare all amounts borrowed under the credit agreement, together with accrued interest thereon, to be due and payable. In such an event, we cannot assure you that we would have sufficient assets to pay debt then outstanding under the credit agreement, the indenture governing our notes, and any other agreements governing our debt. Any future refinancing of the senior secured credit facility is likely to contain similar restrictive covenants. We may also incur future debt obligations that might subject us to additional restrictive covenants that could affect our financial and operational flexibility. We cannot assure you that we will be granted waivers or amendments to these agreements if for any reason we are unable to comply with these agreements or that we will be able to refinance our debt on terms acceptable to us, or at all.

Technology, Development and Growth Risks

The Company's results could be adversely affected if it is unable to effectively achieve and implement its growth initiatives.

Sales and income growth of the Company depends upon a number of uncertain events. Growth will depend in part on sales growth from our existing businesses and customers. The Company has a strategic growth initiative to increase penetration into geographic markets such as Brazil, India and China as well as other Asian and Eastern European countries. The Company also has a strategic growth initiative to increase penetration into consumer-oriented markets such as pet litter, personal care, and oil purification. Our strategy also anticipates growth through future acquisitions. However, our ability to identify and consummate any future acquisitions on terms that are favorable to us may be limited by the number of attractive acquisition targets, internal demands on our resources and our ability to obtain financing. Our success in integrating newly acquired businesses will depend upon our ability to retain key personnel, avoid diversion of management's attention from operational matters, and integrate general and administrative services. In addition, future acquisitions could result in the incurrence of additional debt, costs and contingent liabilities. Integration of acquired operations may take longer, or be more costly or disruptive to our business, than originally anticipated, and it is also possible that expected synergies from future acquisitions may not materialize. We also may incur costs and divert management attention with regard to potential acquisitions that are never consummated. Difficulties, delays or failure of any of these strategies could affect the future growth rate of the Company.

Delays or failures in new product development could adversely affect the Company's operations.

The Company's future business success will depend in part upon its ability to maintain and enhance its technological capabilities, to respond to changing customer needs, and to successfully anticipate or respond to technological changes on a cost-effective and timely basis. The Company is engaged in a continuous effort to develop new products and processes in all of its product lines. Difficulties, delays or failures in the development, testing, production, marketing or sale of such new products could cause actual results of operations to differ materially from our expected results.

The Company's ability to compete is dependent upon its ability to defend its intellectual property against inappropriate disclosure, theft and infringement.

The Company's ability to compete is based in part upon proprietary knowledge, both patented and unpatented. The Company's ability to achieve anticipated results depends in part on its ability to defend its intellectual property against inappropriate disclosure and theft as well as against infringement. In addition, development by the Company's competitors of new products or technologies that are more effective or less expensive than those the Company offers could have a material adverse effect on the Company's financial condition or results of operations.

The Company's operations could be impacted by the increased risks of doing business abroad.

The Company does business in many areas internationally. Approximately 49% of our sales in 2024 were derived from outside the United States and we have significant production facilities which are located outside of the United States. We have in recent years expanded our operations in emerging markets, and we plan to continue to do so in the future, particularly in China, India, Brazil, the Middle East, and Eastern Europe. Some of our operations are located in areas that have experienced political or economic instability, including Indonesia, Malaysia, Nigeria, Egypt, Saudi Arabia, Turkey, Brazil, Thailand, China and South Africa. As the Company expands its operations overseas, it faces increased risks of doing business abroad, including inflation, fluctuation in interest rates, changes in applicable laws and regulatory requirements, nationalization, expropriation, limits on repatriation of funds, civil unrest, unstable governments and legal systems, and other factors. The U.S. and foreign countries may also adopt or increase restrictions on foreign trade or investment, including currency exchange controls, tariffs or other taxes, or limitations on imports or exports (including recent and proposed changes in U.S. trade policy and resulting retaliatory actions by other countries). Further, geopolitical and terrorism threats, including armed conflict among countries, could in the future affect our business overseas, including leading to, among other things, impairment of our or our customers' ability to conduct operations, adverse impact to our employees, and a loss of our investment. While recent geopolitical conflicts, such as between Russia and Ukraine and between Israel and Hamas, have not significantly affected our business, the broader consequences of geopolitical and terrorism threats, which may include sanctions that prohibit our ability to do business in specific countries, embargoes, supply chain disruptions, potential contractual breaches and litigation, regional instability and geopolitical shifts, cannot be predicted. We are also subject to increased risks of natural disasters, public health crises, including the occurrence of a contagious disease or illness, such as COVID-19, and other catastrophic events in such countries. Many of these risks are beyond our control and can lead to sudden, and potentially prolonged, changes in demand for our products, difficulty in enforcing agreements, and losses in the realizability of our assets. Adverse developments in any of the areas in which we do business could cause actual results to differ materially from historical and expected results. In addition, a significant portion of our raw material purchases and sales outside the United States are denominated in foreign currencies, and liabilities for non-U.S. operating expenses and income taxes are denominated in local currencies. Accordingly, reported sales, net earnings, cash flows and fair values have been and, in the future, will be affected by changes in foreign currency exchange rates. Our overall success as a global business depends, in part, upon our ability to succeed in differing legal, regulatory, economic, social and political conditions. We cannot assure you that we will implement policies and strategies that will be effective in each location where we do business.

The Company's operations are dependent on the availability of raw materials and access to ore reserves at its mining operations. Increases in costs of raw materials, energy, or shipping could adversely affect our financial results.

The Company depends in part on having an adequate supply of raw materials for its manufacturing operations, particularly lime and carbon dioxide for the production of PCC, and magnesia and alumina for its refractory operations. Purchase prices and availability of these critical raw materials are subject to volatility. At any given time, we may be unable to obtain an adequate supply of these critical raw materials on a timely basis, on price and other terms, or at all. While most such raw materials are readily available, the Company has purchased approximately 55% of its magnesia requirements from sources in China over the past five years. The price and availability of magnesia have fluctuated in the past and they may fluctuate in the future. Price increases for certain other of our raw materials, including petrochemical products, as well as increases in energy prices, have also affected our business. Our production processes consume a significant amount of energy, primarily electricity, diesel fuel, natural gas and coal. We use diesel fuel to operate our mining and processing equipment and our freight costs are heavily dependent upon fuel prices and surcharges. Energy costs also affect the cost of raw materials. On a combined basis, these factors represent a large exposure to petrochemical and energy products which may be subject to significant price fluctuations. The contracts pursuant to which we construct and operate our satellite plants generally adjust pricing to reflect the pass-through of increases in costs resulting from inflation, including energy. However, there is a time lag before such price adjustments can be implemented. The Company and its customers will typically negotiate reasonable price adjustments in order to recover these escalating costs, but there can be no assurance that we will be able to recover increasing costs through such negotiations.

The Company also depends on having adequate access to ore reserves of appropriate quality at its mining operations. There are numerous uncertainties inherent in estimating ore reserves including subjective judgments and determinations that are based on available geological, technical, contract and economic information. In addition, mining permits, leases and other rights are, or may be, required for certain of the Company's mining operations. Such permits, leases and other rights are subject to modification, renewal and revocation. Our ability to maintain such mining permits, leases and other rights has been, and may continue to be, affected by changes in laws, regulations and governmental actions, particularly in emerging markets such as Turkey and China. We cannot assure you that we will be able to maintain such mining permits, leases and other rights to the extent we currently maintain them or at all.

The Company relies on shipping bulk cargos of bentonite from the United States, Turkey and China to customers, as well as our own subsidiaries, and we are sensitive to our ability to recover these shipping costs. If we cannot secure our container requirements or offset additional shipping costs with price increases to customers, our profitability could be impacted. We are also subject to other shipping risks. In particular, rail service interruptions have affected our ability to ship, and the availability of rail service, and our ability to recover increased rail costs, may be beyond our control. In addition, governmental restrictions can, and during the COVID-19 pandemic did, affect our ability to ship our products.

Operational Risks

The Company's subsidiaries, BMI Oldco Inc. (f/k/a Barretts Minerals Inc.) ("Oldco") and Barretts Ventures Texas LLC (together with Oldco, the "Chapter 11 Debtors"), have filed voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code to address and comprehensively resolve Oldco's liabilities associated with talc. Risks and uncertainties related to this filing could have a material adverse effect on the Company's business, financial condition, results of operations and cash flows.

The Company and certain of the Company's subsidiaries are among numerous defendants in over six hundred cases seeking damages for alleged exposure to asbestos-contaminated talc products sold by the Company's subsidiary Oldco. On October 2, 2023 (the "Petition Date"), notwithstanding the Company's confidence in the safety of Oldco's talc products, the Chapter 11 Debtors filed voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code in the United States Bankruptcy Court for the Southern District of Texas (the "Chapter 11 Cases") to address and comprehensively resolve Oldco's liabilities associated with talc. Minerals Technologies Inc. and the Company's other subsidiaries were not included in the Chapter 11 filing. In the second quarter of 2024, Oldco sold its talc assets under section 363 of the U.S. Bankruptcy Code. In addition, in the second quarter of 2024, the Company entered into a Debtor-in-Possession Credit Agreement with Oldco (the "DIP Credit Agreement") and recorded a provision for credit loss of $30 million for the maximum aggregate principal amount under such DIP Credit Agreement. Proceeds of the sale of Oldco's talc assets and funds drawn by Oldco under the DIP Credit Agreement will be used to fund the Chapter 11 Cases. The Chapter 11 Debtors' ultimate goal in the Chapter 11 Cases is to confirm a plan of reorganization under Section 524(g) of the U.S. Bankruptcy Code and utilize this provision of the Bankruptcy Code to establish a trust that will address all current and future talc-related claims. In January 2024, the Chapter 11 Debtors and Minerals Technologies Inc. commenced a court-approved mediation process with the Official Committee of Unsecured Creditors (appointed in the Chapter 11 Cases as the representative of current talc claimants) (the "Committee") and the Future Claimants Representative (appointed in the Chapter 11 Cases as the representative of future talc claimants) regarding the terms of a potential consensual plan of reorganization and the ultimate amount to be contributed to any trust. The mediation process is ongoing. During the pendency of the Chapter 11 Cases, the Company anticipates that the Chapter 11 Debtors will benefit from the operation of the automatic stay, which stays ongoing litigation in connection with talc-related claims against the Chapter 11 Debtors. In addition, subject to certain exceptions, the filing or continued prosecution of all talc-related claims against the Chapter 11 Debtors' non-debtor affiliates is temporarily stayed through April 15, 2025 (subject to further extensions), the date on which a hearing is scheduled on the status of the Chapter 11 Cases. The Chapter 11 Debtors have been deconsolidated from the Company's financial statements since the Petition Date.

Although the Chapter 11 Cases are progressing, it is not possible at this time to predict how the Bankruptcy Court will rule on the Committee's motion to dismiss the Chapter 11 Cases, the form of any ultimate resolution or when an ultimate resolution might occur. Accordingly, the amount that will be necessary to fully and finally resolve all of Oldco's current and future talc-related claims in connection with a confirmed Chapter 11 plan of reorganization cannot be estimated at this time. Several risks and uncertainties related to the Chapter 11 Cases could have a material adverse effect on the Company's business, financial condition, results of operations and cash flows, including the ultimate amount necessary to be contributed to any trust established pursuant to Section 524(g) of the U.S. Bankruptcy Code, the potential for the Company's talc-related exposure to extend beyond the Chapter 11 Debtors arising from claims by talc plaintiffs relating to the Company's liability for talc claims, corporate veil piercing efforts or otherwise, any final resolution of the scope of the Pfizer indemnity, the ongoing costs of the Chapter 11 Cases, which may require additional funding from time to time, the cost and the length of time necessary to ultimately resolve the cases, either through settlement or as a result of litigation arising in connection with the Chapter 11 Cases, and the possibility that the Chapter 11 Debtors will be unsuccessful in attaining relief under Chapter 11. Further, while the Company anticipates that the Chapter 11 Debtors will benefit from the operation of the automatic stay during the Chapter 11 proceedings, depending on the ultimate outcome of any of these litigation matters, the Company could in the future be required to pay significant amounts as a result of settlements or judgments, potentially in excess of liabilities accrued to date in respect of such matters. The resolution of, or recognition of additional liabilities in connection with, pending or future litigation could have a material adverse effect on the Company's results of operations, cash flows and financial condition.

For a further discussion of the Chapter 11 Cases and Oldco's talc-related liabilities, see Note 17 to the Consolidated Financial Statements, included in this report.

The Company is subject to stringent regulation in the areas of environmental, health and safety, and tax, and may incur unanticipated costs or liabilities arising out of claims for various legal, environmental and tax matters or product stewardship issues that could materially harm the Company's results of operations, cash flows and financial condition.

The Company's operations are subject to international, federal, state and local governmental environmental, health and safety, tax and other laws and regulations. We have expended, and may be required to expend in the future, substantial funds for compliance with such laws and regulations. In addition, future events, such as changes to or modifications of interpretations of existing laws and regulations, or enforcement polices, or further investigation or evaluation of the potential environmental impacts of operations or health hazards of certain products, may affect our mining rights or give rise to additional compliance and other costs that could have a material adverse effect on the Company. Further, certain of our customers are subject to various federal and international laws and regulations relating to environmental and health and safety matters, especially customers of our Environmental & Infrastructure product line of our Engineered Solutions segment, who are subject to drilling permits, waste water disposal and other regulations. To the extent that these laws and regulations affecting our customers change, demand for our products and services could also change and thereby affect our financial results. State, national, and international governments and agencies have been evaluating climate-related legislation and regulation that would restrict emissions of greenhouse gases in areas in which we conduct business, and some such legislation and regulation have already been enacted or adopted. Enactment of climate-related legislation or adoption of regulation that restrict emissions of greenhouse gases in areas in which we conduct business could have an adverse effect on our operations or demand for our products. Our manufacturing processes for our products use a significant amount of energy and, should energy prices increase as a result of such legislation or regulation, we may not be able to pass these increased costs on to purchasers of our products. We cannot predict if or when currently proposed or additional laws and regulations regarding climate change or other environmental or health and safety concerns will be enacted or adopted.

The Company is also subject to income tax laws and regulations in the United States and various foreign jurisdictions. Significant judgment is required in evaluating and estimating our provision and accruals for these taxes. Our income tax liabilities are dependent upon the location of earnings among these different jurisdictions. Our income tax provision and income tax liabilities could be adversely affected by the jurisdictional mix of earnings, changes in valuation of deferred tax assets and liabilities and changes in tax treaties, laws and regulations.

The Company is currently a party in various litigation matters and tax and environmental proceedings and faces risks arising from various unasserted litigation matters, including product liability, patent infringement, antitrust claims, and claims for third-party property damage or personal injury stemming from alleged torts, including, as discussed elsewhere in this Report, a number of cases seeking damages for alleged exposure to asbestos-contaminated talc products sold by BMI Oldco. Any failure to appropriately manage safety, human health, product liability and environmental risks associated with the Company's products and production processes could adversely impact the Company's employees and other stakeholders, the Company's reputation, and its results of operations, cash flows and financial condition. Public perception of the risks associated with the Company's products and production processes could impact product acceptance and influence the regulatory environment in which the Company operates. Any unanticipated liability arising out of a current matter or proceeding, or from the other risks described above, could have a material adverse effect on the Company's results of operations, cash flows and financial condition.

Production facilities are subject to operating risks and capacity limitations that may adversely affect the Company's financial condition or results of operations.

The Company is dependent on the continued operation of its production facilities. Production facilities are subject to hazards associated with the manufacturing, handling, storage, and transportation of chemical materials and products, including pipeline leaks and ruptures, explosions, fires, inclement weather and natural disasters, mechanical failure, unscheduled downtime, labor difficulties, transportation interruptions, and environmental risks. Production facilities are also subject to governmental requirements that may, and during the Covid-19 pandemic did, affect our ability to operate. We maintain property, business interruption and casualty insurance but such insurance may not cover all risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies. Further, from time to time, we may experience capacity limitations in our manufacturing operations. In addition, if we are unable to effectively forecast our customers' demand, it could affect our ability to successfully manage operating capacity limitations. These hazards, limitations, disruptions in supply and capacity constraints could adversely affect financial results.

Operating results for some of our businesses are seasonal.

Certain of our businesses are affected by seasonal weather patterns. A majority of revenues from our energy services business within the Environmental & Infrastructure product line of our Engineered Solutions segment is derived from the Gulf of Mexico and surrounding states, which are susceptible to hurricanes that typically occur June 1st through November 30th. Actual or threatened hurricanes can result in volatile demand for services provided by our energy services business. Our other businesses within the Environmental & Infrastructure product line are affected by weather patterns which determine the feasibility of construction activities. Typically, less construction activity occurs in winter months and thus this segment's revenues tend to be greatest in the second and third quarters when weather patterns in our geographic markets are more conducive to construction activities. Additionally, some of the businesses within the Specialty Additives product line of our Consumer & Specialties segment are subject to similar seasonal patterns.

Our operations have been and will continue to be subject to cyber-attacks and other disruptions to our information systems that could have a material adverse impact on our business, consolidated results of operations, and consolidated financial condition.

Our operations are dependent on digital technologies and services. We use these technologies for activities important to our business, including managing and operating our manufacturing facilities, communications within our company and with customers and suppliers, maintaining accurate financial records, protecting confidential information, complying with regulatory, financial reporting, and legal requirements, and otherwise storing, processing and transmitting our data. Increased use of remote working arrangements has only increased our reliance on these technologies and services. Our business has in the past and could in the future be negatively affected by security incidents and systems disruptions. These disruptions or incidents may be caused by cyberattacks and other cyber incidents, network or power outages, software, equipment or telecommunications failures, the unintentional or malicious actions of employees or contractors, natural disasters, fires or other catastrophic events.

Cyberattacks and other cyber incidents are occurring more frequently, the techniques used to gain access to information technology systems and data, disable or degrade service or sabotage systems are constantly evolving and becoming more sophisticated in nature and are being carried out by groups and individuals with a wide range of expertise and motives. Cyberattacks and cyber incidents may be difficult to detect for periods of time and take many forms including cyber extortion, denial of service, social engineering, introduction of viruses or malware (such as ransomware), exploiting vulnerabilities in hardware, software or other infrastructure, hacking, website defacement or theft of passwords and other credentials, unauthorized use of computing resources and business email compromise. Continued geopolitical instability has heightened the risk of cyberattacks.

Like other global companies, our systems are subject to recurring attempts by third parties to access information, manipulate data or disrupt our operations, and we have experienced cyber incidents. If we do not allocate and effectively manage the resources necessary to continue building and maintaining our information technology infrastructure, or if we fail to timely identify or appropriately respond to cyberattacks or other cyber incidents, our business has been and can continue to be adversely affected by, among other things: interruption of our business operations; loss of or damage to intellectual property, proprietary or confidential information, or customer, supplier, or employee data; and increased costs required to prevent, respond to, or mitigate cybersecurity attacks. Similar risks exist with respect to our business partners and third-party providers that we rely upon. We are subject to the risk that the activities associated with our business partners and third-party providers can adversely affect our business even if the attack or breach does not directly impact our systems or information.

Although the cyber incidents that we have experienced to date have not had a material effect on our business, such incidents or disruptions could have a material adverse effect on us in the future. While we believe we devote significant resources to network security, disaster recovery, employee training and other measures to secure our information technology systems and prevent unauthorized access to or loss of data, there can be no guarantee that they will be adequate to safeguard against all cyber incidents, systems disruptions, or misuses of data. In addition, while we currently maintain insurance coverage that is intended to address costs associated with certain aspects of cyber incidents and information systems failures, this insurance coverage may not cover all losses or all types of claims that arise from an incident, or the damage to our reputation or brands that may result from an incident.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Risk Management and Strategy

The Company has processes, policies and procedures for identifying, assessing, managing, and responding to cybersecurity threats and incidents. These are integrated into our overall risk management systems, as overseen by our Board of Directors, primarily through the Audit Committee. Our policies and procedures include protocols for assessing potential material impact from cybersecurity threats and incidents, escalating to executive leadership and the Board of Directors, engaging external stakeholders, and reporting incidents based on applicable legal requirements. Our incident response plan provides guidance in the event of a cybersecurity incident, including processes with assigned roles and responsibilities to triage, contain, assess severity, escalate, investigate, and remediate incidents, as well as to comply with potentially applicable legal obligations and mitigate reputational damage.

We use cybersecurity technologies, products, specialized IT tools and services including cyber threat intelligence and external cyber technology experts to understand, manage, mitigate and continually remediate identified risks. A cybersecurity incident may be detected in a number of ways, including through the following avenues: Security Operations Center (SOC) events, employee reports such as helpdesk incidents, and cybersecurity tool and service stacks (e.g., vulnerability detection, threat intelligence, anti-virus, and malware detection tools). All cybersecurity risks are logged into the Company's cybersecurity risk register where they are tracked for remediation. These cybersecurity risks are discussed with management for resolution planning and escalation. We leverage recognized cybersecurity frameworks to drive strategic direction and maturity improvement and engage third party security experts for risk assessments, risk mitigation actions, vulnerability identification, and program enhancements.

We periodically test our security controls through internal and external penetration testing that covers both corporate and plant IT networks by external specialized vendors, as well as in connection with auditing of our financial systems. We also conduct regular cybersecurity tabletop exercises to test established policies and procedures for responding to cybersecurity threats and incidents. In addition, we conduct an annual independent review of our cybersecurity posture.

Throughout the year, we conduct cybersecurity training and awareness for our employees to help identify, avoid and mitigate cybersecurity threats utilizing various delivery methods such as phishing campaigns, training sessions, and informational bulletins.

We conduct risk assessments of third-party suppliers and service providers including due diligence assessments of third-party suppliers and service providers that have access to the Company's networks, confidential information, and information systems. We provide all third-party vendors, consultants, and partners with detailed security requirements for securing their connections into our IT networks. Third parties service providers are also typically contractually responsible for identifying and remediating security issues within their technology and service environment.

Management has not identified risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, that have materially affected or are reasonably likely to materially affect the Company, including its business strategy, results of operations or financial condition. For more information, see "Item 1A. Risk Factors, *Our operations have been and will continue to be subject to cyber-attacks and other disruptions to our information systems that could have a material adverse impact on our business, consolidated results of operations, and consolidated financial condition*".

Governance

The Board of Directors is responsible for overseeing the assessment and management of enterprise-level risks that may impact the Company. The Audit Committee has primary responsibility for overseeing risk management, including oversight of risks from cybersecurity threats. Management reports on cybersecurity matters, including material risks and threats, to the Audit Committee at regularly scheduled Audit Committee meetings, which is then discussed with the Board of Directors. The reports discuss specific risks and mitigation efforts, including critical and high cyber risks from the risk register, the results of our annual independent review of the Company's cybersecurity posture and other third party assessments and benchmarking information.

It is management's responsibility to manage cybersecurity risks, as described above, and bring to the Board's attention material risks. Under the oversight of the Audit Committee, and as directed by the Company's Chief Executive Officer, the Company's Chief Information Officer (CIO) is primarily responsible for the assessment and management of cybersecurity risks. The CIO, who reports to the Chief Financial Officer, is aided by a third party Chief Information Security Officer with over 40 years of experience, in addition to other external professionals. Management's risk oversight is also accomplished through the Company's Strategic Risk Management Committee and Operating Risk Management Committee, which provides cross-functional support for cybersecurity risk management, as well as the Company's Chief Compliance Officer.

Item 2. Properties

The Company's corporate headquarters, sales offices, research laboratories, plants, mines and other facilities are owned by the Company except as otherwise noted. Set forth below is certain information relating to the Company's principal plants and office and research facilities.

Location	Facility	Product Line	Segment
United States			
Alabama, Sandy Ridge	Plant; Mine	High-Temperature Technologies and Household & Personal Care	All Segments
Alabama, Selma	Satellite Plant	Specialty Additives	Consumer & Specialties
Arizona, Phoenix	Plant	Household & Personal Care	Consumer & Specialties
Arizona, Pima County (1)	Plant; Mine	Specialty Additives	Consumer & Specialties
Arkansas, Ashdown	Satellite Plant	Specialty Additives	Consumer & Specialties
California, Lucerne Valley	Plant; Mine	Specialty Additives	Consumer & Specialties
Connecticut, Canaan	Plant; Mine	Specialty Additives, High-Temperature Technologies	All Segments
Georgia. Cartersville	Plant	Environmental & Infrastructure	Engineered Solutions
Illinois, Belvidere	Plant	High-Temperature Technologies	Engineered Solutions
Illinois, Hoffman Estates (2)	Research Laboratories; Administrative office	All Company Products	All Segments
Indiana, Portage	Plant	High-Temperature Technologies	Engineered Solutions
Indiana, Troy	Plant	High-Temperature Technologies	Engineered Solutions
Iowa, Shell Rock	Plant	High-Temperature Technologies	Engineered Solutions
Kentucky, Wickliffe	Satellite Plant	Specialty Additives	Consumer & Specialties
Louisiana, Baton Rouge	Plant	High-Temperature Technologies	Engineered Solutions
Louisiana, Broussard	Administrative office	Environmental & Infrastructure	Engineered Solutions
Louisiana, Lafayette	Plant	Household & Personal Care	Consumer & Specialties
Louisiana, New Iberia (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Massachusetts, Adams	Plant; Mine	Specialty Additives	Consumer & Specialties
Michigan, Albion	Plant	High-Temperature Technologies	Engineered Solutions
Michigan, Quinnesec	Satellite Plant	Specialty Additives	Consumer & Specialties
Minnesota, Cloquet	Satellite Plant	Specialty Additives	Consumer & Specialties
Minnesota, International Falls	Satellite Plant	Specialty Additives	Consumer & Specialties
Mississippi, Aberdeen	Plant	Specialty Additives and Environmental & Infrastructure	All Segments
Missouri, Ste. Genevieve	Plant	Specialty Additives	Consumer & Specialties
Nebraska, Scottsbluff	Transportation terminal	All Company Products	Engineered Solutions
New York, New York (2)	Headquarters	All Company Products	Headquarters
New York, Ticonderoga	Satellite Plant	Specialty Additives	Consumer & Specialties
North Dakota, Gascoyne	Plant; Mine	High-Temperature Technologies, Environmental & Infrastructure and Household & Personal Care	All Segments
Ohio, Archbold	Plant	High-Temperature Technologies	Engineered Solutions
Ohio, Bryan	Plant	High-Temperature Technologies	Engineered Solutions
Ohio, Chillicothe	Satellite Plant	Specialty Additives	Consumer & Specialties
Ohio, Dover	Plant	High-Temperature Technologies	Engineered Solutions
Pennsylvania, Bethlehem	Administrative Office; Research Laboratories; Sales Offices	All Company Products	All Segments
Pennsylvania, Easton	Administrative Office; Research Laboratories; Plant; Sales Offices	All Company Products	All Segments
Pennsylvania, Slippery Rock	Plant; Sales Offices	High-Temperature Technologies	Engineered Solutions
Pennsylvania, York	Plant	High-Temperature Technologies and Household & Personal Care	All Segments

Location	Facility	Product Line	Segment
South Carolina, Eastover	Satellite Plant	Specialty Additives	Consumer & Specialties
Tennessee, Chattanooga	Plant	High-Temperature Technologies	Engineered Solutions
Tennessee, Dyersburg	Plant	Household & Personal Care	Consumer & Specialties
Texas, Houston (2)	Research Laboratories	Environmental & Infrastructure	Engineered Solutions
Texas, Houston (2)	Administrative Office	Environmental & Infrastructure	Engineered Solutions
Washington, Longview	Satellite Plant	Specialty Additives	Consumer & Specialties
Wisconsin, Neenah	Plant	High-Temperature Technologies	Engineered Solutions
Wisconsin, Superior	Satellite Plant	Specialty Additives	Consumer & Specialties
Wyoming, Colony	Plant; Mine	High-Temperature Technologies, Environmental & Infrastructure and Household & Personal Care	All Segments
Wyoming, Lovell	Plant; Mine	High-Temperature Technologies, Environmental & Infrastructure and Household & Personal Care	All Segments

Location	Facility	Product Line	Segment
International			
Australia, Brisbane	Sales Office/Administrative Office	High-Temperature Technologies and Household & Personal Care	All Segments
Australia, Oak Flats (2)	Sales Office	High-Temperature Technologies	Engineered Solutions
Australia, Gurulmundi	Plant; Mine	High-Temperature Technologies and Household & Personal Care	All Segments
Australia, Perth (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Austria, Pucking	Sales Office/Administrative Office	Household & Personal Care	Consumer & Specialties
Austria, Rottersdorf	Plant	Household & Personal Care	Consumer & Specialties
Belgium, Brussels	Administrative Office	High-Temperature Technologies	Engineered Solutions
Brazil, Guaiba	Satellite Plant	Specialty Additives	Consumer & Specialties
Brazil, Jacarei	Satellite Plant	Specialty Additives	Consumer & Specialties
Brazil, Luiz Antonio	Satellite Plant	Specialty Additives	Consumer & Specialties
Brazil, Macae (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Brazil, Mucuri	Satellite Plant	Specialty Additives	Consumer & Specialties
Brazil, Sao Jose dos Campos	Sales Office /Administrative Office	Specialty Additives	Consumer & Specialties
Brazil, Suzano	Satellite Plant	Specialty Additives	Consumer & Specialties
Canada, Brantford, Ontario	Plant	Household & Personal Care	Consumer & Specialties
Canada, Lethbridge, Alberta	Plant	Household & Personal Care	Consumer & Specialties
Canada, Mississauga, Ontario	Administrative Office	Household & Personal Care	Consumer & Specialties
Canada, Pt. Claire	Administrative Office	Specialty Additives/High-Temperature Technologies	All Segments
Canada, St. Jerome, Quebec	Satellite Plant	Specialty Additives	Consumer & Specialties
Canada, Windsor, Quebec	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Beihai	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Beihai (New Yield) (4)	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Beijing	Sales Office/Administrative Office	High-Temperature Technologies and Household & Personal Care	All Segments
China, Chao Yang, Liaoning	Plant; Mine	High-Temperature Technologies and Household & Personal Care	All Segments
China, Changshu	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Dagang (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Henan	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Rugao	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Shandong	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Shanghai	Administrative Office/Sales Office	Specialty Additives/High-Temperature Technologies	All Segments

Location	Facility	Product Line	Segment
China, Shouguang (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Suzhou	Plant	Environmental & Infrastructure	Engineered Solutions
China, Suzhou	Sales Office/Research Laboratories	Specialty Additives/High-Temperature Technologies	All Segments
China, Taian (4)	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Tianjin	Plant; Mine; Research Laboratories	High-Temperature Technologies and Household & Personal Care	All Segments
China, Yanzhou	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Zhejiang (4)	Satellite Plant	Specialty Additives	Consumer & Specialties
China, Zhumadian	Satellite Plant	Specialty Additives	Consumer & Specialties
Finland, Äänekoski	Satellite Plant	Specialty Additives	Consumer & Specialties
Finland, Tervakoski	Satellite Plant	Specialty Additives	Consumer & Specialties
France, Quimperle	Satellite Plant	Specialty Additives	Consumer & Specialties
France, Saillat Sur Vienne	Satellite Plant	Specialty Additives	Consumer & Specialties
Germany, Duisburg	Plant/Sales Office/Research Laboratories	High-Temperature Technologies	Engineered Solutions
Germany, Schongau	Satellite Plant	Specialty Additives	Consumer & Specialties
Netherlands, Hengelo	Plant/Administrative Office	High-Temperature Technologies	Engineered Solutions
India, Ballarshah (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Chennai	Plant	High-Temperature Technologies	Engineered Solutions
India, Dandeli	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Erode	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Gaganapur (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Kala Amb	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Mukstar	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Mumbai (2)	Sales Office /Administrative Office	Specialty Additives/High-Temperature Technologies	All Segments
India, Lalkuan	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Rajahmundry	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Rayagada (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Saila Khurd	Satellite Plant	Specialty Additives	Consumer & Specialties
India, Sirpur (4)	Satellite Plant	Specialty Additives	Consumer & Specialties
Indonesia, Jakarta (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Indonesia, Perawang (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Indonesia, Perawang 2 (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Ireland, Cork (2)	Plant; Administrative Office/ Research Laboratories	High-Temperature Technologies	Engineered Solutions
Italy, Brescia	Sales Office	High-Temperature Technologies	Engineered Solutions
Italy, Nave	Plant	High-Temperature Technologies	Engineered Solutions
Japan, Gamagori	Plant/Research laboratories	High-Temperature Technologies	Engineered Solutions
Japan, Shiraoi (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Japan, Tokyo	Sales/Administrative Office	High-Temperature Technologies	Engineered Solutions
Malaysia, Kemaman (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Malaysia, Labuan (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
Malaysia, Puchong (2)	Sales Office/Administrative Office	Environmental & Infrastructure	Engineered Solutions
Malaysia, Sipitang	Satellite Plant	Specialty Additives	Consumer & Specialties
Netherlands, Moerdijk	Plant/Administrative Office	Household & Personal Care	Consumer & Specialties
Nigeria, Port Harcourt (2)	Operations base	Environmental & Infrastructure	Engineered Solutions

Location	Facility	Product Line	Segment
Poland, Kwidzyn	Satellite Plant	Specialty Additives	Consumer & Specialties
Poland, Szczytno	Plant	Environmental & Infrastructure	Engineered Solutions
Portugal, Figueira da Foz (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Slovakia, Bratislava	Administrative Office; Mine	Household & Personal Care	Consumer & Specialties
Slovakia, Kopernica	Plant	Household & Personal Care	Consumer & Specialties
Slovakia, Ruzomberok	Satellite Plant	Specialty Additives	Consumer & Specialties
South Africa, Johannesburg (2)	Sales Office/Administrative Office	High-Temperature Technologies and Specialty Additives	All Segments
South Africa, Merebank (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
South Africa, Pietermaritzburg	Plant	High-Temperature Technologies	Engineered Solutions
South Korea, Yangbuk-Myeun, Kyeung-buk	Plant	High-Temperature Technologies and Household & Personal Care	All Segments
Spain, Santander	Administrative Office	High-Temperature Technologies	Engineered Solutions
Thailand, Laemchabang	Plant	High-Temperature Technologies and Household & Personal Care	All Segments
Thailand, Namphong	Satellite Plant	Specialty Additives	Consumer & Specialties
Thailand, Tha Toom (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Thailand, Tha Toom 2 (3)	Satellite Plant	Specialty Additives	Consumer & Specialties
Thailand, Wangnoi	Plant	Household & Personal Care	Consumer & Specialties
Turkey, Enez	Plant; Mine	High-Temperature Technologies, Environmental & Infrastructure and Household & Personal Care	All Segments
Turkey, Gebze	Plant/Research Laboratories	High-Temperature Technologies	Engineered Solutions
Turkey, Istanbul	Sales Office/Administrative Office	High-Temperature Technologies and Household & Personal Care	All Segments
Turkey, Kutahya	Plant	High-Temperature Technologies	Engineered Solutions
Turkey, Unye	Plant; Mine	Household & Personal Care	Consumer & Specialties
Turkey, Usak	Plant; Mine	Household & Personal Care	Consumer & Specialties
United Kingdom, Aberdeen (2)	Operations base	Environmental & Infrastructure	Engineered Solutions
United Kingdom, Birkenhead (2)	Research Laboratories	Environmental & Infrastructure	Engineered Solutions
United Kingdom, Lifford	Plant	Specialty Additives	Consumer & Specialties
United Kingdom, Rotherham	Plant/Sales Office	High-Temperature Technologies	Engineered Solutions
United Kingdom, Winsford	Plant/Research Laboratories	Household & Personal Care and High-Temperature Technologies	All Segments

(1) This plant and quarry is leased to another company.
(2) Leased by the Company. The facilities in Cork, Ireland, are operated pursuant to a 99-year lease, the term of which commenced in 1963. The Company's headquarters in New York, New York, are held under a lease which expires in 2031.
(3) These plants are owned through joint ventures.
(4) These plants are under construction.

Mining Properties

Information concerning our mining properties in this Annual Report on Form 10-K is disclosed in accordance with the requirements of subpart 1300 of Regulation S-K.

The Company relies on access to bentonite reserves to support our businesses. The Company has reserves of sodium and calcium bentonite at various locations in the U.S., including Wyoming, Montana, South Dakota, Nevada and Alabama, as well as in Australia, China, Slovakia and Turkey. Through the Company's affiliations and joint ventures, the Company also has access to bentonite deposits in India and Mexico. The Company owns or controls the properties on which the bentonite reserves are located through long-term leases, royalty agreements (including easement and right of way agreements) and patented and unpatented mining claims. No single or group of mining claims or leases is significant or material to the financial condition or operations of our Company or our segments. The majority of our current bentonite mining in the U.S. occurs on reserves where our rights to such reserves accrue to us through over 80 mining leases and royalty agreements and 2,000 mining claims. A majority of these are with private parties and located in South Dakota, Montana and Wyoming. The bentonite deposits underlying these claims and leases generally lie in parcels of land varying between 20 and 40 acres.

In general, our bentonite reserves are immediately adjacent to, or within sixty miles of, one of the related processing plants. All of the properties on which our reserves are located are either physically accessible for the purposes of mining and hauling or the cost of obtaining physical access would not be material. Access to processing facilities from the mining areas is generally by private road, public highways, or railroads. For most of our leased properties and mining claims, there are multiple means of access.

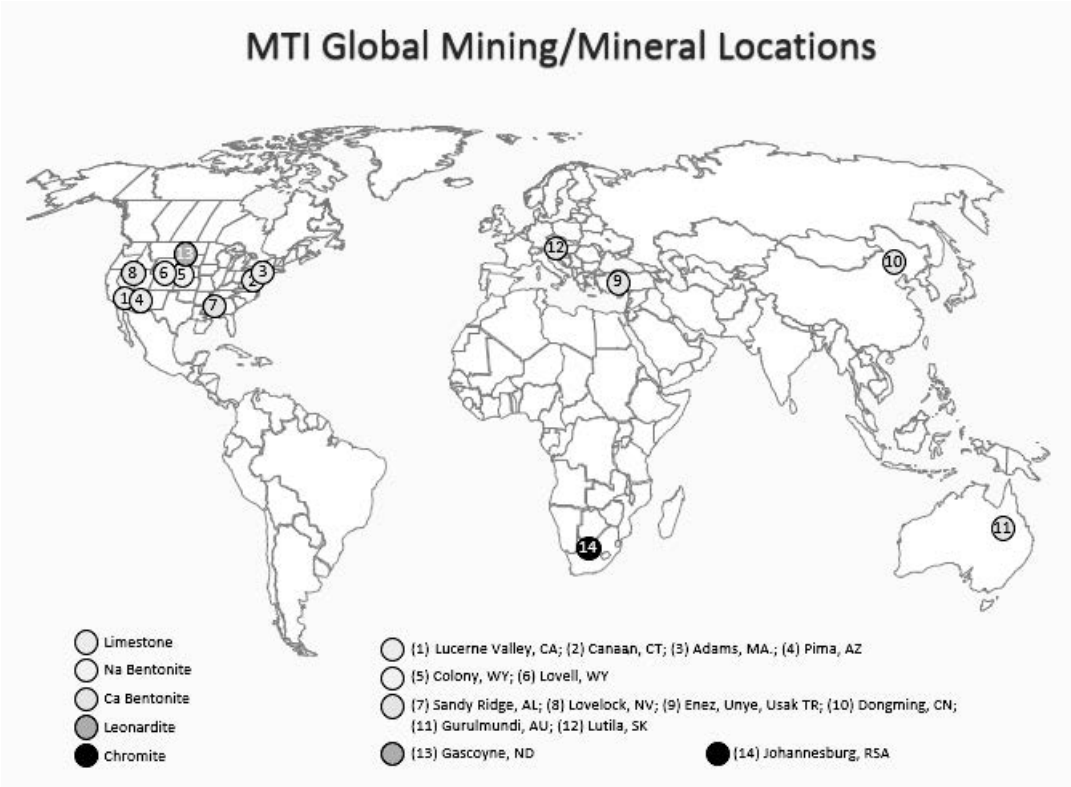
Bentonite is surface mined, generally with large earthmoving bulldozers and scrapers, and then loaded into trucks and off-highway-haul wagons for movement to processing plants. The mining and hauling of our bentonite is done by us and by independent contractors. At the processing plants, bentonite is dried, crushed and sent through grinding mills, where it is sized to customer requirements, then chemically modified, where needed, and transferred to silos for automatic bagging or bulk shipment. Most of the production is shipped as processed rather than stored for inventory.

We also mine leonardite, a form of oxidized lignite, in North Dakota, and transport it to nearby processing facilities.

The Company's Consumer & Specialties segment is supported by the Company's limestone reserves located in the western and eastern parts of the United States. The Company generally owns and surface mines these reserves and processes its products at nearby processing plants.

The Company also owns mineral deposits that it is not currently mining, including deposits of bentonite in Nevada and chromite in South Africa, and leases its limestone mine in Pima, Arizona to a third party.

Below is a map of our significant mines globally.



Based upon the quantitative and qualitative factors applicable, we do not consider any of our mines to be individually material to the Company's business or financial condition. The following provides an overview of the Company's most significant mining properties and operations.

Colony, Wyoming Mines

The Company's Colony, WY mining operations are located in the northern Black Hills in the tri-State area of South Dakota, Wyoming, and Montana, with processing facilities located in Colony, WY and Belle Fourche, SD.

The local processing facilities are supported by bentonite clay supplied from 53 million tons of proven and probable reserves, comprised of leases (71%), unpatented claims (22%), and owned properties (7%). The area operates under 12 mining permits covering approximately 100,000 acres, with active mining and future mineral reserves located within 35 miles of the Colony processing facilities.

The Black Hills are a northward-trending anticlinal uplift approximately 200 miles long and flank the Powder River Basin to the west and southwest, and the Williston Basin to the northeast. The bentonite clay in the Black Hills area is predominantly of the sodium type and was formed by the in-situ alteration of rhyolite volcanic ash.

Bentonite mining consists of shallow surface mining for bentonite beds located in the Mitten Black Shale, Gammon Ferruginous, Belle Fourche Shale, Green Horn Formations, Mowry, and Newcastle shales and sandstones. A back-cast method of mining is used whereby small pits are progressively opened and then quickly backfilled in succession as mining progresses along outcrops. The majority of pits are reclaimed in the same year that they were first disturbed.

Annual exploration and permitting activities target the replacement of the number of tons mined to support the long-term sustainability of local operations.

The Colony area mines are supported by 2 main processing plants located in Colony, WY. These plants produce both powder and granular products. A wet-processing facility is located near Belle Fourche, SD. All three facilities have direct access to rail.

Lovell, Wyoming Mines

The Company's Lovell, WY mining operations are located in the Bighorn Basin near Lovell, WY with processing facilities located 3 miles East of the town of Lovell. One facility produces powder and granular bentonite products; the other facility produces geosynthetic clay liners and other environmental products. Both facilities have direct access to rail.

The Lovell processing facility is supported by bentonite clay supplied from 34 million tons of proven and probable reserves, comprised of leases (12%), unpatented claims (44%), and owned properties (44%). The area operates under 2 mining permits covering ~30,000 acres, with active mining and future mineral reserves located within 30 miles of the Lovell processing facilities.

The Bighorn Basin is a large sedimentary basin in northwestern Wyoming. It is Laramide in age and trends northwest-southeast. The bentonite clay in the Bighorn Basin is predominantly of the sodium type. Mining occurs from 19 different bentonite beds occurring in 3 geologic formations – the Thermopolis shale, the Mowry shale, and the Frontier shale which were deposited during the Upper Cretaceous Period between 70 to 100 million years ago. A back-cast method of mining is used whereby small pits are progressively opened and then quickly backfilled in succession as mining progresses along outcrops. Most pits are reclaimed in the same year that they were first disturbed.

Annual exploration and permitting activities target the replacement of the number of tons mined to support the long-term sustainability of local operations.

Ünye, Turkey Mines

The Company's Unye-area mines, Nadirli and Konan, are located southwest of the town of Unye, Turkey on the southern coast of the Black Sea. These mines are operated by the Company via contract mining and hauling. Both mines use conventional open-pit truck & shovel mining methods. The properties are comprised of both government-issued mining claims and privately-owned lands. The orebodies were produced by hydrothermal alteration and generally occur as massive deposits greater than 10 meters in thickness. The bentonite ore is notable for its high brightness.

Ore from the mines is transported by truck to a processing facility in the town of Unye where it is stockpiled, dried, and converted to granular products.

Dongming, China Mines

The Company's Dongming mines and processing facilities are located in Jianping county, Liaoning province, China. The regional bentonite occurs within the Jurassic Jingangshan and Tuhulu formations which were deposited during the Upper Jurassic Period between 135 to 144 million years ago. The thickness of the bentonite layers varies from 0.5 to 40m. The bentonite clay in the region is predominantly of the calcium type and is converted to sodium bentonite to produce the majority of products.

The Dongming mines consist of 16 small mining areas under 4 mining permits covering approximately 1,200 acres controlled by the Company. Rights to the bentonite are leased from the Chinese government and separate agreements are made with land owners for surface access and mining. Much of the bentonite supplied to the Dongming processing facility is from 3rd-party mines, with Company-controlled mines used to supplement supply and as strategic backup reserves. In most cases, supply from 3rd-party mines is directly supervised by local Company staff which assists with grading and quality control.

All mines are operated by contractors with conventional open-pit truck & shovel mining methods. Clay from the mines is hauled by trucks to the Company's processing facility. The primary processing facility is located approximately 50 miles west of Chaoyang, Liaoning Province near the Dongming mines.

Adams, Massachusetts Mine

The Company's Adams mine and the associated processing facility is located in the town of Adams, in the Northwest corner of Massachusetts. The property consists of approximately 800 total acres, including the land on which the production facilities sit. Production of lime began on the site back in the 1850s and continues today with GCC, Lime and PCC. The open-pit mine consists mainly of a mineral deposit of limestone (marble). The deposit is part of the Shelburne geological formation, which runs up and down the eastern coast of the United States.

The mined material is finely pulverized at the processing facility using a variety of crushing and milling equipment and sold as ground products, calcined into lime and is also synthesized into participated crystals or PCC. The resulting calcium and calcium carbonate products are primarily used as food and pharmaceutical ingredients, sealant additives, high-end construction ingredients, as well as asphalt roofing shingles.

The deposit is wholly owned by the Company.

With over 150 years of mining on site by the Company and its predecessors, the resources are well understood. A mine plan has been developed based on the prior mining activities and a core drilling program was completed in 2019. The reserves and resources are the product of this recent life-of-mine study.

Canaan, Connecticut Mine

The Canaan mine and the associated processing facility are located in the town of North Canaan, Connecticut and consists of approximately 208 total acres. The mine is situated between Canaan Mountain to the South and Lower Road to the North. The mine is located approximately 1.0 miles south of the main processing facility.

The open-pit mine consists mainly of dolomitic limestone. The mined dolomite is finely pulverized at the processing facility using a variety of crushing and milling equipment. The resulting Ground Calcium Carbonate (GCC) is primarily used by high-end, high-volume construction markets in joint compound, floor coverings, asphalt roofing shingles and glass.

Lucerne Valley, California Mines

The Company's Lucerne Valley operation consists of three high-purity, calcium carbonate surface mining leases, a processing and packaging facility, and supporting infrastructure within 7,347 acres in the town of Lucerne Valley in San Bernardino County, California.

Calcium carbonate mining onsite stretches back to the early 1950's. The Marble Canyon and Arctic Canyon Leases are both still active, with Marble Canyon at a minimal rate of production. Furnace Canyon is in an advanced stage of reclamation. All mineral rights are owned by the Company.

Operating Statistics

The following table sets forth the tons usage for the fiscal years 2024, 2023 and 2022 by major mineral category.

	2024 Tons (000s)	2023 Tons (000s)	2022 Tons (000s)
Limestone			
Adams, MA	298	401	315
Canaan, CT	674	641	562
Lucerne Valley, CA	1,262	1,267	1,202
Pima County, AZ	101	101	114
Total Limestone	2,335	2,410	2,193
Sodium Bentonite			
Australia	61	39	69
Belle/Colony, WY/SD	1,540	1,253	1,109
Lovell, WY	760	681	629
Total Sodium Bentonite	2,361	1,973	1,807
Calcium Bentonite			
Chao Yang, Liaoning, China	461	278	267
Nevada	1	1	1
Sandy Ridge, AL	104	96	98
Slovakia, Lutila	74	65	52
Turkey, Enez	188	168	172
Turkey, Usak	70	60	62
Turkey, Unye	386	368	331
Total Calcium Bentonite	1,284	1,036	983
Leonardite			
Gascoyne, ND	41	75	31
GRAND TOTALS (1)	6,021	5,494	5,014

(1) The Company also has mined, beneficiated and processed talc through its BMI Oldco Inc. (f/k/a Barretts Minerals Inc.) ("Oldco") subsidiary in prior years. In the fourth quarter of 2023, Oldco filed a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code, and Oldco was deconsolidated from our consolidated financial statements. See Note 17 to the consolidated financial statements.

Proven and Probable Reserves

The following table sets forth the Company's proven and probable reserves, as well as, the conversion factor for the conversion of in-situ materials to saleable products by major minerals category at December 31, 2024.

	Proven Reserves (1)(2) Tons (000s)	Probable Reserves (1)(2) Tons (000s)	Conversion Factor (%)	Proven and Probable Reserves (1)(2) Tons (000s)		
				Owned	Unpatented (3)	Leased
Limestone						
Adams, MA	6,483	913	56%	7,396	—	—
Canaan, CT	14,287	4,288	97%	18,575	—	—
Lucerne Valley, CA	26,420	7,399	95%	33,819	—	—
Pima County, AZ	6,327	—	90%	—	6,327	—
Total Limestone	53,517	12,600		59,790	6,327	—
				90%	10%	0%
Sodium Bentonite						
Australia	—	952	80%	—	—	952
Belle/Colony, WY/SD	28,856	24,369	77%	3,399	11,869	37,957
Lovell, WY	29,968	4,217	87%	14,988	15,023	4,174
Other SD, WY, MT	43,117	29,714	77%	54,815	15,048	2,968
Total Sodium Bentonite	101,941	59,252		73,202	41,940	46,051
				45%	26%	29%
Calcium Bentonite						
Chao Yang, Liaoning, China	140	379	78%	—	—	519
Nevada	—	1,054	75%	1,010	44	—
Sandy Ridge, AL	4,292	2,009	75%	1,839	—	4,462
Slovakia, Lutila	947	1,702	84%	—	—	2,649
Turkey, Enez	581	1,745	78%	—	—	2,326
Turkey, Usak	801	962	43%	—	—	1,763
Turkey, Unye	—	4,843	80%	—	—	4,843
Total Calcium Bentonite	6,761	12,694		2,849	44	16,562
				15%	—	85%
Leonardite						
Gascoyne, ND	158	2,158	67%	—	2,158	158
				0%	93%	7%
Chromite						
South Africa	2,113	1,001	75%	—	—	3,114
				0%	0%	100%
GRAND TOTALS	164,490	87,705		135,841	50,469	65,885
				54%	20%	26%

(1) Certain definitions:
The term "mineral reserve" represents an estimate of tonnage and grade or quality of indicated and measured mineral resources that can be the basis of an economically viable project.
The term "proven mineral reserve" represents the economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource.
The term "probable mineral reserve" represents the economically mineable part of an indicated and, in some cases a measured mineral resource.
(2) Mineral reserves estimates were calculated and prepared by the Company's in-house technical staff.
(3) Quantity of reserves that would be owned if patent was granted.

Measured, Indicated and Inferred Resources

The following table sets forth the Company's measured, indicated and inferred resources by major minerals category at December 31, 2024.

	Measured Resources (1)(2) Tons (000s)	Indicated Resources (1)(2) Tons (000s)	Measured and Indicated (1)(2) Resources Tons (000s)	Inferred (1)(2) Resources Tons (000s)	Total Resources (1)(2) Tons (000s)		
					Owned	Unpatented (3)	Leased
Limestone							
Adams, MA	24,416	1,350	25,766	14,649	40,415	—	—
Canaan, CT	15,503	21,063	36,566	3,798	40,364	—	—
Lucerne Valley, CA	24,825	22,373	47,198	8,394	55,592	—	—
Pima County, AZ	7,142	—	7,142	—	—	7,142	—
Total Limestone	71,886	44,786	116,672	26,841	136,371	7,142	—
					95%	5%	0%
Sodium Bentonite							
Australia	—	1,220	1,220	—	—	—	1,220
Belle/Colony, WY/SD	9,407	6,902	16,309	94	556	8,137	7,710
Lovell, WY	410	57	467	2,952	1,075	2,217	127
Other SD, WY, MT	4,612	—	4,612	11,030	—	15,642	—
Total Sodium Bentonite	14,429	8,179	22,608	14,076	1,631	25,996	9,057
					4%	71%	25%
Calcium Bentonite							
Chao Yang, Liaoning, China	—	200	200	345	—	—	545
Nevada	—	—	—	—	—	—	—
Sandy Ridge, AL	195	—	195	—	—	—	195
Slovakia, Lutila	—	4,113	4,113	1,892	—	—	6,005
Turkey, Enez	350	—	350	1,192	—	—	1,542
Turkey, Usak	580	229	809	2,749	—	—	3,558
Turkey, Unye	—	1,320	1,320	21,000	—	—	22,320
Total Calcium Bentonite	1,125	5,862	6,987	27,178	—	—	34,165
					0%	0%	100%
Leonardite							
Gascoyne, ND	1,435	—	1,435	790	—	—	2,225
					0%	0%	100%
Chromite							
South Africa	800	584	1,384	7,093	—	—	8,477
					0%	0%	100%
Other							
Nevada	—	2,997	2,997	3,031	—	6,028	—
					0%	100%	0%
GRAND TOTALS	89,675	62,408	152,083	79,009	138,002	39,166	53,924
					60%	17%	23%

(1) Certain definitions:
The term "mineral resource" indicates a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction.
The term "measured resource" indicates a mineral resource for which quantity and grade or quality are estimated based on conclusive geological evidence and sampling.
The term "indicated resource" indicates a mineral resource for which quantity and grade or quality are estimated based on adequate geological evidence and sampling.
The term "inferred resource" indicates a mineral resource for which quantity and grade or quality are estimated based on limited geological evidence and sampling.
(2) Mineral resources estimates were calculated and prepared by the Company's in-house technical staff.
(3) Quantity of resources that would be owned if patent was granted.

The estimates of total reserves and resources noted in the tables above require the Company to make certain key assumptions. These assumptions relate to consistency of deposits in relation to drilling samples obtained with respect to both quantity and quality of reserves contained therein; the ratio of overburden to mineral deposits; any environmental or social impact of mining the minerals; and profitability of extracting those minerals, including haul distance to processing plants, applicability of minerals to various end markets and selling prices within those markets, and our past experiences in the deposits, several of which we have been operating in for many decades.

The Company maintains a Mining Lead Team that develops standards and systems to ensure Company-wide use of best practices for mining and exploration. The Mining Lead Team ensures that the Company maintains robust controls over its exploration and resource and reserve estimation efforts. In particular, because the Company has a long history of operations at its mining operations, the Company is able to continuously validate its resource and reserve estimates by reference to actual production from each mine. During the process from exploration to final production, ore is tested a minimum of 3 times beginning with exploration drilling, again after overburden removal and finally on finished products after plant processing. In some cases when blending ore grades, an additional step of testing occurs on stockpiles after hauling from the mine but before plant processing. The quantities, qualities, and costs of grades obtained from mining and processing are reconciled to quantities, qualities, and costs from reserve estimates and mine models. To enable additional verification of reserves if needed, all exploration samples are retained until areas are mined out and reclaimed.

The Company believes that its facilities, which are of varying ages and are of different construction types, have been satisfactorily maintained, are in good condition, are suitable for the Company's operations and generally provide sufficient capacity to meet the Company's production requirements. Based on past loss experience, the Company believes it is adequately insured with respect to these assets and for liabilities likely to arise from its operations.

The Company holds numerous environmental and mineral extraction permits, water rights and other permits, licenses and approvals from governmental authorities authorizing operations at each of our mines. Permits, licenses and approvals are obtained as needed in the normal course of business based on our mine plans and applicable regulatory provisions regarding mine permitting and licensing. Based on our historical permitting experience, we expect to be able to continue to obtain necessary mining permits and approvals to support historical rates of production.

Assuming the continuation of 2024 annualized usage rates, the Company has reserves of commercially usable sodium bentonite in excess of 50 years, commercially usable calcium bentonite for the next 15 years and commercially usable leonardite for more than 50 years. At current usage levels, the Company has reserves in excess of 28 years at its limestone production facilities.

The Company has ongoing exploration and development activities for all of its mineral interests with the intent to increase its proven and probable reserves.

Item 3. Legal Proceedings

From time to time, the Company and its subsidiaries are the subject of various legal actions and claims arising in the ordinary course of their businesses. The most significant litigation facing the Company is the asbestos-related Chapter 11 cases of BMI Oldco Inc. (f/k/a Barretts Minerals Inc.) and Barretts Ventures Texas LLC. Additional information regarding legal proceedings is disclosed in Note 17 to the consolidated financial statements included elsewhere in this report, which disclosure is incorporated herein by reference.

Item 4. Mine Safety Disclosures

The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95 to this Annual Report on Form 10-K.

Information About Our Executive Officers

Set forth below are the names and ages of all Executive Officers of the Registrant indicating all positions and offices with the Registrant held by each such person, and each such person's principal occupations or employment during the past five years.

Name	Age	Position
Douglas T. Dietrich	55	Chairman of the Board and Chief Executive Officer
Erik C. Aldag	40	Senior Vice President, Finance and Treasury, and Chief Financial Officer
Brett Argirakis	60	Group President, Engineered Solutions
Michael A. Cipolla	67	Vice President, Corporate Controller and Chief Accounting Officer
Erin N. Cutler	37	Vice President, Human Resources
Jonathan J. Hastings	62	Senior Vice President, Strategy and M&A
Timothy J. Jordan	50	Vice President, General Counsel, Secretary and Chief Compliance Officer
D.J. Monagle, III	62	Group President, Consumer & Specialties

Douglas T. Dietrich was elected Chairman of the Board in March 2021. He has served as the Chief Executive Officer since December 2016. He joined the Company in August 2007 as Vice President, Corporate Development and Treasury, and was appointed Senior Vice President, Finance and Treasury, Chief Financial Officer effective January 2011. Prior to joining the Company, Mr. Dietrich was Vice President, Alcoa Wheel Products since 2006 and President, Alcoa Latin America Extrusions and Global Rod and Bar Products since 2002.

Erik C. Aldag was named Senior Vice President, Finance and Treasury, and Chief Financial Officer effective November 2022. Mr. Aldag joined the Company in 2017 as Director of Financial Analysis and Planning and assumed the role of Investor Relations in 2020. Mr. Aldag has led finance teams in the U.S. and internationally in companies serving both consumer and industrial markets, as Finance Director of The Chia Co., and in various positions at Alcoa Inc.

Brett Argirakis was named Group President, Engineered Solutions in January 2023. Prior to that he was Senior Vice President and Managing Director, Minteq International Inc. and MTI Global Supply Chain effective December 2020, and Vice President and Managing Director, Minteq International effective in 2016 with additional responsibility for MTI Global Supply Chain given in October 2019. Mr. Argirakis joined the Company in 1987 and has held positions of increasing responsibility. Prior to his current position, he was Global Vice President & General Manager, Refractories effective August 2009. Prior to that, he served as Director, Marketing, Minteq Europe and as Director of Sales and Field Operations for Minteq U.S.

Michael A. Cipolla was named Vice President, Corporate Controller and Chief Accounting Officer in July 2003. Prior to that, he served as Corporate Controller and Chief Accounting Officer of the Company since 1998. From 1992 to 1998 he served as Assistant Corporate Controller of the Company.

Erin N. Cutler was named Vice President, Human Resources effective August 2020. Prior to that, she was Director, Talent Management, where she led major human resources initiatives including enhancing talent management and succession practices, strengthening talent acquisition efforts, and building talent development programs through the creation and deployment of internship and mentorship programs. Prior to joining the Company in July 2015, she was employed by Pratt Industries where she held multiple human resource positions of increasing responsibility.

Jonathan J. Hastings was named Senior Vice President, Strategy and M&A in January 2023. Prior to that, he was Group President, Performance Materials effective June 2018. He joined the Company in September 2011 as Vice President, Corporate Development, and was appointed Senior Vice President, Corporate Development effective April 2013. Prior to joining the Company, he was Senior Director of Strategy and New Business Development – Coatings, Global at The Dow Chemical Company. Prior to that he held positions of increasing responsibility at Rohm and Haas, including Vice President & General Manager – Packaging and Building Materials – Europe.

Timothy J. Jordan was named Vice President, General Counsel, Secretary and Chief Compliance Officer effective January 2023. He joined the Company in 2008 managing all legal aspects of the organization and providing legal support to all corporate functions, as well as, commercial, environmental/regulatory and supply chain activities. Mr. Jordan possesses global expertise in designing, negotiating and implementing complex packages inclusive of joint venture, long-term manufacturing/supply, sourcing, construction, real estate and technology licensing agreements. Prior to his tenure at the Company, Mr. Jordan specialized in cross-border transactions as an antitrust/M&A specialist for law firms in the EMEA region.

D.J. Monagle III was named Group President, Consumer & Specialties in January 2023. Prior to that he was Group President, Specialty Minerals and Refractories effective March 2017 and Senior Vice President, Chief Operating Officer – Specialty Minerals Inc. and Minteq Group, effective February 2014. He joined the Company in January of 2003 and held positions of increasing responsibility including Senior Vice President and Managing Director, Paper PCC; Vice President and Managing Director - Performance Minerals; Vice President, Americas, Paper PCC; and Global Marketing Director, Paper PCC. Before joining the Company, Mr. Monagle worked for the Paper Technology Group at Hercules between 1990 and 2003, where he held sales and marketing positions of increasing responsibility. Between 1985 and 1990, he served as an aviation officer in the U.S. Army's 11th Armored Cavalry Regiment, leaving the service as a troop commander with a rank of Captain.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

The Company's common stock is traded on the New York Stock Exchange under the symbol "MTX".

Holders

On February 7, 2025 there were approximately 186 holders of record of the common stock.

Issuer Purchases of Equity Securities

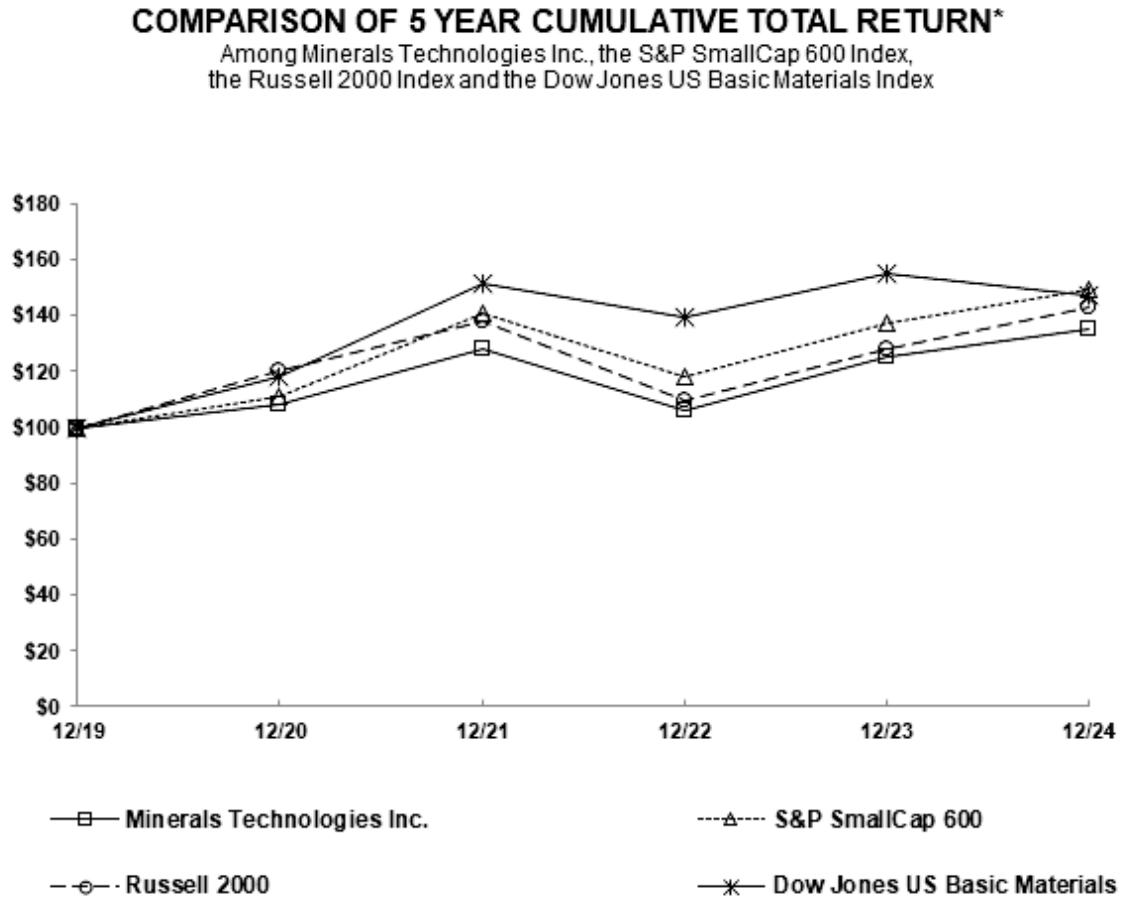
	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of the Publicly Announced Program	Dollar Value of Shares that May Yet be Purchased Under the Program
September 30 - October 27	44,182	$ 76.49	1,034,692	$ 4,233
Total	44,182	$ 76.49		
October 28 - November 24	—	$ —	—	$ 200,000,000
November 25 - December 31	34,934	$ 79.27	34,934	$ 197,230,926
Total	34,934	$ 79.27		

On October 18, 2023, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to $75 million of the Company's shares over a one-year period. Over this program's one-year period, 1,034,692 shares have been repurchased for $75 million, or an average price of approximately $72.48 per share. This program is now complete.

On October 16, 2024, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to $200 million of the Company's shares. As of December 31, 2024, 34,934 shares have been repurchased under this program for $2.8 million, or an average price of approximately $79.27 per share. This authorization has no expiration date.

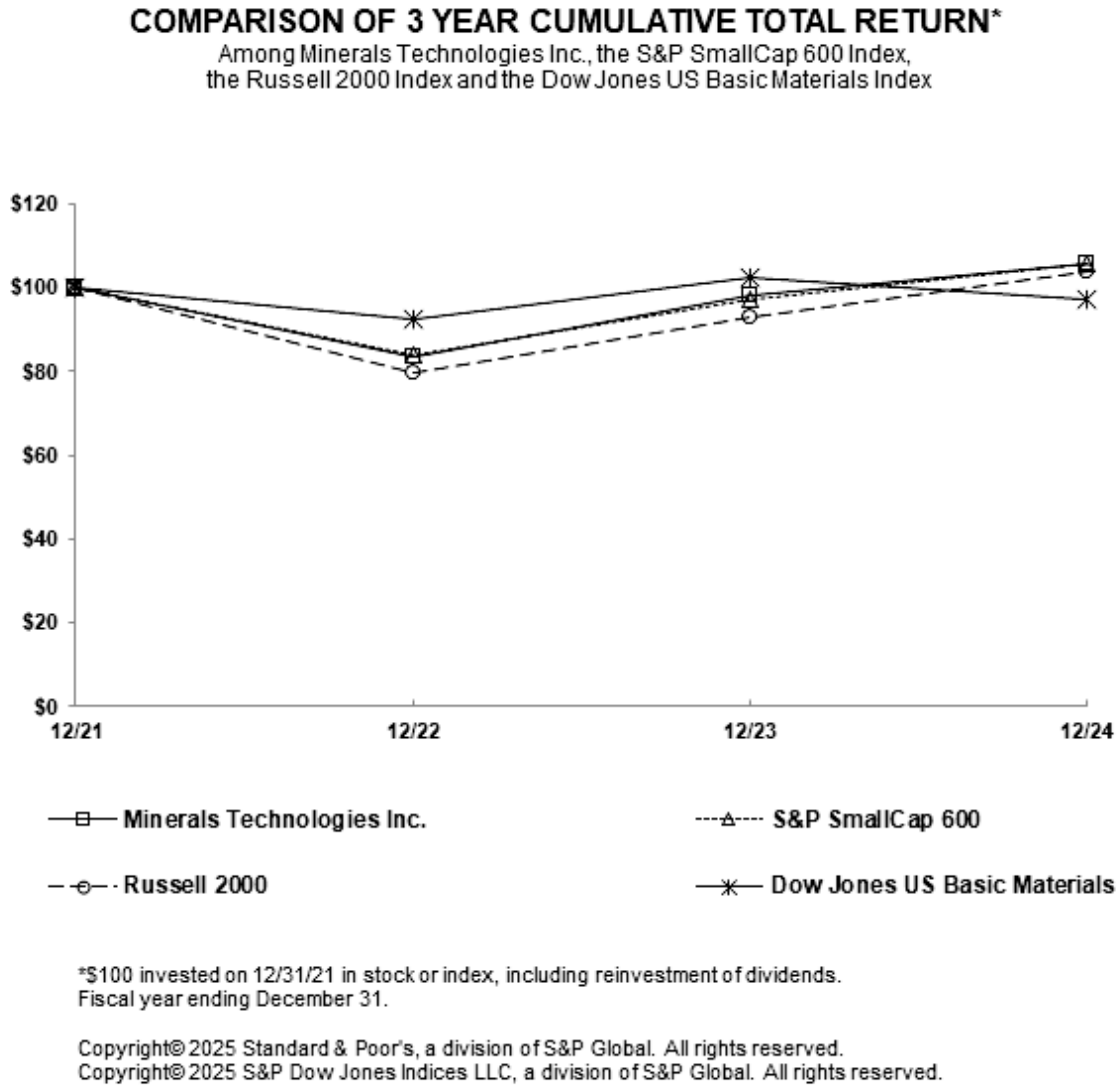
Performance Graph

The graph below compares Minerals Technologies Inc.'s cumulative 5-year total shareholder return on common stock with the cumulative total returns of the S&P SmallCap 600 index, the Russell 2000 index and the Dow Jones US Basic Materials index. The graph tracks the performance of a $100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2019 to 12/31/2024.



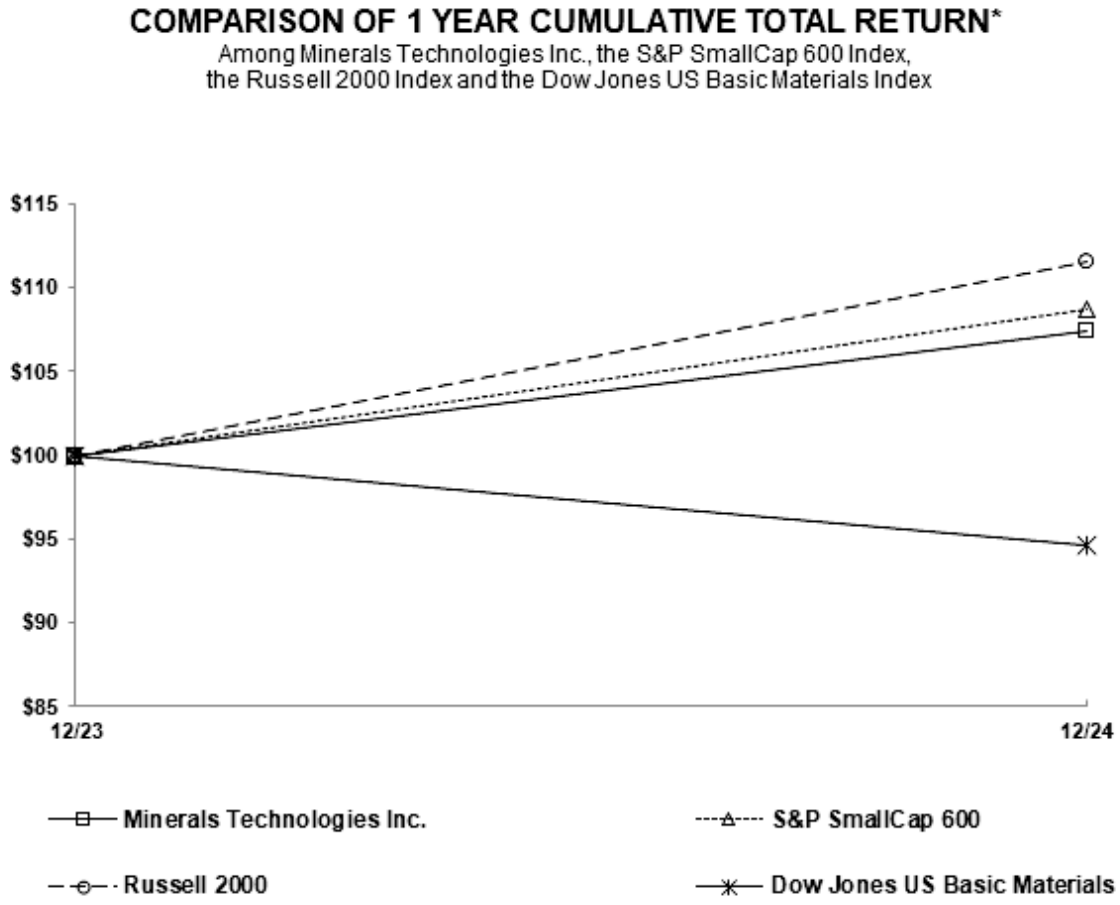
	2019	2020	2021	2022	2023	2024
Minerals Technologies Inc.	$ 100.00	$ 108.19	$ 127.74	$ 106.37	$ 125.47	$ 134.81
S&P SmallCap 600	100.00	111.29	141.13	118.41	137.42	149.37
Russell 2000	100.00	119.96	137.74	109.59	128.14	142.93
Dow Jones US Basic Materials	100.00	118.32	151.20	139.75	155.14	146.90

The graph below compares Minerals Technologies Inc.'s cumulative 3-year total shareholder return on common stock with the cumulative total returns of the S&P SmallCap 600 index, the Russell 2000 index and the Dow Jones US Basic Materials index. The graph tracks the performance of a $100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2021 to 12/31/2024.



	2021	2022	2023	2024
Minerals Technologies Inc.	$ 100.00	$ 83.27	$ 98.22	$ 105.54
S&P SmallCap 600	100.00	83.90	97.37	105.84
Russell 2000	100.00	79.56	93.03	103.77
Dow Jones US Basic Materials	100.00	92.43	102.61	97.16

The graph below compares Minerals Technologies Inc.'s cumulative 1-year total shareholder return on common stock with the cumulative total returns of the S&P SmallCap 600 index, the Russell 2000 index and the Dow Jones US Basic Materials index. The graph tracks the performance of a $100 investment in our common stock and in each index (with the reinvestment of all dividends) from 12/31/2023 to 12/31/2024.



*$100 invested on 12/31/23 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

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	2023	2024
Minerals Technologies Inc.	$ 100.00	$ 107.45
S&P SmallCap 600	100.00	108.70
Russell 2000	100.00	111.54
Dow Jones US Basic Materials	100.00	94.69

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Cautionary Statement for "Safe Harbor" Purposes under the Private Securities Litigation Reform Act of 1995

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of the Company. This report contains statements that the Company believes may be "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, particularly statements relating to the Company's objectives, plans or goals, future actions, future performance or results of current and anticipated products, sales efforts, expenditures, and financial results. From time to time, the Company also provides forward-looking statements in other publicly-released materials, both written and oral. Forward-looking statements provide current expectations and forecasts of future events such as new products, revenues and financial performance, and are not limited to describing historical or current facts. They can be identified by the use of words such as "outlook," "forecast," "believes," "expects," "plans," "intends," "anticipates," and other words and phrases of similar meaning.

Forward-looking statements are necessarily based on assumptions, estimates and limited information available at the time they are made. A broad variety of risks and uncertainties, both known and unknown, as well as the inaccuracy of assumptions and estimates, can affect the realization of the expectations or forecasts in these statements. Many of these risks and uncertainties are difficult to predict or are beyond the Company's control. Consequently, no forward-looking statements can be guaranteed. Actual future results may vary materially. Significant factors affecting the expectations and forecasts are set forth under "Item 1A — Risk Factors" in this Annual Report on Form 10-K.

The Company undertakes no obligation to update any forward-looking statements to reflect events or circumstances that arise after the date hereof. Investors should refer to the Company's subsequent filings under the Securities Exchange Act of 1934 for further disclosures.

Executive Summary

Worldwide sales decreased 2% in 2024 to $2.119 billion as compared with $2.170 billion in 2023. Consolidated income from operations was $286.5 million, as compared with $171.8 million in the prior year. Included in income from operations for 2024 was $11.3 million of litigation expenses incurred in connection with the bankruptcy of the Company's subsidiaries, BMI Oldco Inc. (f/k/a Barretts Minerals Inc.) ("Oldco") and Barretts Ventures Texas LLC ("BVT" and together with Oldco, the "Chapter 11 Debtors"). In addition, in 2024, the Company entered into a Debtor-in-Possession Credit Agreement with Oldco (the "DIP Credit Agreement") which resulted in a $30.0 million provision for credit loss charge. The Company also recorded a $12.3 million net gain on the sale of assets relating to a facility in the Engineered Solutions segment in 2024. Included in income from operations in 2023 was a $71.7 million non-cash impairment charge for Oldco's fixed assets and $29.2 million of litigation expenses in connection with Oldco's bankruptcy filing and by Oldco to defend against and restore its reserve for claims associated with certain talc products. In addition, the Company recorded $6.9 million of restructuring charges in 2023. Net income was $167.1 million in 2024, as compared to $84.1 million in the prior year. The Company reported diluted earnings of $5.17 per share in 2024 as compared with $2.58 per share in the prior year.

The Company refinanced its senior secured revolving credit facility and term loan in the fourth quarter of 2024, increasing the aggregate commitments under the revolving credit facility to $400 million and extending out maturities to 2029 for the revolving credit facility and 2031 for the term loan. In connection with the refinancing, the Company incurred $1.8 million of debt extinguishment expenses.

In 2024, the Company continued to deliver on its strategic growth initiatives driven by multi-year advancements in new product development, positioning in growth markets and geographies, geographic penetration and growth from acquisitions.

Our balance sheet continues to be strong. Cash, cash equivalents and short-term investments were $337.1 million as of December 31, 2024. Cash flow from operations for 2024 was $236.4 million. The Company currently has more than $700 million of available liquidity, including cash on hand, as well as availability under its revolving credit facility. We believe these factors will allow us to meet our anticipated funding requirements. Our intention is to maintain a balanced approach to capital deployment, by using cash flow for investments in growth, returns to shareholders, and continued debt reduction.

Outlook

The Company will continue to focus on innovation and new product development and other opportunities for sales growth in 2025 from its existing businesses, as follows:

Consumer & Specialties Segment

- Increase our presence and market share in global pet litter products, including in emerging markets.
- Deploy new products in pet care such as lightweight litter.
- Increase our sales of calcium carbonate products by further penetration into filling and coating applications in the paper and packaging markets.
- Promote the Company's expertise in crystal engineering by developing crystal morphologies that help our customers achieve functional benefits.
- Deploy new calcium carbonate products in paint, coating and packaging applications.
- Continue developing products and processes for waste management and recycling opportunities to reduce the environmental impact for our customers by reducing energy consumption and improving the sustainability of their products.
- Continue to develop innovative applications for our bleaching earth products for edible oil and renewable fuel industries.
- Develop new mineral-based solutions for personal care applications.
- Increase our presence and market share globally for retinol delivery technology for personal care applications.
- Expand our bentonite product solutions for animal health applications.
- Increase our presence and market share in fabric care, including in emerging markets.

Engineered Solutions Segment

- Increase our presence and gain penetration of our bentonite-based foundry solutions in emerging markets.
- Deploy value-added formulations of refractory materials that not only reduce costs but improve performance.
- Deploy our laser measurement technologies into new applications.
- Expand our refractory maintenance model to other steel makers globally.
- Continue the development and market penetration of our FLUORO-SORB® products which address PFAS contamination in soil, groundwater, drinking water sources, landfill leachate and wastewater treatment facilities.
- Pursue opportunities for the expanded use of our products in environmental, building and construction, infrastructure, and oil and gas drilling and water treatment globally.
- Increase our presence and market share for geosynthetic clay liners globally.

All Segments

- Further operational excellence principles into all aspects of the organization, including system infrastructure and lean principles.
- Continue to explore selective acquisitions to fit our competencies in minerals and our core technologies.

However, there can be no assurance that we will achieve success in implementing any one or more of these opportunities.

Results of Operations

Consolidated Income Statement Review

(millions of dollars)	Year Ended December 31, 2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Net sales	$ 2,118.5	$ 2,169.9	$ 2,125.5	(2.4)%	2.1%
Cost of goods sold	1,570.8	1,662.8	1,660.5	(5.5)%	0.1%
Production margin	547.7	507.1	465.0	8.0%	9.1%
Production margin %	25.9%	23.4%	21.9%		
Marketing and administrative expenses	209.2	206.0	192.1	1.6%	7.2%
Research and development expenses	23.0	21.2	20.4	8.5%	3.9%
Provision for credit losses	30.0	—	—	*	*
Restructuring and other items, net	—	6.9	—	*	*
Impairment of assets	—	71.7	—	*	*
Acquisition-related expenses	—	0.3	5.1	*	(94.1)%
Gain on sale of assets, net	(12.3)	—	—	*	*
Litigation expenses	11.3	29.2	32.6	(61.3)%	(10.4)%
Income from operations	286.5	171.8	214.8	66.8%	(20.0)%
Operating margin %	13.5%	7.9%	10.1%		
Interest expense, net	(56.4)	(59.2)	(43.9)	(4.7)%	34.9%
Debt extinguishment expenses	(1.8)	—	(6.9)	*	*
Non-cash pension settlement charge	—	—	(3.5)	*	*
Other non-operating deductions, net	(4.7)	(4.9)	(3.8)	(4.1)%	28.9%
Total non-operating deductions, net	(62.9)	(64.1)	(58.1)	(1.9)%	10.3%
Income before tax and equity in earnings	223.6	107.7	156.7	107.6%	(31.3)%
Provision for taxes on income	59.4	23.7	32.1	150.6%	(26.2)%
Effective tax rate	26.6%	22.0%	20.5%		
Equity in earnings of affiliates, net of tax	6.7	4.3	1.7	55.8%	152.9%
Consolidated net income	170.9	88.3	126.3	93.5%	(30.1)%
Less: Net income attributable to non-controlling interests	3.8	4.2	4.1	(9.5)%	2.4%
Net income attributable to Minerals Technologies Inc. (MTI)	$ 167.1	$ 84.1	$ 122.2	98.7%	(31.2)%

* Not meaningful

Net Sales

(millions of dollars)	Year Ended December 31, 2024	2023	2022	2024 vs. 2023	2023 vs. 2022
U.S.	$ 1,089.4	$ 1,144.0	$ 1,135.6	(4.8)%	0.7%
International	1,029.1	1,025.9	989.9	0.3%	3.6%
Total sales	$ 2,118.5	$ 2,169.9	$ 2,125.5	(2.4)%	2.1%
Consumer & Specialties Segment	$ 1,140.2	$ 1,160.2	$ 1,124.6	(1.7)%	3.2%
Engineered Solutions Segment	978.3	1,009.7	1,000.9	(3.1)%	0.9%
Total sales	$ 2,118.5	$ 2,169.9	$ 2,125.5	(2.4)%	2.1%

Worldwide net sales in 2024 decreased 2.4% from the previous year to $2,118.5 million. Included in sales from the prior year were $40.6 million of sales related to Oldco, which was deconsolidated in the fourth quarter of 2023 and primarily impacted sales in the United States. Net sales in the United States decreased 4.8% to $1,089.4 million in 2024 and represented 51.0% of consolidated net sales. International sales increased 0.3% to $1,029.1 million in 2024 and represented 49.0% of consolidated net sales.

Worldwide net sales in 2023 increased 2.1% from the previous year to $2,169.9 million. Net sales in the United States increased 0.7% to $1,144.0 million in 2023 and represented 53.0% of consolidated net sales. International sales increased 3.6% to $1,025.9 million in 2023 and represented 47.0% of consolidated net sales.

Operating Costs and Expenses

Consolidated cost of sales was $1,570.8 million, $1,662.8 million and $1,660.5 million in 2024, 2023 and 2022, respectively. Production margin as a percentage of net sales was 25.9% in 2024, 23.4% in 2023 and 21.9% in 2022. Production margin increased in 2024 primarily due to improved pricing, lower input costs and higher productivity.

Marketing and administrative costs were $209.2 million, $206.0 million and $192.1 million in 2024, 2023 and 2022, respectively. Marketing and administrative costs as a percentage of net sales were 9.9% in 2024, 9.5% in 2023 and 9.0% in 2022.

Research and development expenses were $23.0 million, $21.2 million and $20.4 million in 2024, 2023 and 2022, respectively. Research and development expenses as a percentage of net sales were 1.1% in 2024, 1.0% in 2023 and 1.0% in 2022.

In 2024, the Company recorded a $30.0 million provision for credit losses in connection with the DIP Credit Agreement. In addition, the Company recorded litigation expenses of $11.3 million in connection with Oldco's bankruptcy filing. The Company also recorded a $12.3 million net gain on sale of refractories manufacturing assets in China.

In 2023, the Company recorded a $71.7 million non-cash impairment charge relating to Oldco's fixed assets within the Consumer & Specialties segment, $6.9 million in restructuring costs to further streamline our cost structure as a result of organization efficiencies gained through our resegmentation, and $0.3 million of acquisition-related expenses. In addition, the Company recorded $29.2 million of net litigation expenses in connection with Oldco’s bankruptcy and by Oldco to defend against and restore its reserve for claims associated with certain talc products.

In 2022, the Company recorded $32.6 million of litigation expenses relating to costs incurred to defend against, opportunistically settle, and establish a reserve for claims associated with certain talc products from Oldco. In addition, the Company recorded a $5.1 million charge for acquisition-related expenses.

Income from Operations

During 2024, the Company recorded income from operations of $286.5 million, as compared with $171.8 million in the prior year. Income from operations represented 13.5% of sales compared with 7.9% of sales in the prior year. Income from operations in 2024 reflected a $30.0 million charge for a provision of credit losses in connection with the DIP Credit Agreement and $11.3 million of litigation expenses. In addition, the Company recorded a $12.3 million net gain on sale of refractories manufacturing assets in China.

During 2023, the Company recorded income from operations of $171.8 million, as compared with $214.8 million in the prior year. Income from operations represented 7.9% of sales compared with 10.1% of sales in the prior year. Income from operations in 2023 reflected $78.6 million in impairment and restructuring charges and $29.2 million of net litigation expenses.

Non-Operating Income (Deductions)

The Company recorded non-operating deductions, net of $62.9 million in 2024 as compared with $64.1 million in the previous year.

Included in non-operating deductions was net interest expense of $56.4 million in 2024 as compared to $59.2 million in the prior year. In addition, the Company recorded debt extinguishment expenses of $1.8 million related to the refinancing of its credit facilities in the fourth quarter of 2024.

Included in non-operating deductions was net interest expense of $59.2 million in 2023 as compared to $43.9 million in the prior year, primarily due to higher interest rates. In 2022, the Company recorded debt extinguishment expenses of $6.9 million related to the refinancing of its credit facilities. Additionally, the Company recorded a $3.5 million non-cash pension settlement charge relating to some of the Company’s retirement plans in the United States.

Provision for Taxes on Income

Provision for taxes was $59.4 million, $23.7 million and $32.1 million in 2024, 2023 and 2022, respectively. The effective tax rates were 26.6%, 22.0% and 20.5% during 2024, 2023 and 2022, respectively.

The higher effective tax rate in 2024 as compared to 2023 was primarily due to the expected credit loss in connection with the DIP Credit Agreement that the Company entered into with its subsidiary, Oldco. Such credit loss is not currently deductible as the loans under such agreement are treated as an equity contribution for tax purposes. The current expected credit loss may become fully deductible in a future period. The timing of such deductibility is dependent on developments in the bankruptcy proceedings.

The higher effective tax rate in 2023 as compared to 2022 was primarily due to the impact of rate differentials related to foreign earnings indefinitely invested.

The other factors having the most significant impact on our effective tax rates in recent periods are percentage depletion, the Global Intangible Low-Tax Income provision ("GILTI"), Foreign-Derived Intangible Income ("FDII"), 162(m) disallowance, and the tax benefits on restructuring and impairment charges.

Percentage depletion allowances (tax deductions for depletion that may exceed our tax basis in our mineral reserves) are available to us under the income tax laws of the United States for operations conducted in the United States. The tax benefits from percentage depletion were $10.0 million in 2024, $11.1 million in 2023 and $9.6 million in 2022.

The Company has elected, as its accounting policy, to treat the taxes due from GILTI as a current period expense when incurred. The net charge to the Company for GILTI was $1.5 million, $1.1 million and $3.5 million for 2024, 2023 and 2022, respectively.

We operate in various countries around the world that have tax laws, tax incentives and tax rates that are significantly different than those of the United States. These differences combine to move our overall effective tax rate higher or lower than the United States statutory rate depending on the mix of income relative to income earned in the United States. The effects of foreign earnings and the related foreign rate differentials resulted in increases of $10.5 million, $8.2 million and $3.8 million in 2024, 2023 and 2022, respectively.

In December 2021, as part of the Organization for Economic Co-operation and Development's ("OECD") Inclusive Framework, 140 member countries agreed to the implementation of the Pillar Two Global Minimum Tax ("Pillar 2"). The Company began implementation of the Pillar 2 Model Rules in the first quarter of 2024. The Company continues to assess the effect of the Pillar 2 rules in all jurisdictions and does not expect that Pillar 2 will have a material impact on its consolidated financial statements.

Consolidated Net Income Attributable to MTI Shareholders

Consolidated net income was $170.9 million in 2024 and included a $31.7 million charge, net of tax. This charge consisted of a provision for credit loss and litigation expenses, offset by a gain on a sale of assets.

Consolidated net income was $88.3 million in 2023 and included a $85.8 million charge, net of tax. This charge consisted of impairment of assets, litigation expenses, restructuring and acquisition-related expenses.

Segment Review

The following discussions highlight the operating results for each of our two segments.

Consumer & Specialties Segment

	Year Ended December 31,				
(millions of dollars)	**2024**	**2023**	**2022**	**2024 vs. 2023**	**2023 vs. 2022**
Net Sales					
Household & Personal Care	$ 530.0	$ 517.6	$ 476.2	$ 12.4	$ 41.4
Specialty Additives	610.2	642.6	648.4	(32.4)	(5.8)
Total net sales	$ 1,140.2	$ 1,160.2	$ 1,124.6	$ (20.0)	$ 35.6
Income from operations	$ 165.5	$ 41.6	$ 79.0	$ 123.9	$ (37.4)
% of net sales	14.5%	3.6%	7.0%		

2024 v 2023

Net sales in the Consumer & Specialties segment decreased 1.7% to $1,140.2 million, as compared with $1,160.2 million in the prior year. Household & Personal Care sales increased 2.4% to $530.0 million from $517.6 million the prior year. This increase was primarily driven by strong demand for our pet litter products in all regions and growth in other high-margin consumer-oriented products. Specialty Additives sales decreased 5.0% to $610.2 million from $642.6 million primarily as a result of the deconsolidation of Oldco in the fourth quarter of 2023. Included in Specialty Additives' sales from the prior year were $40.6 million of sales related to Oldco.

Income from operations was $165.5 million in 2024, as compared to $41.6 million in 2023. In 2023, the Company recorded a $71.7 million non-cash impairment of Oldco's fixed assets and litigation expenses of $29.2 million in connection with Oldco's bankruptcy filing and by Oldco to defend against and restore its reserve for claims associated with certain talc products.

2023 v 2022

Net sales in the Consumer & Specialties segment increased 3.2% to $1,160.2 million, as compared with $1,124.6 million in the prior year. Household & Personal Care sales increased 8.7% to $517.6 million from $476.2 million in the prior year. This increase was primarily driven by strong demand for our pet litter products in all regions and growth in other high-margin consumer-oriented products. Specialty Additives sales decreased 0.9% to $642.6 million from $648.4 million primarily as a result of the deconsolidation of Oldco in the fourth quarter of 2023. Sales for Oldco in the fourth quarter of 2022 were $12.0 million.

Income from operations was $41.6 million in 2023, as compared to $79.0 million in 2022. In 2023, the Company recorded a $71.7 million non-cash impairment of assets related to Oldco. In addition, litigation expenses of $29.2 million and $32.6 million were recorded in 2023 and 2022, respectively, relating to Oldco.

Engineered Solutions Segment

	Year Ended December 31,				
(millions of dollars)	**2024**	**2023**	**2022**	**2024 vs. 2023**	**2023 vs. 2022**
Net Sales					
High-Temperature Technologies	$ 713.2	$ 720.9	$ 702.5	$ (7.7)	$ 18.4
Environmental & Infrastructure	265.1	288.8	298.4	(23.7)	(9.6)
Total net sales	$ 978.3	$ 1,009.7	$ 1,000.9	$ (31.4)	$ 8.8
Income from operations	$ 174.0	$ 147.8	$ 147.1	$ 26.2	$ 0.7
% of net sales	17.8%	14.6%	14.7%		

2024 v 2023

Net sales in the Engineered Solutions segment decreased 3.1% to $978.3 million, as compared with $1,009.7 million in the prior year. High-Temperature Technologies sales decreased 1.1% to $713.2 million, as compared with $720.9 million in the prior year. This decrease was driven by softer demand in some industrial end markets. Environmental & Infrastructure sales decreased 8.2% to $265.1 million, as compared with $288.8 million in the prior year as a result of low levels of project activity.

Income from operations was $174.0 million and 17.8% of sales, as compared with $147.8 million and 14.6% of sales in the prior year. Included in income from operations for 2024 is a $12.3 million net gain on sale of assets. Included in income from operations for 2023 are $3.2 million of restructuring expenses.

2023 v 2022

Net sales in the Engineered Solutions segment increased 0.9% to $1,009.7 million, as compared with $1,000.9 million in the prior year. High-Temperature Technologies sales increased 2.6% to $720.9 million, as compared with $702.5 million in the prior year. This increase was driven by strong demand in the North America market and volume recovery in China. Environmental & Infrastructure decreased 3.2% to $288.8 million, as compared with $298.4 million in the prior year. This decrease is a result of weak commercial construction activity in 2023.

Income from operations was $147.8 million and 14.6% of sales, as compared with $147.1 million and 14.7% of sales in the prior year. Included in income from operations for 2023 are $3.2 million of restructuring expenses.

Inflation

While inflation historically has not had a material impact on the Company, our financial performance could be adversely affected by increases in energy and commodity prices. Our production processes consume a significant amount of energy, primarily electricity, diesel fuel, natural gas and coal. We use diesel fuel to operate our mining and processing equipment and our freight costs are heavily dependent upon fuel prices and surcharges. Energy costs also affect the cost of raw materials. On a combined basis, these factors represent a large exposure to petrochemical and energy products which may be subject to significant price fluctuations. The contracts pursuant to which we construct and operate our satellite PCC plants generally adjust pricing to reflect the pass-through of increases in costs resulting from inflation, including lime and energy prices. However, there is a time lag before such price adjustments can be implemented. The Company and its customers will typically negotiate reasonable price adjustments in order to recover a portion of these escalating costs, but there can be no assurance that we will be able to recover increasing costs through such negotiations.

Cyclical Nature of Customers' Businesses

Portions of our sales to customers in the paper manufacturing, metalcasting, steel manufacturing, oil and gas and construction industries have historically been cyclical. The pricing structure of some of our long-term PCC contracts makes our PCC business less sensitive to declines in the quantity of product purchased. Oil and natural gas prices decreased significantly between 2014 through 2017 and again in 2020, which has caused exploration companies to reduce their capital expenditures and production and exploration activities. This has had the effect of decreasing the demand and increasing competition for the services we provide. We cannot predict the economic outlook in the countries in which we do business, nor in the key industries we serve.

Liquidity and Capital Resources

Cash provided from continuing operations in 2024 was $236.4 million, compared with $233.6 million in prior year. Cash flows provided from operations in 2024 were principally used to fund capital expenditures, repay debt, repurchase shares and to pay the Company's dividend to common shareholders. The Company's intention is to use cash flow for investments in growth, returns to shareholders, and continued debt reduction.

On November 26, 2024, the Company, entered into a Refinancing Facility Agreement and Incremental Facility Amendment (the "Amendment") to amend the Company's previous credit agreement (the "Previous Credit Agreement; the previous credit agreement, as amended by the Amendment, being the "Amended Credit Agreement"). The Amendment provides for, among other things, a new senior secured revolving credit facility with aggregate commitments of $400 million (the "Revolving Facility"), a portion of which may be used for the issuance of letters of credit and swingline loans, and a new senior secured term loan facility with aggregate commitments of $575 million (the "Term Loan Facility" and, together with the Revolving Facility, the "Senior Secured Credit Facilities"). The Revolving Facility and the Term Loan Facility replace the facilities under the Previous Credit Agreement, which provided for, among other things, a $550 million senior secured term loan facility and a $300 million senior secured revolving credit facility. The maturity date for loans and commitments under the Revolving Facility is November 26, 2029, and the maturity date for loans under the Term Loan Facility is November 26, 2031; provided that the maturity dates of the Revolving Facility and the Term Loan Facility will be adjusted to the date that is 91 days prior to the stated maturity date of the Company's 5.0% Senior Notes due 2028 (the "Notes") unless, prior to the date that is 91 days prior to the stated maturity date of the Notes, all amounts in excess of $50 million of the Notes have been either (a) refinanced with indebtedness permitted under the Amended Credit Agreement maturing later than 90 days after the scheduled maturity date of the Revolving Facility or of the Term Loan Facility, as applicable, or (b) repaid, discharged or repaid (other than with the proceeds of any indebtedness maturing earlier than 91 days after the scheduled maturity date of the Revolving Facility or of the Term Loan Facility, as applicable). Loans under the Term Loan Facility amortize at a rate equal to 1.00% per annum, payable in equal quarterly instalments, and were issued with original issue discount at 99.875% of par.

Loans under the Revolving Facility will bear interest at a rate equal to (a) for loans denominated in U.S. dollars, at the election of the Company, Term SOFR plus an applicable margin equal to 1.375% per annum or a base rate plus an applicable margin equal to 0.375% per annum, (b) for loans denominated in Euros, adjusted EURIBOR plus an applicable margin equal to 1.375% per annum and (c) for loans denominated in Pounds Sterling, SONIA plus an applicable margin equal to 1.375% per annum, subject in each case to (i) an increase of 37.5 basis points in the event that, and for so long as, the Net Leverage Ratio (as defined in the Amended Credit Agreement) is greater than or equal to 3.00 to 1.00 as of the last day of the preceding fiscal quarter, (ii) an increase of 12.5 basis points in the event that, and for so long as, the Net Leverage Ratio is less than 3.00 to 1.00 and greater than or equal to 2.00 to 1.00 as of the last day of the preceding fiscal quarter and (iii) a decrease of 12.5 basis points in the event that, and for so long as, the Net Leverage Ratio is less than 1.00 to 1.00 as of the last day of the preceding fiscal quarter. Loans under the Term Loan Facility will bear interest at a rate equal to, at the election of the Company, Term SOFR plus an applicable margin equal to 2.00% per annum or a base rate plus an applicable margin equal to 1.00% per annum. The Company will pay certain fees under the Amended Credit Agreement, including (a) a commitment fee of 0.175% per annum on the undrawn portion of the Revolving Facility (subject to a step-ups to 0.300% and 0.250% and a step-down to 0.150% at the same levels described above), (b) a fronting fee of 0.125% per annum on the average daily undrawn amount of, plus unreimbursed amounts in respect of disbursements under, letters of credit issued under the Revolving Facility and (c) customary annual administration fees. The obligations of the Company under the Senior Secured Credit Facilities are unconditionally guaranteed jointly and severally by, subject to certain exceptions, all material domestic subsidiaries of the Company (the "Guarantors") and secured, subject to certain exceptions, by a security interest in substantially all of the tangible and intangible assets of the Company and the Guarantors.

In the fourth quarter of 2024, the Company recorded $1.8 million in non-cash debt extinguishment expenses related to the refinancing of our credit facilities, which represents the difference between the redemption payment and the carrying value of the debt at the refinancing date. All lenders under the previous facility were repaid in full.

As of December 31, 2024, there were $4.5 million in loans and $9.1 million in letters of credit outstanding under the Revolving Facility.

On June 30, 2020, the Company issued $400 million aggregate principal amount of Notes. The Notes were issued pursuant to an indenture, dated as of June 30, 2020, between the Company and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Indenture"). The Notes bear an interest rate of 5.0% per annum payable semi-annually on January 1 and July 1 of each year, beginning on January 1, 2021. The Notes are unconditionally guaranteed on a senior unsecured basis by each of the Company's existing and future wholly owned domestic restricted subsidiaries that is a borrower under or that guarantees the Company's obligations under its Senior Secured Credit Facilities or that guarantees the Company's or any of the Company's wholly owned domestic subsidiaries' long-term indebtedness in an aggregate amount in excess of $50 million.

The Company may redeem some or all of the Notes at any time and from time to time at the applicable redemption prices listed in the Indenture, plus accrued and unpaid interest, if any, to, but excluding, the applicable redemption date.

If the Company experiences a change of control (as defined in the indenture), the Company is required to offer to repurchase the Notes at 101% of the principal amount of such Notes, plus accrued and unpaid interest, if any, to, but excluding, the date of repurchase.

The Amended Credit Agreement and the Indenture both contain certain customary affirmative and negative covenants that limit or restrict the ability of the Company and its restricted subsidiaries to enter into certain transactions or take certain actions, as well as customary events of default. In addition, the Amended Credit Agreement contains a financial covenant that requires the Company to maintain a maximum Net Leverage Ratio of 4.00 to 1.00 for each four fiscal quarter period (subject to an increase to 5.00 to 1.00 for four quarters in connection with certain significant acquisitions).

The Company has a committed loan facility in Japan. As of December 31, 2024, there was an outstanding balance of $0.9 million on this facility. Principal will be repaid in accordance with the payment schedule ending in 2026. The Company repaid $0.4 million on these loans in 2024.

As part of the Concept Pet acquisition, the Company assumed $1.9 million in long-term debt, recorded at fair value, consisting of two terms loans, one that matures in 2025 and one that matures in 2027. Both loans have annual payments and carry a variable interest rate. The Company repaid $0.3 million on these loans during 2024.

As of December 31, 2024, the Company had $24.3 million in uncommitted short-term bank credit lines, $0.6 million of which were in use. The credit lines are primarily outside the U.S. and are generally one year in term at competitive market rates at large, well-established institutions. The Company typically uses its available credit lines to fund working capital requirements or local capital spending needs. We anticipate that capital expenditures for 2025 should be between $90 million and $100 million, principally related to opportunities to improve our operations and meet our strategic growth objectives. We expect to meet our other long-term financing requirements from internally generated funds and committed and uncommitted bank credit lines.

In the second quarter of 2023, the Company entered into a floating to fixed interest rate swap for a notional amount of $150 million. The fair value of this instrument as of December 31, 2024 is an asset of $0.3 million.

In addition to long-term debt, the Company has committed cash outflow related to pension and post-retirement benefit obligations, non-cancelable operating leases, primarily for office space and equipment, and other long-term contractual obligations. Other long-term liabilities include tax liabilities, including contingent obligations associated with gross unrecognized tax benefits for uncertain tax positions and a tax liability for the one-time transition tax on accumulated foreign subsidiary earnings, asset retirement obligations relating to the retirement of certain tangible long-lived assets and land restoration obligations at the Company's PCC satellite facilities and mining operations. See Notes 2, 8, 15, 16 and 20 to the Consolidated Financial Statements.

On October 18, 2023, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to $75 million of the Company's shares over a one-year period. Over this program's one-year period, 1,034,692 shares have been repurchased under this program for $75 million, or an average price of approximately $72.48 per share. This program is now complete.

On October 16, 2024, the Company's Board of Directors authorized the Company's management to repurchase, at its discretion, up to $200 million of the Company's shares. As of December 31, 2024, 34,934 shares have been repurchased under this program for $2.8 million, or an average price of approximately $79.27 per share. This authorization has no expiration date.

On January 22, 2025, the Company's Board of Directors declared a regular quarterly dividend on its common stock of $0.11 per share. No dividend will be payable unless declared by the Board and unless funds are legally available for payment thereof.

The Company and certain of the Company's subsidiaries are among numerous defendants in over six hundred cases seeking damages for alleged exposure to asbestos-contaminated talc products sold by the Company's subsidiary Oldco. The Company's position is that these cases are meritless and all talc products sold by Oldco are safe. On October 2, 2023 (the "Petition Date"), notwithstanding the Company's confidence in the safety of Oldco's talc products, the Chapter 11 Debtors filed voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code in the United States Bankruptcy Court for the Southern District of Texas (the "Chapter 11 Cases") to address and comprehensively resolve Oldco's liabilities associated with talc. Minerals Technologies Inc. and the Company's other subsidiaries were not included in the Chapter 11 filing. In the second quarter of 2024, Oldco sold its talc assets under section 363 of the U.S. Bankruptcy Code. In addition, in the second quarter of 2024, the Company entered into a Debtor-in-Possession Credit Agreement with Oldco (the "DIP Credit Agreement") and recorded a provision for credit loss of $30 million for the maximum principal amount under such DIP Credit Agreement. Proceeds of the sale of Oldco's talc assets, as well as the funds drawn by Oldco under the DIP Credit Agreement, will be used to fund the Chapter 11 Cases. The Chapter 11 Debtors' ultimate goal in the Chapter 11 Cases is to confirm a plan of reorganization under Section 524(g) of the U.S. Bankruptcy Code and utilize this provision of the Bankruptcy Code to establish a trust that will address all current and future talc-related claims. In January 2024, the Chapter 11 Debtors and Minerals Technologies Inc. commenced a court-approved mediation process with the Official Committee of Unsecured Creditors (appointed in the Chapter 11 Cases as the representative of current talc claimants) and the Future Claimants Representative (appointed in the Chapter 11 Cases as the representative of future talc claimants) regarding the terms of a potential consensual plan of reorganization and the ultimate amount to be contributed to any trust. The mediation process is ongoing. During the pendency of the Chapter 11 Cases, the Company anticipates that the Chapter 11 Debtors will benefit from the operation of the automatic stay, which stays ongoing litigation in connection with talc-related claims against Oldco. In addition, subject to certain exceptions, the filing or continued prosecution of all talc-related claims against Oldco's non-debtor affiliates is temporarily stayed through April 15, 2025 (subject to further extensions), the date on which a hearing is scheduled on the status of the Chapter 11 Cases. The Chapter 11 Debtors have been deconsolidated from the Company's financial statements since the Petition Date. Although the Chapter 11 Cases are progressing, it is not possible to predict the form of any ultimate resolution or when an ultimate resolution might occur at this time. Accordingly, the amount that will be necessary to fully and finally resolve all of the Chapter 11 Debtors' current and future talc-related claims in connection with a confirmed Chapter 11 plan of reorganization cannot be estimated with certainty at this time. See Note 17 to the consolidated financial statements included in this report for more information.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities.

On an ongoing basis, we evaluate our estimates and assumptions, including those related to revenue recognition, valuation of long-lived assets, goodwill and other intangible assets, income taxes, including valuation allowances and pension plan assumptions. We base our estimates on historical experience and on other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that cannot readily be determined from other sources. There can be no assurance that actual results will not differ from those estimates.

We believe the following critical accounting policies require us to make significant judgments and estimates in the preparation of our consolidated financial statements.

Revenue Recognition

Revenue is recognized at the point in time when the customer obtains control of the promised goods or services in an amount that reflects the consideration we expect to receive in exchange for those goods or services. The Company's revenues are primarily derived from the sale of products. Our primary performance obligation is satisfied upon shipment or delivery to our customer based on written sales terms, which is also when control is transferred. Revenue, where our performance obligations are satisfied in phases, is recognized over time using certain input measures based on the measurement of the value transferred to the customer, including milestones achieved. Revenues from sales of equipment are recorded upon completion of installation and transfer of control to the customer. Revenues from services are recorded when the services are performed.

In most of our PCC contracts, the price per ton is based upon the total number of tons sold to the customer during the year. Under those contracts, the price billed to the customer for shipments during the year is based on periodic estimates of the total annual volume that will be sold to the customer. Revenues are adjusted at the end of each year to reflect the actual volume sold. There were no significant revenue adjustments in the fourth quarter of 2024 and 2023, respectively. We have consignment arrangements with certain customers in our Engineered Solutions segment. Revenues for these transactions are recorded when the consigned products are consumed by the customer.

Allowance for Credit Losses

The allowance for credit losses (ACL) is management's estimate of the current expected credit losses at the balance sheet date. Our credit exposure includes an unfunded load commitment. For this exposure, we recognized an ACL associated with the unfunded amount, which is reported as a liability in accrued expenses and other current liabilities on our consolidated balance sheet.

Valuation of Long-lived Assets, Goodwill and Other Intangible Assets

We assess the possible impairment of long-lived assets and identifiable amortizable intangibles whenever events or changes in circumstances indicate that the carrying value may not be recoverable.

Goodwill is evaluated for impairment at least annually. Factors we consider important that could trigger an impairment review include the following:

- Significant under-performance relative to historical or projected future operating results;
- Significant changes in the manner of use of the acquired assets or the strategy for the overall business;
- Significant negative industry or economic trends;
- Market capitalization below invested capital.

Annually, the Company performs a qualitative assessment for each of its reporting units to determine if the two-step process for impairment testing is required. If the Company determines that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company then evaluates the recoverability of goodwill using a two-step impairment test approach at the reporting unit level. Step one involves a) developing the fair value of total invested capital of each reporting unit in which goodwill is assigned; and b) comparing the fair value of total invested capital for each reporting unit to its carrying amount, to determine if there is goodwill impairment. Should the carrying amount for a reporting unit exceed its fair value, then the step one test is failed, and the magnitude of any goodwill impairment is determined under step two. The amount of impairment loss is determined in step two by comparing the implied fair value of reporting unit goodwill with the carrying amount of goodwill.

The Company has two reporting units; Consumer & Specialties and Engineered Solutions. We identify our reporting units by assessing whether the components of our operating segments constitute businesses for which discrete financial information is available, and management regularly reviews the operating results of those components. In the fourth quarter of 2024, the Company performed a qualitative assessment of each of its reporting units and determined it was not more likely than not that the fair value of any of its reporting units was less than their carrying values.

Property, plant and equipment are depreciated over their useful lives. Useful lives are based on management’s estimates of the period that the assets can generate revenue, which does not necessarily coincide with the remaining term of a customer’s contractual obligation to purchase products made using those assets. Our sales of PCC are predominately pursuant to long-term evergreen contracts, initially ten years in length, with paper mills at which we operate satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of the satellite PCC plant. Failure of a PCC customer to renew an agreement or continue to purchase PCC from our facility could result in an impairment of assets or accelerated depreciation at such facility.

We evaluate the recoverability of our property, plant and equipment whenever events or change in circumstances indicate that the carrying value of the assets may not be recoverable. For testing the recoverability, we primarily use discounted cash flow models or cost approach to estimate the fair value of these assets. Critical assumptions used in conducting these tests included expectations of our business performance and financial results, useful lives of assets, discount rates and comparable market data.

When we acquire a company, we determine fair value on the acquisition date of assets acquired and liabilities assumed. We use the income, market or cost approach (or a combination thereof) for the valuation and use valuation inputs and analyses that are based on market participant assumptions. Changes in assumptions can have a significant impact on the fair value of tangible assets. Goodwill is calculated as the excess of the consideration transferred over the assets acquired and represents the estimated future economic benefits arising from other assets acquired that could not be individually identified and separately recognized.

Income Taxes

As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves estimating current tax expense together with assessing temporary differences resulting from differing treatments of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in the consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income, and to the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or change this allowance in a period, we must include an expense within the tax provision in the Consolidated Statements of Income.

Deferred tax liabilities represent the amount of income taxes payable in future periods. Such liabilities arise because of temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred income tax assets represent amounts available to reduce income taxes payable on taxable income in future years. Such assets arise because of temporary differences between the financial reporting and tax bases of assets and liabilities, as well as from net operating losses. We evaluate the recoverability of these future tax deductions by assessing the adequacy of future expected taxable income from all sources, including reversal of taxable temporary differences and forecasted operating earnings. These sources of income inherently rely heavily on estimates. We use our historical experience and business forecasts to provide insight. The amount recorded for the net deferred tax liability was $115.7 million and $123.3 million at December 31, 2024 and 2023, respectively.

The application of income tax law is inherently complex. Laws and regulations in this area are voluminous and are often ambiguous. As such, we are required to make many subjective assumptions and judgments regarding our income tax exposures. Interpretations of and guidance surrounding income tax laws and regulations change over time. As such, changes in our subjective assumptions and judgments can materially affect the amounts recognized in the consolidated balance sheets and statements of operations. See Note 8 to the Consolidated Financial Statements for additional details on our uncertain tax positions.

Pension Benefits

We sponsor pension and other retirement plans in various forms covering the majority of employees who meet eligibility requirements. Several statistical and actuarial models which attempt to estimate future events are used in calculating the expense and liability related to the plans. These models include assumptions about the discount rate, expected return on plan assets and the rate of future compensation increases as determined by us, within certain guidelines. Our assumptions reflect our historical experience and management's best judgment regarding future expectations. In addition, our actuarial consultants also use subjective factors such as withdrawal and mortality rates to estimate these assumptions. The actuarial assumptions used by us may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates, or longer or shorter life spans of participants, among other things.

The investment strategy for pension plan assets is to maintain a broadly diversified portfolio designed to both preserve and grow plan assets to meet future plan obligations. The Company's average rate of return on assets from inception through December 31, 2024 was approximately 9%. The Company's assets are strategically allocated among equity, debt and other investments to achieve a diversification level that dampens fluctuations in investment returns. The Company's long-term investment strategy is an investment portfolio mix of approximately 55%-65% in equity securities, 30%-35% in fixed income securities and 0%-15% in other securities. As of December 31, 2024, the Company had approximately 55% of its pension assets in equity securities, 33% in fixed income securities and 12% in other securities.

The Company recognized pension expense of $1.9 million in 2024 as compared to $5.7 million in 2023. Accounting guidance on retirement benefits requires companies to discount future benefit obligations back to today's dollars using a discount rate that is based on high-quality fixed-income investments. A decrease in the discount rate increases the pension benefit obligation, while an increase in the discount rate decreases the pension benefit obligation. This increase or decrease in the pension benefit obligation is recognized in Accumulated other comprehensive income (loss) and subsequently amortized into earnings as an actuarial gain or loss. The guidance also requires companies to use an expected long-term rate of return on plan assets for computing current year pension expense. Differences between the actual and expected returns are also recognized in Accumulated other comprehensive income (loss) and subsequently amortized into earnings as actuarial gains and losses. At the end of 2024, total actuarial losses recognized in Accumulated other comprehensive loss for pension plans were $1.3 million as compared to $32.1 million in 2023.

A net gain of $40.6 million ($30.6 million after-tax) primarily due to actuarial gains, driven by a change in discount rates is included in other comprehensive income in 2024. In 2023, a net gain of $7.6 million ($5.6 million after-tax) was recorded in other comprehensive income, primarily due to actuarial gains, driven by a change in discount rates. In 2022, a net gain of $46.3 million ($35.3 million after-tax) was recorded in other comprehensive income, primarily due to a change in discount rates.

Actuarial losses for pensions will be impacted in future periods by actual asset returns, discount rate changes, actual demographic experience and other factors that impact these expenses. These losses, reported in Accumulated other comprehensive income (loss), will generally be amortized as a component of net periodic benefit cost on a straight-line basis over the average remaining service period of active employees expected to receive benefits under the benefit plans. At the end of 2024, the average remaining service period of active employees or life expectancy for fully eligible employees was 9 years.

For a detailed discussion on the application of these and other accounting policies, see "Summary of Significant Accounting Policies" in Note 1 to the Consolidated Financial Statements. This discussion and analysis should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this report.

Recently Issued Accounting Standards

Changes to accounting principles generally accepted in the United States of America (U.S. GAAP) are established by the Financial Accounting Standards Board (FASB) in the form of accounting standards updates (ASUs) to the FASB's Accounting Standards Codification. The Company considers the applicability and impact of all ASUs. ASUs not listed below were assessed and determined to be either not applicable or are expected to have a minimal impact on our consolidated financial position and results of operations.

Adoption of Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures", which requires entities to report incremental information about significant segment expenses included in a segment's profit or loss measure, as well as the name and title of the chief operating decision maker. The guidance also requires interim disclosures related to reportable segment profit or loss and assets that had previously only been disclosed annually. The new standard is effective for fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2023. The Company adopted this guidance on January 1, 2024 and updated the disclosures contained in Note 21. This guidance did not impact the Company's consolidated financial statements.

Income Taxes (Topic 740): Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures", that requires entities to disclose additional information about federal, state, and foreign income taxes primarily related to the income tax rate reconciliation and income taxes paid. The new standard also eliminates certain existing disclosure requirements related to uncertain tax positions and unrecognized deferred tax liabilities. The new standard is effective for interim and annual periods beginning on or after December 15, 2024. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements but will result in disaggregation of the Company's tax footnote.

Income Statement-Reporting Comprehensive Income-Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses

In November 2024, the FASB issued ASU 2024-03, "Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses", that requires entities to disclose additional information in the notes to the financial statements about prescribed categories underlying any relevant income statement expense caption. The new standard is effective for annual periods beginning after December 15, 2026 and interim periods within fiscal years beginning after December 15, 2027. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk from fluctuations in foreign currency exchange rates, interest rates and credit risk. We use a variety of practices to manage these market risks, including derivative financial instruments when appropriate. Our treasury and risk management policies prohibit us from using derivative instruments for trading or speculative purposes. We also do not use leveraged derivative instruments or derivatives with complex features.

Exchange Rate Sensitivity

As we operate in over 30 countries with many international subsidiaries, we are exposed to currency fluctuations related to manufacturing and selling our products and services. This foreign currency risk is diversified and involves assets, liabilities and cash flows denominated in currencies other than the U.S. Dollar (USD).

We manage our foreign currency exchange risk in part through operational means, including managing the same currency revenues versus same currency costs, as well as, same currency assets versus same currency liabilities. We also have subsidiaries with the same currency exposures which may offset each other, providing a natural hedge against one another's currency risk. When appropriate, we enter into derivative financial instruments, such as forward exchange contracts and cross currency interest rate swaps, to mitigate the impact of foreign exchange rate movements on our operating results. The counterparties are major financial institutions. Such forward exchange contracts would not subject us to additional risk from the exchange rate because gains and losses on these contracts would offset losses and gains on the assets, liabilities, and transactions being hedged.

Assets and liabilities of our international subsidiaries are translated to their parent company's reporting currency at current exchange rates during consolidation; gains and losses stemming from these translations are included as a component of Other Comprehensive Income and reported within Accumulated Comprehensive Income within our Consolidated Balance Sheets. Income and expenses of our international subsidiaries are translated at average exchange rates for the period and, when included within retained earnings in the balance sheet at current exchange rates, the differences to those average exchange rates are included within Other Comprehensive Income and reported within Accumulated Comprehensive Income. When our subsidiaries transact business in currencies other than their functional currency, those transactions are revalued in their functional currency and differences resulting from such revaluations are included within other non-operating income (deduction), net within our Consolidated Statement of Income.

We do not anticipate that near-term changes in exchange rates will have a material impact on our future earnings or cash flows. However, there can be no assurance that a sudden and significant change in the value of foreign currencies would not have a material adverse effect on our financial condition and results of operations.

Interest Rate Sensitivity

A portion of our long-term bank debt bears interest at variable rates (see Note 15 to the Consolidated Financial Statements) and our results of operations would be affected by interest rate changes to such bank debt outstanding. The Company utilizes interest rate swaps to limit exposure to market fluctuations on floating-rate debt. In the second quarter of 2023, the Company entered into a floating to fixed interest rate swap for a notional amount of $150 million. The fair value of this instrument as of December 31, 2024 is an asset of $0.3 million. An immediate 10% increase in the interest rates would not have a material effect on our results of operations over the next fiscal year. A one percentage point change in interest rates would cost $4.3 million in incremental interest charges on an annual basis.

Credit Risk

We are exposed to credit risk on certain assets, primarily accounts receivable. We provide credit to customers in the ordinary course of business and perform ongoing credit evaluations. Concentrations of credit risk with respect to trade receivables are limited due to the large number of customers comprising our customer base. We currently believe our allowance for doubtful accounts is sufficient to cover customer credit risks. Our accounts receivable financial instruments are carried at amounts that approximate fair value.

In addition, in 2024, our credit exposure included an unfunded loan commitment in connection with the DIP Credit Agreement. As a result, the Company recorded a provision for credit loss of $30 million in the second quarter of 2024 (see Note 17 to the Consolidated Financial Statements).

Sovereign Debt Risk

We do not have any material credit risk with sovereign governments as we do not sell our products to them. We do, however, sell to customers in these countries, but we believe our risk associated with these customers is not material.

Item 8. Financial Statements and Supplementary Data

The financial information required by Item 8 is contained in Item 15 of Part IV of this report.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

As of the end of the period covered by this report, and under the supervision and with participation of the Company's management, including the Chief Executive Officer and the Chief Financial Officer, the Company carried out an evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures, pursuant to Exchange Act Rule 13a-15(b). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of December 31, 2024.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we have included a report of management's assessment of the design and operating effectiveness of our internal controls as part of this report. Management's report is included in our consolidated financial statements on page F-42 of this report under the caption entitled "Management's Report on Internal Control Over Financial Reporting."

Changes in Internal Control Over Financial Reporting

There were no other changes in the Company's internal control over financial reporting during the fourth fiscal quarter of 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the three months ended December 31, 2024, none of our directors or executive officers adopted or terminated any Rule 10b5-1 trading arrangement or any non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not Applicable

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information concerning the Company's Board of Directors required by this item is incorporated herein by reference to the Company's Proxy Statement, under the captions "The Board of Directors", "Proposal 1- Election of Directors", "Corporate Governance" and "Committees of the Board of Directors".

The Board has established a code of ethics for the Chief Executive Officer, the Chief Financial Officer, and the Chief Accounting Officer entitled "Code of Ethics for the Senior Financial Officers," which is available on our website, www.mineralstech.com, by clicking the links entitled *Our Company,* then *Corporate Governance* and then *Policies and Charters*. The Company has adopted an insider trading policy governing the purchase, sale and other dispositions of its securities by directors, officers, employees and certain other insiders, and the Company itself, that is reasonably designed to promote compliance with insider trading laws, rules and regulations and any applicable listing standards. Additional information regarding such policy is set forth in the Company's Proxy Statement, under the caption "Compensation Discussion and Analysis—Other Policies and Practices—Trading Controls and Hedging Transaction", and incorporated herein by reference.

See "Information About Our Executive Officers" in Part I of this report for information regarding executive officers of the Company.

Item 11. Executive Compensation

The information appearing in the Company's Proxy Statement under the captions "Compensation Discussion and Analysis," "Report of the Compensation Committee", "Executive Compensation" and "Compensation Tables and Narrative" is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information appearing in the Company's Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management" is incorporated herein by reference.

Equity Compensation Plan Information

The following table summarizes information about our equity compensation plans as of December 31, 2024. All of our equity compensation plans have been approved by our stockholders. All outstanding awards relate to our common stock.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights[1]	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights [2]	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	1,624,430	$ 65.06	1,419,611
Total	1,624,430	$ 65.06	1,419,611

(1) Includes shares issuable upon exercise of outstanding stock options and shares issuable upon vesting of time-based deferred restricted stock units (DRSUs).
(2) The weighted-average exercise price includes all outstanding stock options but does not include DRSUs which do not have an exercise price.

For further information, see Note 6 to the Consolidated Financial Statements.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information appearing in the Company's Proxy Statement under the caption "Certain Relationships and Related Transactions" is incorporated herein by reference.

The Board has established Corporate Governance principles which include guidelines for determining Director independence, which is available on our website, www.mineralstech.com, by clicking the links entitled *"Investors",* then *"Corporate Governance"*. The information appearing in the Company's Proxy Statement under the caption "Corporate Governance – Director Independence" is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information appearing in the Company's Proxy Statement under the caption "Principal Accountant Fees and Services" is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this report:

1. Financial Statements. The following Consolidated Financial Statements of Mineral Technologies Inc. and subsidiary companies and Reports of Independent Registered Public Accounting Firm are set forth on pages F-2 to F-41.

   Consolidated Balance Sheets as of December 31, 2024 and 2023
   Consolidated Statements of Income for the years ended December 31, 2024, 2023 and 2022
   Consolidated Statements of Comprehensive Income for the years ended December 31, 2024, 2023 and 2022
   Consolidated Statements of Cash Flows for the years ended December 31, 2024, 2023 and 2022
   Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2024, 2023 and 2022
   Notes to the Consolidated Financial Statements
   Reports of Independent Registered Public Accounting Firm
   Management's Report on Internal Control Over Financial Reporting

2. Financial Statement Schedule. The following financial statement schedule is filed as part of this report:

   Schedule II – Valuation and Qualifying Accounts

   All other schedules for which provision is made in the applicable accounting regulations of the SEC are not required under the related instructions or are inapplicable and, therefore, have been omitted.

3. Exhibits. The following exhibits are filed as part of, or incorporated by reference into, this report.

Exhibit No.	Exhibit Title
3.1	Restated Certificate of Incorporation of the Company (Incorporated by reference to exhibit 3.1 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2003)
3.2	By-Laws of the Company as amended and restated effective March 13, 2018 (Incorporated by reference to exhibit 3.1 filed with the Company's Current Report on Form 8-K (file no. 001-11430) filed on March 19, 2018)
4.1	Specimen Certificate of Common Stock (Incorporated by reference to exhibit 4.1 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2003)
4.2	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (Incorporated by reference to exhibit 4.2 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2019)
4.3	Indenture, dated as of June 30, 2020, by and among Minerals Technologies Inc., the subsidiary guarantors from time to time party thereto and The Bank of New York Mellon Trust Company, N.A., as a trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K (file no. 001-11430) filed on June 30, 2020.)
10.1	Asset Purchase Agreement, dated as of September 28, 1992, by and between Specialty Refractories Inc. and Quigley Company Inc. (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992)
10.1(a)	Agreement dated October 22, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-59510), originally filed on March 15, 1993)
10.1(b)	Letter Agreement dated October 29, 1992 between Specialty Refractories Inc. and Quigley Company Inc., amending Exhibit 10.1 (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-59510), originally filed on March 15, 1993)
10.2	Reorganization Agreement, dated as of September 28, 1992, by and between the Company and Pfizer Inc. (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992)
10.3	Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc. and Specialty Minerals Inc. (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992)
10.4	Asset Contribution Agreement, dated as of September 28, 1992, by and between Pfizer Inc. and Barretts Minerals Inc. (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992)
10.4(a)	Agreement dated October 22, 1992 between Pfizer Inc, Barretts Minerals Inc. and Specialty Minerals Inc., amending Exhibits 10.3 and 10.4 (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-59510), originally filed on March 15, 1993)

10.5	Employment Agreement, dated December 13, 2016, between the Company and Douglas T. Dietrich (Incorporated by reference to exhibit 10.1 filed with the Company's Current Report on Form 8-K (file no. 001-11430) filed on December 16, 2016) (+)
10.5(a)	First Amendment to Employment Agreement, dated April 15, 2021, between the Company and Douglas T. Dietrich (Incorporated by reference to exhibit 10.1 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the quarter ended April 4, 2021) (+)
10.6	Form of Employment Agreement between the Company and each of Erik C. Aldag, Brett Argirakis, Michael A. Cipolla, Erin N. Cutler, Jonathan J. Hastings, Timothy J. Jordan, and D.J. Monagle, III (Incorporated by reference to exhibit 10.6 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2016) (+)
10.7	Severance Agreement between the Company and Douglas T. Dietrich (Incorporated by reference to the exhibit 10.2 filed with the Company's Current Report on form 8-K (file no. 001-11430) filed on December 16, 2016) (+)
10.7(a)	First Amendment to Severance Agreement between the Company and Douglas T. Dietrich (Incorporated by reference to exhibit 10.2 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the quarter ended April 4, 2021) (+)
10.8	Form of Severance Agreement between the Company and each of Erik C. Aldag, Brett Argirakis, Michael A. Cipolla, Erin N. Cutler, Jonathan J. Hastings, Timothy J. Jordan, and D.J. Monagle, III (Incorporated by reference to exhibit 10.8 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2016) (+)
10.9	Form of Indemnification Agreement between the Company and each of Erik C. Aldag, Brett Argirakis, Michael A. Cipolla, Erin N. Cutler, Douglas T. Dietrich, Jonathan J. Hastings, Timothy J. Jordan, D.J. Monagle III and each of the Company's non-employee directors (Incorporated by reference to exhibit 10.1 filed with the Company's Current Report on Form 8-K (file no. 001-11430) filed on May 8, 2009) (+)
10.10	Company Nonfunded Deferred Compensation and Unit Award Plan for Non-Employee Directors, as amended and restated effective January 1, 2008 (Incorporated by reference to exhibit 10.8 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the quarter ended March 30, 2008) (+)
10.10(a)	First Amendment to the Company Nonfunded Deferred Compensation and Unit Award Plan for Non-Employee Directors, dated January 18, 2012 (Incorporated by reference to exhibit 10.11(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2011) (+)
10.11	2015 Stock Award and Incentive Plan of the Company, as amended and restated effective March 15, 2024 (Incorporated by reference to Appendix B to the Company's 2024 Proxy Statement (file no. 001-11430) filed on April 4, 2024) (+)
10.11(a)	Form of Stock Option Agreement (Incorporated by reference to exhibit 10.12(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2019) (+)
10.11(b)	Form of Deferred Restricted Stock Unit Agreement (Incorporated by reference to exhibit 10.12(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2019) (+)
10.12	Company Retirement Plan, as amended and restated, dated August 27, 2020 (Incorporated by reference to exhibit 10.13 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2020) (+)
10.13	Company Supplemental Retirement Plan, amended and restated effective December 31, 2008 (Incorporated by reference to exhibit 10.13 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2009) (+)
10.13(a)	First Amendment to Company Supplemental Retirement Plan, as amended and restated, dated December 22, 2014 (Incorporated by reference to exhibit 10.14(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)
10.13(b)	Second Amendment to Company Supplemental Retirement Plan, as amended and restated, dated December 20, 2019 (Incorporated by reference to exhibit 10.14(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2019) (+)
10.14	Company Savings and Investment Plan, as amended and restated, dated December 21, 2012 (Incorporated by reference to exhibit 10.14 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2012) (+)
10.14(a)	Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 5, 2013 (Incorporated by reference to exhibit 10.15(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2013) (+)

10.14(b) Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 5, 2013 (Incorporated by reference to exhibit 10.15(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2013) (+)

10.14(c) Third Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 22, 2014 (Incorporated by reference to exhibit 10.15(c) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)

10.14(d) Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 31, 2015 (Incorporated by reference to exhibit 10.15(d) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2015)(+)

10.14(e) Amendment to the Company Savings and Investment Plan, as amended and restated, dated July 16, 2020 (Incorporated by reference to exhibit 10.1 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the quarter ended June 28, 2020)(+)

10.14(f) Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 21, 2020 (Incorporated by reference to exhibit 10.15(f) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2020) (+)

10.14(g) Amendment to the Company Savings and Investment Plan, as amended and restated, dated May 25, 2022 (Incorporated by reference to exhibit 10.1 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the quarter ended July 3, 2022) (+)

10.14(h) Amendment to the Company Savings and Investment Plan, as amended and restated, dated December 15, 2022 (Incorporated by reference to exhibit 10.14(h) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2022) (+)

10.15 Company Supplemental Savings Plan, amended and restated effective December 31, 2008 (Incorporated by reference to exhibit 10.15 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2009) (+)

10.15(a) Amendment to the Company Supplemental Savings Plan, dated December 28, 2011 (Incorporated by reference to exhibit 10.16(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2011)(+)

10.15(b) First Amendment to the Company Supplemental Savings Plan, dated December 22, 2014 (Incorporated by reference to exhibit 10.16(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)

10.15(c) Second Amendment to the Company Supplemental Savings Plan, dated December 22, 2014 (Incorporated by reference to exhibit 10.16(c) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)

10.15(d) Third Amendment to the Company Supplemental Savings Plan, dated December 16, 2016 (Incorporated by reference to exhibit 10.16(d) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2016)(+)

10.15(e) Fourth Amendment to the Company Supplemental Savings Plan, dated December 20, 2019 (Incorporated by reference to exhibit 10.16(e) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2019) (+)

10.16 Company Health and Welfare Plan, effective as of April 1, 2003 and amended and restated as of January 1, 2006 (Incorporated by reference to exhibit 10.14 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2006)(+)

10.16(a) Amendment to the Company Health and Welfare Plan, dated May 19, 2009 (Incorporated by reference to exhibit 10.16(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2009) (+)

10.16(b) First Amendment to Company Health and Welfare Plan, dated December 22, 2014 (Incorporated by reference to exhibit 10.17(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)

10.17 Company Retiree Medical Plan, effective as of January 1, 2011 (Incorporated by reference to exhibit 10.17 filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2010)(+)

10.17(a) First Amendment to Company Retiree Medical Plan, dated December 22, 2014 (Incorporated by reference to exhibit 10.18(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2014)(+)

10.17(b) Second Amendment to Company Retiree Medical Plan, dated November 10, 2021 (Incorporated by reference to exhibit 10.18(b) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2021) (+)

10.18 Amended and Restated Grantor Trust Agreement, dated as of April 1, 2010, by and between the Company and the Wilmington Trust Company (Incorporated by reference to exhibit 10.1 filed with the Company's Quarterly Report on Form 10-Q (file no. 001-11430) for the period ended April 4, 2010)(+)

10.18(a) Agreement and Amendment No. 1, dated October 1, 2017, to the Amended and Restated Grantor Trust Agreement, dated as of April 1, 2010, by and between the Company and the Wilmington Trust Company (Incorporated by reference to exhibit 10.19(a) filed with the Company's Annual Report on Form 10-K (file no. 001-11430) for the year ended December 31, 2017)(+)

10.19	Refinancing Facility Agreement and Incremental Facility Amendment dated as of November 26, 2024, among Minerals Technologies Inc., certain subsidiaries party thereto, the lenders party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent. (Incorporated by reference to the exhibit 10.1 filed with the Company's Current Report on Form 8-K (file no. 001-11430) filed on November 26, 2024)
10.20	Indenture, dated July 22, 1963, between the Cork Harbour Commissioners and Roofchrome Limited (Incorporated by reference to the exhibit so designated filed with the Company's Registration Statement on Form S-1 (Registration No. 33-51292), originally filed on August 25, 1992)
19	Minerals Technologies Inc. Securities Trading Policy (*)
21.1	Subsidiaries of the Company (*)
23.1	Consent of Independent Registered Public Accounting Firm (*)
24	Power of Attorney (*)
31.1	Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal executive officer (*)
31.2	Rule 13a-14(a)/15d-14(a) Certification executed by the Company's principal financial officer (*)
32	Section 1350 Certification (*)
95	Information Concerning Mine Safety Violations (*)
97	Minerals Technologies Inc. Policy for Recoupment of Incentive Compensation (Incorporated by reference to exhibit 97 filed with the Company's Annual Report on Form 10-K (file no. 001-11430 for the year ended December 31, 2023)
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.
(+) Management contract or compensatory plan or arrangement required to be filed pursuant to Item 601 of Regulation S-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

By: /s/ Douglas T. Dietrich
Douglas T. Dietrich
Chairman of the Board and Chief Executive Officer

February 21, 2025

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated:

SIGNATURE	TITLE	DATE
/s/ Douglas T. Dietrich Douglas T. Dietrich	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 21, 2025
/s/ Erik C. Aldag Erik C. Aldag	Senior Vice President – Finance and Treasury, Chief Financial Officer (Principal Financial Officer)	February 21, 2025
/s/ Michael A. Cipolla Michael A. Cipolla	Vice President – Controller and Chief Accounting Officer (Principal Accounting Officer)	February 21, 2025
* Joseph C. Breunig	Director	February 21, 2025
* John J. Carmola	Director	February 21, 2025
* Robert L. Clark	Director	February 21, 2025
* Alison A. Deans	Director	February 21, 2025
/s/ Douglas T. Dietrich Douglas T. Dietrich	Chairman	February 21, 2025
* Franklin L. Feder	Director	February 21, 2025
* Kristina M. Johnson	Director	February 21, 2025
* Rocky Motwani	Director	February 21, 2025
* Carolyn K. Pittman	Director	February 21, 2025
* Marc E. Robinson	Director	February 21, 2025

* By: /s/ Timothy J. Jordan
Timothy J. Jordan
Attorney-in-Fact

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES

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MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEETS

(millions of dollars, except share and per share amounts)	December 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 333.1	$ 317.2
Short-term investments, at cost which approximates market	4.0	4.3
Accounts receivable	385.2	399.1
Inventories	342.1	325.4
Prepaid expenses	61.1	45.0
Other current assets	5.5	8.0
Total current assets	1,131.0	1,099.0
Property, plant and equipment, less accumulated depreciation and depletion	989.7	986.8
Goodwill	913.8	913.6
Intangible assets	218.1	231.0
Deferred income taxes	14.8	16.0
Other assets and deferred charges	126.5	100.2
Total assets	$ 3,393.9	$ 3,346.6
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 5.1	$ 85.4
Current maturities of long-term debt	6.5	18.0
Accounts payable	185.5	188.7
Income tax payable	27.4	14.0
Accrued compensation and related items	67.5	59.2
Other current liabilities	105.7	92.0
Total current liabilities	397.7	457.3
Long-term debt, net of unamortized discount and deferred financing costs	959.6	911.1
Deferred income taxes	130.5	139.3
Accrued pension and postretirement benefits	20.5	51.7
Other non-current liabilities	102.4	100.5
Total liabilities	1,610.7	1,659.9
Shareholders' equity:		
Preferred stock, without par value; 1,000,000 shares authorized; none issued	—	—
Common stock, par value at $0.10 per share; 100,000,000 shares authorized; Issued 49,993,737 shares in 2024 and 49,657,464 shares in 2023	5.0	4.9
Additional paid-in capital	523.9	501.2
Retained earnings	2,514.5	2,360.6
Accumulated other comprehensive loss	(387.1)	(369.4)
Less common stock held in treasury, at cost; 18,098,082 shares in 2024 and 17,252,743 shares in 2023	(909.3)	(845.3)
Total Minerals Technologies Inc. shareholders' equity	1,747.0	1,652.0
Non-controlling interests	36.2	34.7
Total shareholders' equity	1,783.2	1,686.7
Total liabilities and shareholders' equity	$ 3,393.9	$ 3,346.6

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF INCOME

(millions of dollars, except per share data)	Year Ended December 31, 2024	2023	2022
Net sales	$ 2,118.5	$ 2,169.9	$ 2,125.5
Cost of goods sold	1,570.8	1,662.8	1,660.5
Production margin	547.7	507.1	465.0
Marketing and administrative expenses	209.2	206.0	192.1
Research and development expenses	23.0	21.2	20.4
Provision for credit losses	30.0	—	—
Restructuring and other items, net	—	6.9	—
Impairment of assets	—	71.7	—
Acquisition-related expenses	—	0.3	5.1
Gain on sale of assets, net	(12.3)	—	—
Litigation expenses	11.3	29.2	32.6
Income from operations	286.5	171.8	214.8
Interest expense, net	(56.4)	(59.2)	(43.9)
Debt extinguishment expenses	(1.8)	—	(6.9)
Non-cash pension settlement charge	—	—	(3.5)
Other non-operating deductions, net	(4.7)	(4.9)	(3.8)
Total non-operating deductions, net	(62.9)	(64.1)	(58.1)
Income before tax and equity in earnings	223.6	107.7	156.7
Provision for taxes on income	59.4	23.7	32.1
Equity in earnings of affiliates, net of tax	6.7	4.3	1.7
Net income	170.9	88.3	126.3
Less:			
Net income attributable to non-controlling interests	3.8	4.2	4.1
Net income attributable to Minerals Technologies Inc. (MTI)	$ 167.1	$ 84.1	$ 122.2
Earnings per share:			
Basic:			
Income from operations attributable to MTI	$ 5.21	$ 2.59	$ 3.74
Diluted:			
Income from operations attributable to MTI	$ 5.17	$ 2.58	$ 3.73
Cash dividends declared per common share	$ 0.41	$ 0.25	$ 0.20
Shares used in computation of earnings per share:			
Basic	32.1	32.5	32.7
Diluted	32.3	32.6	32.8

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Net income	$ 170.9	$ 88.3	$ 126.3
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(49.9)	(6.1)	(78.9)
Pension and postretirement plan adjustments	30.6	5.6	35.3
Unrealized gain (loss) on cash flow hedges	0.3	(3.3)	7.8
Total other comprehensive loss, net of tax	(19.0)	(3.8)	(35.8)
Total comprehensive income including non-controlling interests	151.9	84.5	90.5
Less: Net income attributable to non-controlling interests	3.8	4.2	4.1
Less: Foreign currency translation adjustments attributable to non-controlling interests	(1.3)	(0.9)	(2.9)
Comprehensive income attributable to non-controlling interests	2.5	3.3	1.2
Comprehensive income attributable to Minerals Technologies Inc.	$ 149.4	$ 81.2	$ 89.3

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(millions of dollars)	Year Ended December 31, 2024	2023	2022
Operating Activities:			
Net income	$ 170.9	$ 88.3	$ 126.3
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, depletion and amortization	94.9	95.0	94.2
Loss (gain) on disposal of property, plant and equipment	(11.8)	2.0	(0.1)
Deferred income taxes	(7.6)	(34.8)	(17.2)
Pension amortization and settlement loss	1.1	2.3	8.4
Provision for bad debts	1.4	2.8	4.1
Stock-based compensation	11.8	11.3	10.4
Impairment of assets	—	71.7	—
Provision for credit losses	30.0	—	—
Reduction of right of use asset	14.4	14.1	12.8
Non-cash debt extinguishment expenses	1.8	—	6.9
Restructuring costs	—	6.9	—
Other non-cash items	(6.6)	(4.3)	(1.7)
Changes in operating assets and liabilities			
Accounts receivable	5.2	1.8	(48.3)
Inventories	(26.2)	18.7	(66.1)
Pension plan funding	(11.7)	(9.9)	(9.1)
Accounts payable	2.3	(2.9)	7.2
Restructuring liabilities	(1.4)	(2.8)	(0.7)
Income taxes payable	5.8	6.7	11.7
Prepaid expenses and other	(37.9)	(33.3)	(33.1)
Net cash provided by operating activities	236.4	233.6	105.7
Investing Activities:			
Purchases of property, plant and equipment	(89.5)	(93.5)	(82.3)
Cash paid for acquisitions, net of cash acquired	(4.0)	(1.8)	(22.4)
Proceeds from sale of assets	12.3	0.2	1.0
Purchases of short-term investments	(8.6)	(17.9)	(6.6)
Proceeds from sale of short-term investments	8.0	20.0	6.7
Other investing activities	(12.7)	1.3	2.0
Net cash used in investing activities	(94.5)	(91.7)	(101.6)
Financing Activities:			
Long-term debt issuance	575.0	—	550.0
Debt issuance costs	(6.7)	—	(3.3)
Repayment of long-term debt	(533.6)	(14.8)	(552.3)
Proceeds from issuance of short-term debt	—	—	39.3
Repayment of short-term debt	(80.2)	(34.5)	—
Purchase of common stock for treasury	(63.6)	(14.2)	(56.0)
Proceeds from issuance of stock under option plan	15.7	5.1	5.7
Tax withholding payments for stock-based compensation	(2.8)	(2.8)	(3.3)
Dividends paid to non-controlling interests	(1.0)	(2.4)	(7.7)
Cash dividends paid	(13.2)	(8.1)	(6.5)
Net cash provided by (used in) financing activities	(110.4)	(71.7)	(34.1)
Effect of exchange rate changes on cash and cash equivalents	(15.6)	(0.2)	(22.3)
Net increase (decrease) in cash and cash equivalents	15.9	70.0	(52.3)
Cash and cash equivalents at beginning of period	317.2	247.2	299.5
Cash and cash equivalents at end of period	$ 333.1	$ 317.2	$ 247.2
Supplemental disclosure of cash flow information:			
Non-cash investing and financing activities			
Property, plant and equipment additions related to asset retirement obligations	$ 7.0	$ —	$ —
Treasury stock purchases settled after period end	$ 0.1	$ 0.6	$ —
Excise tax charged to equity not paid	$ 0.4	$ —	$ —

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

MINERALS TECHNOLOGIES INC. AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Equity Attributable to MTI						
(millions of dollars)	**Common Stock**	**Additional Paid-in Capital**	**Retained Earnings**	**Accumulated Other Comprehensive Loss**	**Treasury Stock**	**Non-controlling Interests**	**Total**
Balance as of December 31, 2021	$ 4.9	$ 474.2	$ 2,168.9	$ (333.6)	$ (775.1)	$ 40.2	$1,579.5
Net income	—	—	122.2	—	—	4.1	126.3
Other comprehensive loss	—	—	—	(32.9)	—	(2.9)	(35.8)
Dividends declared	—	—	(6.5)	—	—	—	(6.5)
Dividends paid to non-controlling interests	—	—	—	—	—	(7.7)	(7.7)
Issuance of shares pursuant to employee stock compensation plans	—	5.7	—	—	—	—	5.7
Purchase of common stock for treasury	—	—	—	—	(56.0)	—	(56.0)
Stock-based compensation	—	10.4	—	—	—	—	10.4
Conversion of RSU's for tax withholding	—	(2.7)	—	—	—	—	(2.7)
Balance as of December 31, 2022	$ 4.9	$ 487.6	$ 2,284.6	$ (366.5)	$ (831.1)	$ 33.7	$1,613.2
Net income	—	—	84.1	—	—	4.2	88.3
Other comprehensive loss	—	—	—	(2.9)	—	(0.9)	(3.8)
Dividends declared	—	—	(8.1)	—	—	—	(8.1)
Dividends paid to non-controlling interests	—	—	—	—	—	(2.3)	(2.3)
Issuance of shares pursuant to employee stock compensation plans	—	5.1	—	—	—	—	5.1
Purchase of common stock for treasury	—	—	—	—	(14.2)	—	(14.2)
Stock-based compensation	—	11.3	—	—	—	—	11.3
Conversion of RSU's for tax withholding	—	(2.8)	—	—	—	—	(2.8)
Balance as of December 31, 2023	$ 4.9	$ 501.2	$ 2,360.6	$ (369.4)	$ (845.3)	$ 34.7	$1,686.7
Net income	—	—	167.1	—	—	3.8	170.9
Other comprehensive loss	—	—	—	(17.7)	—	(1.3)	(19.0)
Dividends declared	—	—	(13.2)	—	—	—	(13.2)
Dividends paid to non-controlling interests	—	—	—	—	—	(1.0)	(1.0)
Issuance of shares pursuant to employee stock compensation plans	0.1	15.7	—	—	—	—	15.8
Purchase of common stock for treasury	—	—	—	—	(64.0)	—	(64.0)
Stock-based compensation	—	11.8	—	—	—	—	11.8
Conversion of RSU's for tax withholding	—	(4.8)	—	—	—	—	(4.8)
Balance as of December 31, 2024	$ 5.0	$ 523.9	$ 2,514.5	$ (387.1)	$ (909.3)	$ 36.2	$1,783.2

See Notes to Consolidated Financial Statements, which are an integral part of these statements.

Note 1. Summary of Significant Accounting Policies

Business

Minerals Technologies Inc. (the "Company") is a leading, technology-driven specialty minerals company that develops, produces, and markets a broad range of mineral and mineral-based products, related systems and services. The Company serves globally a wide range of consumer and industrial markets, including household and personal care, paper and packaging, food and pharmaceutical, automotive, construction, steel and foundry, environmental, and infrastructure.

Basis of Presentation

The accompanying consolidated financial statements include the accounts of the Company, its wholly and majority-owned subsidiaries, as well as variable interest entities for which the Company is the primary beneficiary. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The Company employs accounting policies that are in accordance with U.S. generally accepted accounting principles and require management to make estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reported period. Significant estimates include those related to valuation of long-lived assets, goodwill and other intangible assets, certain pension plan assumptions, valuation of deferred income tax assets, and litigation and environmental liabilities. Actual results could differ from those estimates.

Cash Equivalents and Short-term Investments

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. Short-term investments consist of financial instruments, mainly bank deposits, with original maturities beyond three months, but less than twelve months. Short-term investments amounted to $4.0 million and $4.3 million at December 31, 2024 and 2023, respectively. There were no unrealized holding gains or losses on the short-term bank investments held at December 31, 2024.

Trade Accounts Receivable

Trade accounts receivables are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in the Company's existing accounts receivable. The Company determines the allowance based on historical write-off experience and specific allowances for bankrupt customers. The Company also analyzes the collection history and financial condition of its other customers, considering current industry conditions and determines whether an allowance needs to be established. The Company reviews its allowance for doubtful accounts monthly. Past due balances over 90 days based on payment terms are reviewed individually for collectability. Allowance for doubtful accounts was $17.1 million and $20.3 million at December 31, 2024 and 2023, respectively. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. The Company does not have any off-balance-sheet credit exposure related to its customers.

Allowance for Credit Losses

The allowance for credit losses (ACL) is management's estimate of the current expected credit losses at the balance sheet date. Our credit exposure includes an unfunded loan commitment. For this exposure, we recognized an ACL associated with the unfunded amount, which is reported as a liability in accrued expenses and other current liabilities on our consolidated balance sheet.

Inventories

Inventories are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method.

Additionally, items such as idle facility expense, freight handling costs, and re-handling costs are recognized as current period charges. The allocation of fixed production overheads to the costs of conversion are based upon the normal capacity of the production facility. Fixed overhead costs associated with idle capacity are expensed as incurred.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Significant improvements are capitalized, while maintenance and repair expenditures are charged to operations as incurred. The Company capitalizes interest cost as a component of construction in progress. The straight-line method of depreciation is used for substantially all the assets for financial reporting purposes, except for mining related equipment which uses units-of-production method. The annual rates of depreciation are 3% - 6.67% for buildings, 6.67% - 12.5% for machinery and equipment, 8% - 12.5% for furniture and fixtures and 12.5% - 25% for computer equipment and software-related assets. The estimated useful lives of our PCC production facilities and machinery and equipment pertaining to our natural stone mining and processing plants and our chemical plants are 15 years.

Property, plant and equipment are depreciated over their useful lives. Useful lives are based on management's estimates of the period that the assets can generate revenue, which does not necessarily coincide with the remaining term of a customer's contractual obligation to purchase products made using those assets. The Company's sales of PCC are predominantly pursuant to long-term evergreen contracts, initially ten years in length, with paper mills at which the Company operates satellite PCC plants. The terms of many of these agreements have been extended, often in connection with an expansion of the satellite PCC plant. Failure of a PCC customer to renew an agreement or continue to purchase PCC from a Company facility could result in an impairment of assets charge or accelerated depreciation at such facility.

Depletion of mineral reserves is determined on a unit-of-extraction basis for financial reporting purposes, based upon proven and probable reserves, and generally on a percentage depletion basis for tax purposes.

Stripping Costs Incurred During Production

Stripping costs are those costs incurred for the removal of waste materials for the purpose of accessing ore body that will be produced commercially. Stripping costs incurred during the production phase of a mine are variable costs that are included in the costs of inventory produced during the period that the stripping costs are incurred.

Accounting for the Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, the Company estimates the undiscounted future cash flows (excluding interest), resulting from the use of the asset and its ultimate disposition. If the sum of the undiscounted cash flows (excluding interest) is less than the carrying value, the Company recognizes an impairment loss, measured as the amount by which the carrying value exceeds the fair value of the asset, determined principally using discounted cash flows.

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price and related costs over the value assigned to the net tangible and identifiable intangible assets of businesses acquired. Goodwill is not amortized, but instead assessed for impairment. Intangible assets with estimable useful lives are amortized on a straight-line basis over their respective estimated lives to the estimated residual values and reviewed for impairment.

The Company performs a qualitative assessment for each of its reporting units to determine if the two-step process for impairment testing is required. If the Company determines that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company would then evaluate the recoverability of goodwill using a two-step impairment test approach at the reporting unit level. In the first step, the fair value for the reporting unit is compared to its book value including goodwill. In the case that the fair value of the reporting unit is less than book value, a second step is performed which compares the fair value of the reporting unit's goodwill to the book value of the goodwill. The fair value for the goodwill is determined based on the difference between the fair values of the reporting unit and the net fair values of the identifiable assets and liabilities of such reporting unit. If the fair value of the goodwill is less than the book value, the difference is recognized as impairment.

In addition to the assessment of goodwill impairment, the Company also reviews its other identifiable intangibles for impairment. Each year, the Company reviews whether events or changes in circumstances could indicate that a long-lived asset's carrying amount may not be recoverable. Should such events occur, the value of intangibles not recoverable would be recognized as impairment.

Investment in Joint Ventures

The Company uses the equity method of accounting to record the results of its investments in companies in which it has significant influence but does not control; and cost method of accounting in companies in which it cannot exercise significant control. The Company records the equity in earnings of its investments in joint ventures on a one-month lag. At December 31, 2024 and 2023, the book value of the Company's equity method investments was $23.4 million and $20.0 million.

Accounting for Asset Retirement Obligations

The Company provides for obligations associated with the retirement of long-lived assets and the associated asset retirement costs. The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The associated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset. The Company also provides for legal obligations to perform asset retirement activities where timing or methods of settlement are conditional on future events.

The Company also records liabilities related to land reclamation as a part of the asset retirement obligations. The Company mines land for various minerals using a surface-mining process that requires the removal of overburden. In many instances, the Company is obligated to restore the land upon completion of the mining activity. As the overburden is removed, the Company recognizes this liability for land reclamation based on the estimated fair value of the obligation. The obligation is adjusted to reflect the passage of time and changes in estimated future cash outflows.

Fair Value of Financial Instruments

The recorded amounts of cash and cash equivalents, receivables, short-term borrowings, accounts payable, accrued interest, and variable-rate long-term debt approximate fair value because of the short maturity of those instruments or the variable nature of underlying interest rates. Short-term investments are recorded at cost, which approximates fair market value.

Derivative Financial Instruments

The Company records derivative financial instruments which are used to hedge certain foreign exchange risk at fair value on the balance sheet. See Note 12 for a full description of the Company's hedging activities and related accounting policies.

Revenue Recognition

Revenue is recognized at the point in time when the customer obtains control of the promised goods or services in an amount that reflects the consideration we expect to receive in exchange for those goods or services. The Company's revenues are primarily derived from the sale of products. Our primary performance obligation is satisfied upon shipment or delivery to our customer based on written sales terms, which is also when control is transferred. Revenues from sales of equipment are recorded upon completion of installation and transfer of control to the customer. Revenue where our performance obligations are satisfied in phases is recognized over time using certain input measures based on the measurement of the value transferred to the customer, including milestones achieved. Revenues from services are recorded when the services are performed.

In most of our PCC contracts, the price per ton is based upon the total number of tons sold to the customer during the year. Under those contracts, the price billed to the customer for shipments during the year is based on periodic estimates of the total annual volume that will be sold to the customer. Revenues are adjusted at the end of each year to reflect the actual volume sold. There were no significant revenue adjustments in the fourth quarter of 2024 and 2023, respectively. We have consignment arrangements with certain customers in our Engineered Solutions segment. Revenues for these transactions are recorded when the consigned products are consumed by the customer.

Foreign Currency

The assets and liabilities of the Company's international subsidiaries are translated into U.S. dollars using exchange rates at the respective balance sheet date. The resulting translation adjustments are recorded in accumulated other comprehensive income (loss) in shareholders' equity. Income statement items are generally translated at monthly average exchange rates prevailing during the period. International subsidiaries operating in highly inflationary economies translate non-monetary assets at historical rates, while net monetary assets are translated at current rates, with the resulting translation adjustments included in net income. At December 31, 2024, the Company had no international subsidiaries operating in highly inflationary economies, with the exception of its subsidiaries in Turkey.

Income Taxes

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company operates in multiple taxing jurisdictions, both within the U.S. and outside the U.S. In certain situations, a taxing authority may challenge positions that the Company has adopted in its income tax filings. The Company regularly assesses its tax position for such transactions and includes reserves for those differences in position. The reserves are utilized or reversed once the statute of limitations has expired or the matter is otherwise resolved.

The application of income tax law is inherently complex. Laws and regulations in this area are voluminous and are often ambiguous. As such, we are required to make many subjective assumptions and judgments regarding our income tax exposures. Interpretations of and guidance surrounding income tax laws and regulations change over time. As such, changes in our subjective assumptions and judgments can materially affect amounts recognized in the consolidated balance sheets and statements of operations. The Company's accounting policy is to recognize interest and penalties as part of its provision for income taxes. See Note 8 for additional details on our uncertain tax positions.

The accompanying financial statements do not include a provision for foreign withholding taxes on international subsidiaries' unremitted earnings, which are expected to be permanently reinvested overseas.

Research and Development

Research and development costs are expensed as incurred.

Accounting for Stock-Based Compensation

The Company recognizes compensation expense for share-based awards based upon the grant date fair value over the vesting period.

Pension and Post-retirement Benefits

The Company has defined benefit pension plans covering the majority of its eligible employees. The benefits are generally based on years of service and an employee's modified career earnings.

The Company also provides post-retirement healthcare benefits for the majority of its retirees and employees in the United States. The Company measures the costs of its obligation based on its best estimate. The net periodic costs are recognized as employees render the services necessary to earn the post-retirement benefits.

Environmental

Expenditures that relate to current operations are expensed or capitalized as appropriate. Expenditures that relate to an existing condition caused by past operations and which do not contribute to current or future revenue generation are expensed. Liabilities are recorded when it is probable the Company will be obligated to pay amounts for environmental site evaluation, remediation or related costs, and such amounts can be reasonably estimated.

Earnings Per Share

Basic earnings per share have been computed based upon the weighted average number of common shares outstanding during the period.

Diluted earnings per share have been computed based upon the weighted average number of common shares outstanding during the period assuming the issuance of common shares for all potentially dilutive common shares outstanding.

Subsequent Events

The Company has evaluated for subsequent events through the date of issuance of its financial statements.

Recently Issued Accounting Standards

Changes to accounting principles generally accepted in the United States of America (U.S. GAAP) are established by the Financial Accounting Standards Board (FASB) in the form of accounting standards updates (ASUs) to the FASB's Accounting Standards Codification. The Company considers the applicability and impact of all ASUs. ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated financial position and results of operations.

Adoption of Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures", which requires entities to report incremental information about significant segment expenses included in a segment's profit or loss measure, as well as the name and title of the chief operating decision maker. The guidance also requires interim disclosures related to reportable segment profit or loss and assets that had previously only been disclosed annually. The new standard is effective for fiscal years beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2023. The Company adopted this guidance on January 1, 2024 and updated the disclosures contained in Note 21. This guidance did not impact the Company's consolidated financial statements.

Income Taxes (Topic 740): Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures", that requires entities to disclose additional information about federal, state, and foreign income taxes primarily related to the income tax rate reconciliation and income taxes paid. The new standard also eliminates certain existing disclosure requirements related to uncertain tax positions and unrecognized deferred tax liabilities. The new standard is effective for interim and annual periods beginning on or after December 15, 2024. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements, but will result in disaggregation of the Company's tax footnote.

Income Statement-Reporting Comprehensive Income-Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses

In November 2024, the FASB issued ASU 2024-03, "Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses", that requires entities to disclose additional information in the notes to the financial statements about prescribed categories underlying any relevant income statement expense caption. The new standard is effective for annual periods beginning after December 15, 2026 and interim periods within fiscal years beginning after December 15, 2027. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements.

Note 2. Leases

The Company determines if an arrangement is a lease at inception. The Company has operating leases for premises, equipment, rail cars and automobiles. Our leases have remaining lease terms of 1 year to 50 years, some of which may include options to extend the leases further. The Company considers these options in determining the lease term used to establish the right-of-use assets and lease liabilities. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based upon the information available at commencement date, or as of implementation of ASC 842, in determining the present value of lease payments.

Leases with an initial term of 12 months or less are not recorded on the balance sheet. We recognize lease expense for these leases on a straight-line basis over the lease term. Certain lease agreements contain both lease and non-lease components. We account for lease components together with non-lease components.

Operating lease cost was $17.3 million, $16.8 million and $15.7 million for the years ended December 31, 2024, 2023 and 2022, respectively. The components of lease costs are as follows:

	December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Operating lease cost	$ 17.3	$ 16.7	$ 15.6
Short-term lease cost	—	0.1	0.1
Total	$ 17.3	$ 16.8	$ 15.7

Supplemental cash flow information and non-cash activity related to our leases are as follows:

(millions of dollars)	**December 31, 2024**
Operating cash flows information:	
Cash paid for amounts included in the measurement of lease liabilities	$ 18.2
Non-cash activity:	
Right-of-use assets obtained in the exchange for operating lease liabilities	$ 17.6

Weighted average remaining lease term and weighted average discount rates related to the Company's leases were as follows:

Weighted-average remaining operating lease term (in years)	5.30
Weighted-average operating leases discount rate	6.0%

The following table summarizes the Company's outstanding lease assets and liabilities and their classification on the Consolidated Balance Sheet:

		December 31,	
(millions of dollars)	**Balance Sheet Classification**	**2024**	**2023**
Right-of-use-asset	Other assets and deferred charges	$ 46.9	$ 44.1
Lease liability - current	Other current liabilities	14.5	13.5
Lease liability - non-current	Other non-current liabilities	38.7	37.9

Future minimum lease payments under the Company's leases as of December 31, 2024 were as follows:

(millions of dollars)	**December 31, 2024**
2025	$ 17.2
2026	14.7
2027	10.8
2028	8.4
2029	3.1
Thereafter	8.1
Total future minimum lease payments	62.3
Less imputed interest	(9.1)
Total	$ 53.2

Note 3. Revenue from Contracts with Customers

The Company's revenues are primarily derived from the sale of products in product lines within our Consumer & Specialties and Engineered Solutions businesses.

Our primary performance obligation (the sale of products) is satisfied upon shipment or delivery to our customers based on written sales terms, which is also when control is transferred. In most of our contracts in our Specialty Additives product line, which is in our Consumer & Specialties segment, the price per ton is based upon the total number of tons sold to the customer during the year. Under these contracts, the price billed to the customer for shipments during the year is based on periodic estimates of the total annual volume that will be sold to such customer. Revenues are adjusted at the end of each year to reflect the actual volume sold.

Revenue from sales of equipment, primarily in our High-Temperature Technologies product line within our Engineered Solutions segment, is recorded upon completion of installation and control is transferred to the customer. Revenue from services is recorded when the services have been performed. Included within our High-Temperature Technologies product line are certain consignment arrangements with certain customers in our Engineered Solutions segment. Revenues for these transactions are recorded when the consigned products are consumed by the customer and control is transferred.

Revenue where our performance obligations are satisfied in phases is recognized over time using certain input measures based on the measurement of the value transferred to the customer, including milestones achieved.

The following table disaggregates our revenue by major source (product line) for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Net Sales			
Household & Personal Care	$ 530.0	$ 517.6	$ 476.2
Specialty Additives	610.2	642.6	648.4
Consumer & Specialties Segment	1,140.2	1,160.2	1,124.6
High-Temperature Technologies	713.2	720.9	702.5
Environmental & Infrastructure	265.1	288.8	298.4
Engineered Solutions Segment	978.3	1,009.7	1,000.9
Total	$ 2,118.5	$ 2,169.9	$ 2,125.5

Note 4. Acquisitions

Concept Pet Heimtierprodukte GmbH

On April 29, 2022, the Company completed the acquisition of Concept Pet Heimtierprodukte GmbH ("Concept Pet"), a European supplier of pet litter products. The purchase of Concept Pet supports the expansion of our European pet care business, as well as providing additional mineral reserves. The purchase price was $28.0 million and the acquisition was financed through cash on hand. The fair value of the total consideration transferred, net of cash acquired, was $22.4 million. In the second quarter of 2023, an additional $1.8 million of hold back consideration was paid. In the second quarter of 2024, an additional $4.0 million was paid representing the final hold back consideration. The results of Concept Pet are included within our Household & Personal Care product line in our Consumer & Specialties segment. The acquisition has been accounted for using the acquisition method of accounting, which requires, among other things, that we recognize the assets acquired and liabilities assumed at their respective fair values as of the acquisition date. The Company recorded goodwill of $9.3 million and intangible assets of $4.3 million relating to this acquisition.

The Company incurred no acquisition related transaction and integration costs during 2024 and recorded $0.3 million and $5.1 million of acquisition-related costs during 2023 and 2022, respectively, which are reflected within the acquisition-related expenses line of the Consolidated Statements of Income.

Note 5. Restructuring and Other Items, net

In the third quarter of 2023, the Company recorded a $71.7 million non-cash impairment of long-lived assets charge related to its subsidiaries BMI Oldco Inc. (f/k/a Barretts Minerals Inc.) ("Oldco") and Barretts Ventures Texas LLC ("BVT") within the Consumer & Specialties segment. This impairment was triggered by increased claims and continued increases in legal costs, which led to the voluntary filing for relief under Chapter 11 of the U.S. Bankruptcy Code to address and comprehensively resolve Oldco's liabilities associated with the talc claims. See Note 17 for further information.

In the second quarter of 2023, the Company initiated a restructuring and cost savings program to further streamline our cost structure as a result of organizational efficiencies gained through our 2023 resegmentation. As a result, the Company recorded a charge of $6.6 million for restructuring and other charges related to severance and other costs. In the third quarter of 2023, an incremental charge of $0.3 million was recorded relating to this program.

The following table outlines the amount of restructuring charges recorded within the Consolidated Statements of Income and the segments they relate to:

Restructuring and Other Items, net	**Year Ended December 31,**		
(millions of dollars)	**2024**	**2023**	**2022**
Asset Write-Downs			
Consumer & Specialties	$ —	$ 71.7	$ —
Total asset write-down charges	$ —	$ 71.7	$ —
Severance and other employee costs			
Consumer & Specialties	$ —	$ 0.9	$ —
Engineered Solutions	—	3.2	—
Corporate	—	2.8	—
Total severance and other employee costs	$ —	$ 6.9	$ —
Total restructuring and other items, net	$ —	$ 78.6	$ —

At December 31, 2024 and 2023, the Company had $2.4 million and $3.8 million, respectively, included within other current liabilities within our Consolidated Balance Sheets for cash expenditures needed to satisfy remaining obligations under these reorganization initiatives. The Company expects to pay these remaining restructuring obligations by the end of the second quarter of 2025.

The following table is a reconciliation of our restructuring liability balance as of December 31, 2024 and 2023:

	December 31,	
(millions of dollars)	**2024**	**2023**
Restructuring liability, beginning of period	$ 3.8	$ —
Additional provisions	—	6.9
Cash payments	(1.4)	(2.8)
Other	—	(0.3)
Restructuring liability, end of period	$ 2.4	$ 3.8

Note 6. Stock-Based Compensation

The Company's 2015 Stock Award and Incentive Plan provides for grants of incentive and non-qualified stock options, restricted stock, restricted stock units, stock appreciation rights, stock awards and performance unit awards (the 2015 Stock Award and Incentive Plan, as amended, referred to herein as the "Plan" and together with its predecessor for awards granted prior to May 2015, the 2001 Stock Award and Incentive Plan, as amended and restated, the "Plans"). At the Company's 2024 Annual Meeting of Stockholders, the Company's stockholders ratified the adoption of an amendment and restatement of the Plan, which increased the number of shares available for issuance pursuant to the Plan by 889,000 shares and removed certain individual award limits in light of recent tax law changes. The Plans are administered by the Compensation Committee of the Board of Directors. Stock options granted under the Plans generally have a ten year term. The exercise price for stock options are at prices at or above the fair market value of the common stock on the date of the grant, and each award of stock options will vest ratably over a specified period, generally three years.

Stock-based compensation expense is recognized in the consolidated financial statements for stock options based on the grant date fair value.

Net income for the years ended 2024, 2023 and 2022 include $5.4 million, $5.2 million and $4.8 million pre-tax compensation costs, respectively, related to stock option expense as a component of marketing and administrative expenses. All stock option expense is recognized in the consolidated statements of operations. The related tax benefit included in the statement of income on the non-qualified stock options was $1.4 million, $1.4 million and $1.3 million for 2024, 2023 and 2022, respectively.

Stock Options

The fair value of options granted is estimated on the date of grant using the Black-Scholes valuation model. Compensation expense is recognized only for those options expected to vest, with forfeitures estimated at the date of grant based on the Company's historical experience and future expectations. The forfeiture rate assumption used for the periods ended December 31, 2024, 2023 and 2022 was 7.69%, 7.91% and 8.09%, respectively.

The weighted average grant date fair value for stock options granted during the years ended December 31, 2024, 2023 and 2022 was $25.33, $25.11 and $24.26, respectively. The weighted average grant date fair value for stock options vested during 2024, 2023 and 2022 was $23.75, $21.56 and $19.82, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2024, 2023 and 2022 was $7.0 million, $1.0 million and $2.0 million, respectively.

The fair value for stock awards was estimated at the date of grant using the Black-Scholes option valuation model with the following weighted average assumptions for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
	2024	**2023**	**2022**
Expected life (in years)	6.5	6.4	6.7
Interest rate	4.06%	3.51%	1.70%
Volatility	31.93%	32.05%	31.92%
Expected dividend yield	0.61%	0.30%	0.28%

The expected term of the options represents the estimated period of time until exercised and is based on historical experience of similar awards, based upon contractual terms, vesting schedules, and expectations of future employee behavior. The expected stock-price volatility is based upon the historical and implied volatility of the Company's stock. The interest rate is based upon the implied yield on U.S. Treasury bills with an equivalent remaining term. Estimated dividend yield is based upon historical dividends paid by the Company.

The following table summarizes stock option activity for the year ended December 31, 2024:

	Awards	**Weighted Average Exercise Price per Share**	**Weighted Average Remaining Contractual Life (Years)**	**Aggregate Intrinsic Value (Millions)**
Awards outstanding at December 31, 2023	1,514,462	$ 63.15		
Granted	196,471	66.72		
Exercised	(279,810)	55.85		
Canceled	(5,487)	66.76		
Expired	—	—		
Awards outstanding at December 31, 2024	1,425,636	$ 65.06	5.88	$ 16.1
Awards exercisable at December 31, 2024	997,406	$ 64.24	4.82	$ 12.1

The aggregate intrinsic value above is calculated before applicable income taxes, based on the Company's closing stock price of $76.21 as of the last business day of the period ended December 31, 2024 had all options been exercised on that date. The weighted average intrinsic value of the options exercised during 2024, 2023 and 2022 was $24.85, $7.78 and $16.34 per share, respectively. As of December 31, 2024, total unrecognized stock-based compensation expense related to non-vested stock options was approximately $5.1 million, which is expected to be recognized over a weighted average period of approximately three years.

The Company issues new shares of common stock upon the exercise of stock options.

Non-vested stock option activity for the year ended December 31, 2024 is as follows:

	Awards	Weighted Average Grant Date Fair Value per Share
Nonvested awards outstanding at December 31, 2023	460,141	$ 67.18
Granted	196,471	66.72
Vested	(222,895)	67.21
Canceled	(5,487)	66.76
Nonvested awards outstanding at December 31, 2024	428,230	$ 66.96

Deferred Restricted Stock Units

The Company has granted key employees units consisting of rights to receive shares of the Company's common stock pursuant to the Plans. The rights will be deferred for a specified number of years of service, subject to restrictions on transfer and other conditions. Compensation expense for these shares is recognized over the vesting period. The Company granted units consisting of rights to receive 103,169 shares, 102,843 shares and 98,464 shares during the periods ended December 31, 2024, 2023 and 2022, respectively. The fair value was determined based on the market value of unrestricted shares. As of December 31, 2024, there was unrecognized stock-based compensation related to deferred restricted stock units of $7.2 million, which will be recognized over approximately the next three years. The compensation expense amortized with respect to all units was approximately $6.5 million, $6.0 million and $5.7 million for the periods ended December 31, 2024, 2023 and 2022, respectively. In addition, the Company recorded reversals of $2.8 million, $2.7 million and $2.7 million for periods ended December 31, 2024, 2023 and 2022, respectively, related mostly to the conversion of units for tax withholding purposes. Such costs and reversals are included in marketing and administrative expenses.

The following table summarizes the deferred restricted stock unit activity for the Plan:

	Awards	Weighted Average Grant Date Fair Value per Share
Unvested balance at December 31, 2023	187,350	$ 67.15
Granted	103,169	66.79
Vested	(47,876)	67.19
Canceled	(43,849)	67.21
Unvested balance at December 31, 2024	198,794	$ 66.94

Note 7. Earnings Per Share (EPS)

	Year Ended December 31,		
(in millions, except per share data)	**2024**	**2023**	**2022**
Net income attributable to MTI	$ 167.1	$ 84.1	$ 122.2
Weighted average shares outstanding	32.1	32.5	32.7
Dilutive effect of stock options and deferred restricted stock units	0.2	0.1	0.1
Weighted average shares outstanding, adjusted	32.3	32.6	32.8
Basic earnings per share attributable to MTI	$ 5.21	$ 2.59	$ 3.74
Diluted earnings per share attributable to MTI	$ 5.17	$ 2.58	$ 3.73

Of the options outstanding of 1,425,636, 1,514,462 and 1,363,418 for the years ended December 31, 2024, 2023 and 2022, respectively, options to purchase 194,412 shares, 917,177 shares and 754,867 shares of common stock for the years ended December 31, 2024, 2023 and 2022, respectively, were not included in the computation of diluted earnings per share because they were anti-dilutive, as the exercise prices of the options were greater than the average market price of the common shares.

Note 8. Income Taxes

Income (loss) from operations before provision for taxes by domestic and foreign source is as follows:

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Income (loss) from operations before income taxes and income from affiliates and joint ventures:			
Domestic	$ 40.7	$ (38.9)	$ 39.3
Foreign	182.9	146.6	117.4
	$ 223.6	$ 107.7	$ 156.7

The provision (benefit) for taxes on income consists of the following:

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Domestic			
Taxes currently payable			
Federal	$ 20.0	$ 9.5	$ 16.3
State and local	2.8	6.7	3.3
Deferred income taxes	(12.3)	(31.5)	(16.0)
Domestic tax provision (benefit)	10.5	(15.3)	3.6
Foreign			
Taxes currently payable	44.2	42.2	29.8
Deferred income taxes	4.7	(3.2)	(1.3)
Foreign tax provision	48.9	39.0	28.5
Total tax provision	$ 59.4	$ 23.7	$ 32.1

The provision (benefit) for taxes on income shown in the previous table is classified based on the location of the taxing authority, regardless of the location in which the taxable income is generated.

The major elements contributing to the difference between the U.S. federal statutory tax rate and the consolidated effective tax rate are as follows:

	Year Ended December 31,		
	2024	**2023**	**2022**
U.S. statutory rate	21.0%	21.0%	21.0%
Depletion	(4.4)%	(10.3)%	(6.1)%
Difference between tax provided on foreign earnings and the U.S. statutory rate	4.7%	7.7%	2.4%
Global Intangible Low-Tax Income (GILTI)	0.1%	1.0%	2.3%
Foreign Derived Intangible Income	(1.0)%	(2.5)%	—
State and local taxes, net of federal tax benefit	1.4%	(0.1)%	(0.4)%
Tax credits	(0.7)%	(0.6)%	(0.4)%
Bankruptcy Funding	3.1%	—	—
Impact of uncertain tax positions	(0.3)%	0.2%	(1.3)%
Impact of officer's non-deductible compensation	1.1%	1.9%	1.3%
Foreign Withholding Tax	0.8%	2.0%	1.2%
Other	0.8%	1.7%	0.5%
Consolidated effective tax rate	26.6%	22.0%	20.5%

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

	December 31,	
(millions of dollars)	**2024**	**2023**
Deferred tax assets attributable to:		
Accrued liabilities	$ 31.4	$ 26.8
Net operating loss carry forwards	23.2	32.8
Pension and post-retirement benefits costs	2.9	16.0
Interest	16.2	9.1
Research and development capitalization	11.0	7.7
Valuation allowance	(20.6)	(25.2)
Other	13.3	21.3
Total deferred tax assets	77.4	88.5
Deferred tax liabilities attributable to:		
Plant and equipment, principally due to differences in depreciation	138.0	146.0
Intangible assets	49.5	53.6
Other	5.6	12.2
Total deferred tax liabilities	193.1	211.8
Net deferred tax liability	$ (115.7)	$ (123.3)

Net deferred tax assets and net deferred tax liabilities are classified as follows:

	December 31,	
(millions of dollars)	**2024**	**2023**
Net deferred tax asset, long-term	$ 14.8	$ 16.0
Net deferred tax liability, long-term	130.5	139.3
Net deferred tax liability, long-term	$ (115.7)	$ (123.3)

The Company has $23.2 million of deferred tax assets arising from tax loss carry forwards which will be realized through future operations. Carry forwards of approximately $14.2 million expire over the next 20 years, and $9.0 million can be utilized over an indefinite period.

On December 31, 2024, the Company had $1.9 million of total unrecognized tax benefits. Included in this amount were a total of $1.3 million of unrecognized income tax benefits that, if recognized, would affect the Company's effective tax rate. While it is expected that the amount of unrecognized tax benefits will change in the next 12 months, we do not expect the change to have a significant impact on the results of operations or the financial position of the Company.

The following table summarizes the activity related to our unrecognized tax benefits:

(millions of dollars)	**2024**	**2023**
Balance at beginning of the year	$ 2.8	$ 2.6
Increases related to current year tax positions	0.5	0.5
Decreases related to audit settlements and statute expirations	(1.4)	(0.3)
Balance at the end of the year	$ 1.9	$ 2.8

The Company's accounting policy is to recognize interest and penalties accrued, relating to unrecognized income tax benefits as part of its provision for income taxes. The Company recorded a net reversal of $0.1 million in interest and penalties during 2024 and had a total accrued balance on December 31, 2024 of $0.4 million. The Company believes that its accrued liabilities are sufficient to cover its U.S. and foreign tax contingencies.

The Company operates in multiple taxing jurisdictions, both within and outside the U.S. In certain situations, a taxing authority may challenge positions that the Company has adopted in its income tax filings. The Company, with a few exceptions (none of which are material), is no longer subject to U.S. federal, state, local, and international income tax examinations by tax authorities for years prior to 2017.

Net cash paid for income taxes were $70.8 million, $53.8 million and $44.0 million for the years ended December 31, 2024, 2023 and 2022, respectively.

The Company had approximately $497.7 million of foreign subsidiaries' undistributed earnings as of December 31, 2024. We intend to continue to permanently reinvest these earnings overseas for the foreseeable future and while U.S. federal tax expense has been recognized as a result of recent U.S. tax code changes, no deferred tax liabilities with respect to foreign withholding taxes or state taxes have been recognized.

In December 2021, the Organization for Economic Co-operation and Development ("OECD") released the Pillar Two Model Rules which aim to reform international corporate taxation rules, including the implementation of a global minimum tax rate. The Company began implementation of the Pillar Two Model Rules in the first quarter of 2024. The Company continues to assess the effect of the Pillar 2 Model Rules in all jurisdictions and does not expect that Pillar 2 will have a material impact on its consolidated financial statements.

Note 9. Inventories

The following is a summary of inventories by major category:

	December 31,	
(millions of dollars)	**2024**	**2023**
Raw materials	$ 167.7	$ 144.3
Work-in-process	12.3	11.7
Finished goods	106.7	113.5
Packaging and supplies	55.4	55.9
Total inventories	$ 342.1	$ 325.4

Note 10. Property, Plant and Equipment

The major categories of property, plant and equipment and accumulated depreciation and depletion are presented below:

	December 31,	
(millions of dollars)	**2024**	**2023**
Mineral rights and reserves	$ 560.0	$ 552.6
Land	43.0	44.5
Buildings	202.0	207.3
Machinery and equipment	1,236.4	1,201.1
Furniture and fixtures and other	144.5	140.0
Construction in progress	50.7	44.6
	2,236.6	2,190.1
Less: accumulated depreciation and depletion	(1,246.9)	(1,203.3)
Property, plant and equipment, net	$ 989.7	$ 986.8

In the fourth quarter of 2024, the Company recorded a $12.3 million net gain on sale of assets for a facility within the Engineered Solutions segment.

In the third quarter of 2023, the Company recorded a $71.7 million non-cash impairment of long-lived assets charge related to its subsidiaries Oldco and BVT within the Consumer & Specialties segment. See Note 17 for further information.

Depreciation and depletion expense for the years ended December 31, 2024, 2023 and 2022 was $79.5 million, $79.4 million and $76.3 million, respectively.

Note 11. Goodwill and Other Intangible Assets

Goodwill and other intangible assets with indefinite lives are not amortized, but instead are assessed for impairment, at least annually. The carrying amount of goodwill was $913.8 million and $913.6 million as of December 31, 2024 and December 31, 2023, respectively. The net change in goodwill since December 31, 2024 was attributable to the effects of foreign exchange.

The balance of goodwill by reporting unit and the activity occurring in the past two fiscal years is as follows:

(millions of dollars)	Consumer & Specialties	Engineered Solutions	Consolidated
Balance at December 31, 2022	$ 346.4	$ 568.4	$ 914.8
Change in goodwill relating to:			
Foreign exchange translation	(1.2)	—	(1.2)
Total Changes	$ (1.2)	$ —	$ (1.2)
Balance at December 31, 2023	$ 345.2	$ 568.4	$ 913.6
Change in goodwill relating to:			
Foreign exchange translation	0.5	(0.3)	0.2
Total Changes	$ 0.5	$ (0.3)	$ 0.2
Balance at December 31, 2024	$ 345.7	$ 568.1	$ 913.8

Acquired intangible assets subject to amortization as of December 31, 2024 and December 31, 2023 were as follows:

		December 31, 2024 (in millions of dollars)		December 31, 2023 (in millions of dollars)	
	Weighted Average Useful Life (Years)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Tradenames	34	$ 221.5	$ 63.0	$ 221.5	$ 59.1
Technology	13	18.8	15.1	18.8	14.2
Patents and trademarks	19	6.4	6.4	6.4	6.4
Customer relationships	21	77.5	21.6	79.0	15.0
	29	$ 324.2	$ 106.1	$ 325.7	$ 94.7

The weighted average amortization period of the acquired intangible assets subject to amortization is approximately 29 years. Amortization expense was approximately $12.1 million, $12.7 million and $12.7 million for the years ended December 31, 2024, 2023 and 2022, respectively and is recorded within the Marketing and administrative expenses line within the Consolidated Statements of Income. The estimated amortization expense is as follows: 2025 - $11.5 million; 2026 -$11.5 million; 2027 - $11.5 million; 2028 - $11.5 million; 2029 - $11.5 million and $160.6 million thereafter.

Note 12. Derivative Financial Instruments and Hedging Activities

As a multinational corporation with operations throughout the world, the Company is exposed to certain market risks. The Company uses a variety of practices to manage these market risks, including, when considered appropriate, derivative financial instruments. The Company's objective is to offset gains and losses resulting from interest rates and foreign currency exposures with gains and losses on the derivative contracts used to hedge them. The Company uses derivative financial instruments only for risk management and not for trading or speculative purposes.

By using derivative financial instruments to hedge exposures to changes in interest rates and foreign currencies, the Company exposes itself to credit risk and market risk. Credit risk is the risk that the counterparty will fail to perform under the terms of the derivative contract. When the fair value of a derivative contract is positive, the counterparty owes the Company, which creates credit risk for the Company. When the fair value of a derivative contract is negative, the Company owes the counterparty, and therefore, it does not face any credit risk. The Company minimizes the credit risk in derivative instruments by entering into transactions with major financial institutions.

Market risk is the adverse effect on the value of a financial instrument that results from a change in interest rates, currency exchange rates, or commodity prices. The market risk associated with interest rate and forward exchange contracts is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken.

Cash Flow Hedges

For derivative instruments that are designated and qualify as cash flow hedges, the Company records the effective portion of the gain or loss in accumulated other comprehensive income (loss) as a separate component of shareholders' equity. The Company subsequently reclassifies the effective portion of gain or loss into earnings in the period during which the hedged transaction is recognized in earnings.

The Company utilizes interest rate swaps to limit exposure to market fluctuations on floating-rate debt. In the second quarter of 2023, the Company entered into a floating to fixed interest rate swap for a notional amount of $150 million. The fair value of this swap is an asset of $0.3 million at December 31, 2024 and is recorded in other assets and deferred charges on the Consolidated Balance Sheet. This interest rate swap is designated as a cash flow hedge. As a result, the gains and losses associated with this interest rate swap are recorded in accumulated other comprehensive income (loss).

Other

The Company is exposed to potential gains or losses from foreign currency fluctuations affecting net investments and earnings denominated in foreign currencies. The Company is particularly sensitive to currency exchange rate fluctuations for the following currencies: British pound sterling (GBP), Chinese renminbi (CNY), Euro, Malaysian ringgit (MYR), Polish zloty (PLN), South African Rand (ZAR), Thai baht (THB) and Turkish lira (TRY). When considered appropriate, the Company enters into foreign exchange derivative contracts to mitigate the risk of fluctuations on these exposures. The Company does not designate these contracts for hedge accounting treatment and the changes in fair value of these contracts are recorded in earnings. The Company recorded losses of $0.1 million, $0.1 million and $0.8 million in other non-operating income (deductions), net within the Consolidated Statements of Income for the years ended 2024, 2023 and 2022 respectively. There were no open contracts at December 31, 2024 and December 31, 2023.

Note 13. Fair Value of Financial Instruments

Fair value is an exchange price that would be received for an asset or paid to transfer a liability (exit price) in an orderly transaction between market participants at the measurement date. The Company utilizes market data or assumptions that market participants would use in pricing the asset or liability. The Company follows a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs about which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Assets and liabilities measured at fair value are based on one or more of three valuation techniques. The three valuation techniques are as follows:

- Market approach – prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.
- Cost approach – amount that would be required to replace the service capacity of an asset or replacement cost.
- Income approach – techniques to convert future amounts to a single present amount based on market expectations, including present value techniques, option-pricing and other models.

The Company primarily applies the income approach for foreign exchange derivatives for recurring fair value measurements and attempts to utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs.

The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities accounted for at fair value on a recurring basis at the end of each of the past two years. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

(millions of dollars)		Fair Value Measurements Using		
Description	**Asset / (Liability) Balance at December 31, 2024**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Deferred compensation plan assets	$ 13.6	$ —	$ 13.6	$ —
Supplementary pension plan assets	19.4	—	19.4	—
Interest rate swap	0.3	—	0.3	—

		Fair Value Measurements Using		
Description	**Asset / (Liability) Balance at December 31, 2023**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Deferred compensation plan assets	$ 13.7	$ —	$ 13.7	$ —
Supplementary pension plan assets	15.5	—	15.5	—
Interest rate swap	(0.1)	—	(0.1)	—

The fair value of foreign exchange contracts is determined based on inputs that are readily available in public markets or can be derived from information available in publicly quoted markets and are categorized as Level 2. Deferred compensation and supplementary pension plan assets related to the Company's 2014 acquisition of AMCOL International Corporation are valued using quoted prices for similar assets in active markets.

The Company does not have any financial assets or liabilities measured at fair value on a recurring basis categorized as Level 3, except for pension assets discussed in Note 16, and there were no transfers in or out of Level 3 during the year ended December 31, 2024 and 2023. There were also no changes to the Company's valuation techniques used to measure asset and liability fair values on a recurring basis.

Note 14. Financial Instruments and Concentrations of Credit Risk

The following methods and assumptions were used to estimate the fair value of each class of financial instrument:

Cash and cash equivalents, short-term investments, accounts receivable and payable: The carrying amounts approximate fair value because of the short maturities of these instruments.

Short-term debt and other liabilities: The carrying amounts of short-term debt and other liabilities approximate fair value because of the short maturities of these instruments.

Long-term debt: The fair value of the long-term debt of the Company is estimated based on the quoted market prices for that debt or similar debt and approximates the carrying amount.

Forward exchange contracts: The fair value of forward exchange contracts (used for hedging purposes) is based on information derived from active markets. If appropriate, the Company would enter into forward exchange contracts to mitigate the impact of foreign exchange rate movements on the Company's operating results. It does not engage in speculation. Such foreign exchange contracts would offset losses and gains on the assets, liabilities and transactions being hedged.

Credit risk: The Company provides credit to customers in the ordinary course of business. The Company's customer base is diverse and includes customers located throughout the world. Credit risk results from the possibility that a loss may occur from the failure of another party to perform according to the terms of the contracts. The Company regularly monitors its credit risk exposures and takes steps to mitigate the likelihood of these exposures resulting in an actual loss. In the second quarter of 2024, the Company entered into a Debtor-in-Possession Credit Agreement with Oldco and recorded a provision for credit losses of $30.0 million for the maximum principal amount under such Credit Agreement. See Note 17 for further information. The Company's extension of credit is based on an evaluation of the customer's financial condition and collateral is generally not required.

The Company's bad debt expense for the years ended December 31, 2024, 2023 and 2022 was $1.4 million, $2.8 million and $4.1 million, respectively.

Note 15. Long-Term Debt and Commitments

The following is a summary of long-term debt:

	December 31,	
(millions of dollars)	**2024**	**2023**
Secured Credit Agreement:		
Term Loan due 2031, net of unamortized deferred financing cost and original issue discount of $7.3 million and $— million	$ 567.7	$ —
Previous Secured Credit Agreement:		
Term Loan due 2027, net of unamortized deferred financing cost of $— million and $2.4 million	—	530.4
Senior Notes:		
5.00% due 2028, net of unamortized deferred financing costs of $3.2 million and $3.9 million	396.8	396.1
Other debt	1.6	2.6
Total	$ 966.1	$ 929.1
Less: Current maturities	6.5	18.0
Long-term debt	$ 959.6	$ 911.1

On November 26, 2024, the Company, entered into a Refinancing Facility Agreement and Incremental Facility Amendment (the "Amendment") to amend the previous credit agreement (the "Previous Credit Agreement"; the previous credit agreement, as amended by the Amendment, being the "Amended Credit Agreement").

The Amendment provides for, among other things, a new senior secured revolving credit facility with aggregate commitments of $400 million (the "Revolving Facility"), a portion of which may be used for the issuance of letters of credit and swingline loans, and a new senior secured term loan facility with aggregate commitments of $575 million (the "Term Loan Facility" and, together with the Revolving Facility, the "Senior Secured Credit Facilities"). The Revolving Facility and the Term Loan Facility replace the facilities under the Previous Credit Agreement, which provided for, among other things, a $550 million senior secured term loan facility and a $300 million senior secured revolving credit facility. The maturity date for loans and commitments under the Revolving Facility is November 26, 2029, and the maturity date for loans under the Term Loan Facility is November 26, 2031; provided that the maturity dates of the Revolving Facility and the Term Loan Facility will be adjusted to the date that is 91 days prior to the stated maturity date of the Company's 5.0% Senior Notes due 2028 (the "Notes") unless, prior to the date that is 91 days prior to the stated maturity date of the Notes, all amounts in excess of $50 million of the Notes have been either (a) refinanced with indebtedness permitted under the Amended Credit Agreement maturing later than 90 days after the scheduled maturity date of the Revolving Facility or of the Term Loan Facility, as applicable, or (b) repaid, discharged or repaid (other than with the proceeds of any indebtedness maturing earlier than 91 days after the scheduled maturity date of the Revolving Facility or of the Term Loan Facility, as applicable). Loans under the Term Loan Facility amortize at a rate equal to 1.00% per annum, payable in equal quarterly installments, and were issued with original issue discount at 99.875% of par.

Loans under the Revolving Facility will bear interest at a rate equal to (a) for loans denominated in U.S. dollars, at the election of the Company, Term SOFR plus an applicable margin equal to 1.375% per annum or a base rate plus an applicable margin equal to 0.375% per annum, (b) for loans denominated in Euros, adjusted EURIBOR plus an applicable margin equal to 1.375% per annum and (c) for loans denominated in Pounds Sterling, SONIA plus an applicable margin equal to 1.375% per annum, subject in each case to (i) an increase of 37.5 basis points in the event that, and for so long as, the Net Leverage Ratio (as defined in the Amended Credit Agreement) is greater than or equal to 3.00 to 1.00 as of the last day of the preceding fiscal quarter, (ii) an increase of 12.5 basis points in the event that, and for so long as, the Net Leverage Ratio is less than 3.00 to 1.00 and greater than or equal to 2.00 to 1.00 as of the last day of the preceding fiscal quarter and (iii) a decrease of 12.5 basis points in the event that, and for so long as, the Net Leverage Ratio is less than 1.00 to 1.00 as of the last day of the preceding fiscal quarter. Loans under the Term Loan Facility will bear interest at a rate equal to, at the election of the Company, Term SOFR plus an applicable margin equal to 2.00% per annum or a base rate plus an applicable margin equal to 1.00% per annum. The Company will pay certain fees under the Amended Credit Agreement, including (a) a commitment fee of 0.175% per annum on the undrawn portion of the Revolving Facility (subject to a step-ups to 0.300% and 0.250% and a step-down to 0.150% at the same levels described above), (b) a fronting fee of 0.125% per annum on the average daily undrawn amount of, plus unreimbursed amounts in respect of disbursements under, letters of credit issued under the Revolving Facility and (c) customary annual administration fees. The obligations of the Company under the Senior Secured Credit Facilities are unconditionally guaranteed jointly and severally by, subject to certain exceptions, all material domestic subsidiaries of the Company (the "Guarantors") and secured, subject to certain exceptions, by a security interest in substantially all of the tangible and intangible assets of the Company and the Guarantors.

In the fourth quarter of 2024, the Company recorded $1.8 million in non-cash debt extinguishment expenses related to the refinancing of our credit facilities, which represents the difference between the redemption payment and the carrying value of the debt at the refinancing date. All lenders under the previous facility were repaid in full.

As of December 31, 2024, there were $4.5 million in loans and $9.1 million in letters of credit outstanding under the Revolving Facility.

On June 30, 2020, the Company issued $400 million aggregate principal amount of "Notes". The Notes were issued pursuant to an indenture, dated as of June 30, 2020, between the Company and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Indenture"). The Notes bear an interest rate of 5.0% per annum payable semi-annually on January 1 and July 1 of each year, beginning on January 1, 2021. The Notes are unconditionally guaranteed on a senior unsecured basis by each of the Company's existing and future wholly owned domestic restricted subsidiaries that is a borrower under or that guarantees the Company's obligations under its Senior Secured Credit Facilities or that guarantees the Company's or any of the Company's wholly owned domestic subsidiaries' long-term indebtedness in an aggregate amount in excess of $50 million.

The Company may redeem some or all of the Notes at any time and from time to time at the applicable redemption prices listed in the Indenture, plus accrued and unpaid interest, if any, to, but excluding, the applicable redemption date.

If the Company experiences a change of control (as defined in the indenture), the Company is required to offer to repurchase the Notes at 101% of the principal amount of such Notes, plus accrued and unpaid interest, if any, to, but excluding, the date of repurchase.

The Amended Credit Agreement and the Indenture both contain certain customary affirmative and negative covenants that limit or restrict the ability of the Company and its restricted subsidiaries to enter into certain transactions or take certain actions, as well as customary events of default. In addition, the Amended Credit Agreement contains a financial covenant that requires the Company to maintain a maximum Net Leverage Ratio of 4.00 to 1.00 for each four fiscal quarter period (subject to an increase to 5.00 to 1.00 for four quarters in connection with certain significant acquisitions).

The Company has a committed loan facility in Japan. As of December 31, 2024, there was an outstanding balance of $0.9 million on this facility. Principal will be repaid in accordance with the payment schedule ending in 2026. The Company repaid $0.4 million on this loan in 2024.

As part of the Concept Pet acquisition, the Company assumed $1.9 million in long-term debt, recorded at fair value, consisting of two terms loans, one that matures in 2025 and one that matures in 2027. Both loans have annual payments and carry a variable interest rate. The Company repaid $0.3 million on these loans during 2024.

As of December 31, 2024, the Company had $24.3 million in uncommitted short-term bank credit lines, $0.6 million of which were in use.

There were $5.1 million and $85.4 million short-term borrowings as of December 31, 2024 and 2023, respectively. The weighted average interest rates on short-term borrowings outstanding was 6.9% for the years ended December 31, 2024 and 2023, respectively.

The aggregate maturities of long-term debt are as follows: $6.5 million in 2025; $6.4 million in 2026; $6.0 million in 2027, $405.8 million in 2028; $5.7 million in 2029 and $546.3 million thereafter.

During 2024, 2023 and 2022, respectively, the Company incurred interest costs of $63.2 million, $64.1 million and $48.6 million, including $1.0 million, $1.0 million and $1.3 million, respectively, which were capitalized. Interest paid approximated the incurred interest cost.

Note 16. Benefit Plans

Pension Plans and Other Postretirement Benefit Plans

The Company and its subsidiaries have pension plans covering the majority of eligible employees on a contributory or non-contributory basis. Benefits under defined benefit plans are generally based on years of service and an employee's career earnings. Employees generally become fully vested after five years.

The Company also provides postretirement health care and life insurance benefits for the majority of its U.S. retired employees. Employees are generally eligible for benefits upon retirement and completion of a specified number of years of creditable service. The Company does not pre-fund these benefits and has the right to modify or terminate the plan in the future.

The Company's disclosures for the U.S. plans have been combined with those outside of the U.S. as the international plans do not have significantly different assumptions, and together represent approximately 20% of our total benefit obligation.

The following table sets forth the Company's pension obligation and funded status at December 31:

	Pension Benefits		Post-Retirement Benefits	
(millions of dollars)	**2024**	**2023**	**2024**	**2023**
Change in benefit obligations:				
Beginning projected benefit obligation	$ 368.9	$ 348.9	$ 2.0	$ 1.8
Service cost	4.2	4.5	—	—
Interest cost	16.0	16.0	0.1	0.1
Actuarial loss (gain)	(25.4)	11.4	(0.1)	0.1
Benefits paid	(18.7)	(15.0)	(0.1)	—
Settlements	—	(0.5)	—	—
Foreign exchange impact	(3.1)	3.3	(0.1)	—
Other	0.4	0.3	—	—
Ending projected benefit obligation	342.3	368.9	1.8	2.0
Change in plan assets:				
Beginning fair value	317.4	285.4	—	—
Actual return on plan assets	33.5	34.4	—	—
Employer contributions	11.6	9.9	0.1	—
Plan participants' contributions	0.4	0.3	—	—
Benefits paid	(18.7)	(15.0)	(0.1)	—
Settlements	—	(0.5)	—	—
Foreign exchange impact	(2.9)	2.9	—	—
Ending fair value	341.3	317.4	—	—
Funded status	$ (1.0)	$ (51.5)	$ (1.8)	$ (2.0)

Amounts recognized in the consolidated balance sheet consist of:

	Pension Benefits		Post-Retirement Benefits	
(millions of dollars)	**2024**	**2023**	**2024**	**2023**
Non-current asset	$ 19.5	$ —	$ —	$ —
Current liability	(1.6)	(1.8)	(0.1)	(0.1)
Non-current liability	(18.9)	(49.7)	(1.7)	(1.9)
Net liability recognized	$ (1.0)	$ (51.5)	$ (1.8)	$ (2.0)

The current portion of pension liabilities is included in accrued compensation and related items.

Amounts recognized in accumulated other comprehensive loss, net of related tax effects, consist of:

	Pension Benefits		Post-Retirement Benefits	
(millions of dollars)	**2024**	**2023**	**2024**	**2023**
Net actuarial (gain) loss	$ 1.2	$ 32.0	$ (3.2)	$ (3.3)
Prior service cost	0.1	0.1	—	—
Amount recognized end of year	$ 1.3	$ 32.1	$ (3.2)	$ (3.3)

The accumulated benefit obligation for all defined benefit pension plans was $327.5 million and $350.3 million at December 31, 2024 and 2023, respectively. The accumulated benefit obligations and projected benefit obligations are in excess of the plan assets for primarily all of the Company's defined benefit plans.

Changes in the Plan assets and benefit obligations recognized in other comprehensive income:

	Pension Benefits		Post-Retirement Benefits	
(millions of dollars)	**2024**	**2023**	**2024**	**2023**
Current year actuarial gain (loss)	$ 29.7	$ 3.8	$ 0.1	$ (0.1)
Amortization of actuarial (gain) loss	1.1	2.2	(0.3)	(0.3)
Total recognized in other comprehensive income	$ 30.8	$ 6.0	$ (0.2)	$ (0.4)

The components of net periodic benefit costs are as follows:

	Pension Benefits			Post-Retirement Benefits		
(millions of dollars)	**2024**	**2023**	**2022**	**2024**	**2023**	**2022**
Service cost	$ 4.2	$ 4.5	$ 6.6	$ —	$ —	$ —
Interest cost	16.0	16.0	11.0	0.1	0.1	—
Expected return on plan assets	(19.8)	(17.8)	(21.5)	—	—	—
Recognized net actuarial (gain) loss	1.5	2.9	5.3	(0.4)	(0.5)	(0.4)
Settlement/curtailment (gain) loss	—	0.1	3.5	—	—	—
Net periodic benefit cost	$ 1.9	$ 5.7	$ 4.9	$ (0.3)	$ (0.4)	$ (0.4)

Unrecognized prior service cost is amortized over the average remaining service period of each active employee.

The Company's funding policy for U.S. plans generally is to contribute annually into trust funds at a rate that provides for future plan benefits and maintains appropriate funded percentages. Annual contributions to the U.S. qualified plans are at least sufficient to satisfy regulatory funding standards and are not more than the maximum amount deductible for income tax purposes. The funding policies for the international plans conform to local governmental and tax requirements. The plans' assets are invested primarily in stocks and bonds.

Additional Information

The weighted average assumptions used to determine net periodic benefit cost in the accounting for the pension benefit plans and other benefit plans for the years ended December 31, 2024, 2023 and 2022 are as follows:

	Year Ended December 31,		
	2024	**2023**	**2022**
Discount rate	5.16%	4.84%	4.30%
Expected return on plan assets	6.59%	6.53%	6.34%
Rate of compensation increase	2.75%	2.77%	2.74%
Interest crediting rate	3.75%	2.25%	2.25%

The weighted average assumptions used to determine benefit obligations for the pension benefit plans and other benefit plans at December 31, 2024, 2023 and 2022 are as follows:

	Year Ended December 31,		
	2024	**2023**	**2022**
Discount rate	4.75%	4.63%	4.84%
Rate of compensation increase	2.75%	2.76%	2.76%

For 2024, 2023 and 2022, the discount rate was based on the FTSE Pension Discount Curve, a yield curve of high quality corporate bonds with cash flows matching our plans' expected benefit payments. The expected return on plan assets is based on our asset allocation mix and our historical return, taking into account current and expected market conditions. The actual return/(loss) on pension assets was approximately 10% in 2024, 11% in 2023 and (22)% in 2022.

The Company maintains a self-funded health insurance plan for its retirees. This plan provided that the maximum health care cost trend rate would be 5%. Effective June 2010, the Company amended its plan to change the eligibility requirement for retirees and revised its plan so that increases in expected health care costs would be borne by the retiree. Effective January 1, 2022, the plan was closed to new retirees.

Plan Assets

The Company's pension plan weighted average asset allocation percentages at December 31, 2024 and 2023 by asset category are as follows:

	December 31,	
	2024	**2023**
Asset Category		
Equity securities	55.3%	51.3%
Fixed income securities	33.1%	35.3%
Real estate	0.1%	0.3%
Other	11.5%	13.1%
Total	100.0%	100.0%

The Company's pension plan fair values at December 31, 2024 and 2023 by asset category are as follows:

(millions of dollars)	December 31, 2024	December 31, 2023
Asset Category		
Equity securities	$ 188.7	$ 162.9
Fixed income securities	112.8	112.0
Real estate	0.3	0.8
Other	39.5	41.7
Total	$ 341.3	$ 317.4

The following table presents domestic and foreign pension plan assets information at December 31, 2024, 2023 and 2022 (the measurement date of pension plan assets):

	U.S. Plans			International Plans		
(millions of dollars)	2024	2023	2022	2024	2023	2022
Fair value of plan assets	$ 277.1	$ 251.4	$ 226.4	$ 64.2	$ 66.0	$ 59.0

The following table summarizes our defined benefit pension plan assets measured at fair value as of December 31, 2024:

(millions of dollars)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Pension Assets Fair Value as of December 31, 2024				
Equity securities				
US equities	$ 167.2	$ —	$ —	$ 167.2
Non-US equities	21.5	—	—	21.5
Fixed income securities				
Corporate debt instruments	98.9	13.9	—	112.8
Real estate and other				
Real estate	—	—	0.3	0.3
Other	0.4	33.9	5.2	39.5
Total assets	$ 288.0	$ 47.8	$ 5.5	$ 341.3

The following table summarizes our defined benefit pension plan assets measured at fair value as of December 31, 2023:

(millions of dollars)	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Pension Assets Fair Value as of December 31, 2023				
Equity securities				
US equities	$ 142.5	$ —	$ —	$ 142.5
Non-US equities	20.4	—	—	20.4
Fixed income securities				
Corporate debt instruments	98.0	14.0	—	112.0
Real estate and other				
Real estate	—	—	0.8	0.8
Other	0.4	35.0	6.3	41.7
Total assets	$ 261.3	$ 49.0	$ 7.1	$ 317.4

U.S. equities – This class included actively and passively managed common equity securities comprised primarily of large-capitalization stocks with value, core and growth strategies.

Non-U.S. equities – This class included actively managed common equity securities comprised primarily of international large-capitalization stocks.

Fixed income – This class included corporate debt instruments.

Real Estate and other – This class included assets related to real estate and other assets such as insurance contracts.

Asset classified as Level 1 are valued using quoted prices on major stock exchange on which individual assets are traded. Our Level 2 assets are valued using net asset value. The net asset value is quoted on a private market that is not active; however, the unit price is based on the underlying investments that are traded on an active market. Our Level 3 assets are estimated at fair value based on the most recent financial information available for the underlying securities, which are not traded on active market, and represents significant unobservable input.

The following is a reconciliation of changes in fair value measurement of plan assets using significant unobservable inputs (Level 3):

(millions of dollars)	
Beginning balance at December 31, 2022	$ 7.6
Purchases, sales, settlements	—
Actual (loss) return on plan assets still held at reporting date	(0.6)
Foreign exchange impact	0.1
Ending balance at December 31, 2023	$ 7.1
Purchases, sales, settlements	—
Actual (loss) return on plan assets still held at reporting date	(1.6)
Foreign exchange impact	—
Ending balance at December 31, 2024	$ 5.5

There were no transfers in or out of Level 3 during the year ended December 31, 2024 and 2023.

Contributions

The Company expects to contribute $11.0 million to its pension plans and $0.1 million to its other post-retirement benefit plan in 2025.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

(millions of dollars)	Pension Benefits	Other Benefits
2025	$ 23.9	$ 0.1
2026	$ 23.9	$ 0.1
2027	$ 26.3	$ 0.2
2028	$ 25.4	$ 0.2
2029	$ 24.4	$ 0.2
2030-2034	$ 121.9	$ 0.8

Investment Strategies

The investment strategy for pension plan assets is to maintain a broadly diversified portfolio designed to both preserve and grow plan assets to meet future plan obligations. The Company's average rate of return on assets from inception through December 31, 2024 was approximately 9%. The Company's assets are strategically allocated among equity, debt and other investments to achieve a diversification level that dampens fluctuations in investment returns. The Company's long-term investment strategy is an investment portfolio mix of approximately 55%-65% in equity securities, 30%-35% in fixed income securities and 0%-15% in other securities.

Savings and Investment Plan

The Company maintains a voluntary Savings and Investment Plan (a 401(k) plan) for most non-union employees in the U.S. Within prescribed limits, the Company bases its contribution to the Savings and Investment Plan on employee contributions. The Company's contributions amounted to $6.4 million, $6.2 million and $5.7 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Note 17. Contingencies

The Company is party to a number of lawsuits arising in the normal course of our business. The Company and certain of the Company's subsidiaries are among numerous defendants in a number of cases seeking damages for alleged exposure to asbestos-contaminated talc products sold by the Company's subsidiary BMI Oldco Inc.

On October 2, 2023 (the "Petition Date"), notwithstanding the Company's confidence in the safety of Oldco's talc products, the Company's subsidiaries, Oldco and Barretts Ventures Texas LLC ("BVT" and, together with Oldco, the "Chapter 11 Debtors"), filed voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code in the United States Bankruptcy Court for the Southern District of Texas (the "Chapter 11 Cases") to address and comprehensively resolve Oldco's liabilities associated with talc. Minerals Technologies Inc. and the Company's other subsidiaries were not included in the Chapter 11 filing.

The Chapter 11 Debtors' ultimate goal in the Chapter 11 Cases is to confirm a plan of reorganization under Section 524(g) of the U.S. Bankruptcy Code and utilize this provision of the Bankruptcy Code to establish a trust that will address all current and future talc-related claims. In January 2024, the Chapter 11 Debtors and Minerals Technologies Inc. commenced a court-approved mediation process with the Official Committee of Unsecured Creditors (appointed in the Chapter 11 Cases as the representative of current talc claimants) (the "Committee") and the Future Claimants Representative (appointed in the Chapter 11 Cases as the representative of future talc claimants) regarding the terms of a potential consensual plan of reorganization and the ultimate amount to be contributed to any trust. The mediation process is ongoing.

As of December 31, 2024, we had 684 open cases related to certain talc products previously sold by Oldco, which is an increase in volume from previous years. The following table details case activity related to talc products previously sold by Oldco:

	Three Months Ended		Twelve Months Ended	
(number of claims)	**Dec. 31, 2024**	**Dec. 31, 2023**	**Dec. 31, 2024**	**Dec. 31, 2023**
Claims pending, beginning of period	663	562	574	439
Claims filed	44	75	162	256
Less: Claims dismissed, settled or otherwise resolved	23	63	52	121
Claims pending, end of period	684	574	684	574

During the pendency of the Chapter 11 Cases, the Company anticipates that the Chapter 11 Debtors will benefit from the operation of the automatic stay, which stays ongoing litigation in connection with talc-related claims against the Chapter 11 Debtors. In addition, subject to certain exceptions, the filing or continued prosecution of all talc-related claims against the Chapter 11 Debtors' non-debtor affiliates is temporarily stayed through April 15, 2025 (subject to further extensions), the date on which a hearing is scheduled on the status of the Chapter 11 Cases.

These claims typically allege various theories of liability, including negligence, gross negligence and strict liability and seek compensatory and, in some cases, punitive damages, but most of these claims do not provide adequate information to assess their merits, the likelihood that the Company will be found liable, or the magnitude of such liability, if any. We are unable to state an amount or range of amounts claimed in any of these lawsuits because state court pleading practices do not require the plaintiff to identify the amount of the claimed damage. The Company's position, as stated publicly, is that the talc products sold by Oldco are safe and do not cause cancer.

The Company records accruals for loss contingencies associated with legal matters, including talc-related litigation, when it is probable that a liability will be incurred and the amount of the loss can be reasonably estimated. Amounts accrued for legal contingencies often result from a complex series of judgments about future events and uncertainties that rely heavily on estimates and assumptions including timing of related payments. The ability to make such estimates and judgments can be affected by various factors, including whether damages sought in the proceedings are unsubstantiated or indeterminate, the stage of the litigation, the factual and legal matters in dispute, the ability to achieve comprehensive settlements, the availability of co-defendants with substantial resources and assets participating in the litigation, and our evaluation of the unique attributes of each claim.

While costs relating to the talc-related cases have increased concurrently with the volume, the majority of these costs have historically been borne by Pfizer Inc. ("Pfizer") in connection with certain agreements entered into in connection with the Company's initial public offering in 1992, and as long as the litigation is subject to the stay under the Chapter 11 Cases (subject to certain exceptions), the Company will not be required to make any payments in respect thereof. The Company is entitled to indemnification, pursuant to agreement, for liabilities arising from sales prior to the initial public offering. On May 22, 2024, Pfizer filed a motion in the Chapter 11 Cases seeking permission to file a lawsuit against the Company related to the 1992 agreement. That motion has been adjourned, and Pfizer and the Company have agreed to mediate their disputes. The Company continues to receive information from Pfizer with respect to potential costs associated with the defense and/or settlement of talc-related cases that Pfizer alleges are not subject to indemnification. Although the Company believes that the talc products are safe and that claims to the contrary are without merit, Oldco opportunistically settled certain talc-related cases in 2022 and 2023. None of such settlements have been material to the Company.

In the second quarter of 2024, Oldco sold its talc assets under section 363 of the Bankruptcy Code. In addition, in the second quarter of 2024, the Company entered into a Debtor-in-Possession Credit Agreement with Oldco (the "DIP Credit Agreement") and recorded a provision for credit loss of $30 million for the maximum principal amount under such Credit Agreement.

Proceeds of the sale of Oldco's talc assets and funds drawn by Oldco under the DIP Credit Agreement will be used to fund the Chapter 11 Cases. Following the Chapter 11 filing, the activities of the Chapter 11 Debtors are now subject to review and oversight by the bankruptcy court. As a result, the Chapter 11 Debtors were deconsolidated as of the Petition Date, and their assets and liabilities were derecognized from the Company's consolidated financial statements on a prospective basis.

On June 25, 2024, the Committee filed a motion to dismiss the Chapter 11 Cases. A hearing on the motion to dismiss, which has been adjourned several times while the parties continue to explore a consensual resolution of issues through the court-approved mediation process, is scheduled to commence on April 14, 2025 (subject to further adjournments). The Chapter 11 Cases remain pending.

The broader litigation and regulatory environments for talc-related claims continue to evolve. Moreover, although the Chapter 11 Cases are progressing, it is not possible at this time to predict how the Bankruptcy Court will rule on the pending motion to dismiss, the form of any ultimate resolution, or when an ultimate resolution might occur. Given the foregoing factors, it is reasonably possible that the Company will incur a loss for liabilities associated with future talc claims in excess of the amount currently recognized. This risk is based on the potential for new talc-related claims that could eventually be asserted together with their associated disposition cost and related legal costs, despite the automatic stay with respect to claims against the Chapter 11 Debtors, taking into account the portion of such hypothetical claims that may be subject to indemnification by Pfizer, as well as the inability to estimate the amount that may be necessary to fully and finally resolve all of the Chapter 11 Debtors' future talc-related claims in connection with a confirmed Chapter 11 plan of reorganization. Accordingly, the Company is currently unable to provide an estimate or range of the magnitude of any potential loss related to future talc claims. While possible losses associated with future talc claims are not reasonably estimable at this time based on our current knowledge, in light of the uncertainties involved in such matters, the resolution of, or recognition of additional liabilities in connection with, current or future talc claims could have a material adverse effect on the Company's results of operations, cash flows and financial condition.

Note 18. Stockholders' Equity

Capital Stock

The Company's authorized capital stock consists of 100 million shares of common stock, par value $0.10 per share, of which 31,895,655 shares and 32,404,721 shares were outstanding at December 31, 2024 and 2023, respectively, and 1,000,000 shares of preferred stock, none of which were issued and outstanding.

Cash Dividends

Cash dividends of $13.2 million or $0.41 per common share were paid during 2024. In January 2025, a cash dividend of approximately $3.5 million or $0.11 per share, was declared, payable in the first quarter of 2025.

Stock Award and Incentive Plan

The Company's 2015 Stock Award and Incentive Plan provides for grants of incentive and non-qualified stock options, restricted stock, restricted stock units, stock appreciation rights, stock awards and performance unit awards (the 2015 Stock Award and Incentive Plan, as amended, referred to herein as the "Plan" and together with its predecessor for awards granted prior to May 2015, the 2001 Stock Award and Incentive Plan, as amended and restated, the "Plans"). At the Company's 2024 Annual Meeting of Stockholders, the Company's stockholders ratified the adoption of an amendment and restatement of the Plan, which increased the number of shares available for issuance pursuant to the Plan by 889,000 shares and removed certain individual award limits in light of recent tax law changes. The Plans are administered by the Compensation Committee of the Board of Directors. Stock options granted under the Plans generally have a ten year term. The exercise price for stock options are at prices at or above the fair market value of the common stock on the date of the grant, and each award of stock options will vest ratably over a specified period, generally three years.

The following table summarizes stock option and restricted stock unit activity for the Plans:

		Stock Options		Restricted Stock Units	
	Shares Available for Grant	Shares	Weighted Average Exercise Price per Share ($)	Shares	Weighted Average Exercise Price per Share ($)
Balance January 1, 2022	1,268,770	1,330,002	$ 59.91	196,133	$ 60.87
Granted	(341,187)	242,723	69.81	98,464	69.70
Exercised/vested	—	(121,992)	46.81	(52,441)	58.92
Canceled	152,877	(87,315)	69.49	(65,562)	61.00
Balance December 31, 2022	1,080,460	1,363,418	62.22	176,594	66.32
Granted	(358,463)	255,620	66.08	102,843	66.01
Exercised/vested	—	(91,604)	56.82	(46,141)	64.25
Canceled	58,918	(12,972)	67.54	(45,946)	64.33
Balance December 31, 2023	780,915	1,514,462	63.15	187,350	67.15
Authorized	889,000	—	—	—	—
Granted	(299,640)	196,471	66.72	103,169	66.79
Exercised/vested	—	(279,810)	55.85	(47,876)	67.19
Canceled	49,336	(5,487)	66.76	(43,849)	67.21
Balance December 31, 2024	1,419,611	1,425,636	$ 65.06	198,794	$ 66.94

Note 19. Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) at December 31 comprised of the following components:

	December 31,	
(millions of dollars)	**2024**	**2023**
Cumulative foreign currency translation	$ (399.6)	$ (350.9)
Unrecognized pension benefit (costs) (net of tax (expense) benefit of $(1.2) in 2024 and $8.9 in 2023)	1.9	(28.8)
Unrealized gain on cash flow hedges (net of tax expense (benefit) of $0.1 in 2024 and $(1.2) in 2023)	10.6	10.3
	$ (387.1)	$ (369.4)

The following table summarizes the changes in other comprehensive income (loss) by component:

	Year Ended December 31,								
	2024			2023			2022		
(millions of dollars)	Pre-Tax Amount	Tax (Expense) Benefit	Net-of-Tax Amount	Pre-Tax Amount	Tax (Expense) Benefit	Net-of-Tax Amount	Pre-Tax Amount	Tax (Expense) Benefit	Net-of-Tax Amount
Foreign currency translation adjustment	$ (49.9)	$ —	$ (49.9)	$ (6.1)	$ —	$ (6.1)	$ (78.9)	$ —	$ (78.9)
Pension plans:									
Net actuarial gains (losses) and prior service costs arising during the period	39.5	(9.7)	29.8	5.1	(1.4)	3.7	41.4	(9.8)	31.6
Amortization of net actuarial (gains) losses and prior service costs	1.1	(0.3)	0.8	2.5	(0.6)	1.9	4.9	(1.2)	3.7
Unrealized gains (losses) on cash flow hedges	0.4	(0.1)	0.3	(4.5)	1.2	(3.3)	10.6	(2.8)	7.8
Total other comprehensive income (loss)	$ (8.9)	$ (10.1)	$ (19.0)	$ (3.0)	$ (0.8)	$ (3.8)	$ (22.0)	$ (13.8)	$ (35.8)

The pre-tax amortization amounts of pension plans in the table above are included within the components of net periodic pension benefit costs (see Note 16) and the related tax amounts are included within provision (benefit) for taxes on income line within Consolidated Statements of Income.

Note 20. Accounting for Asset Retirement Obligations

The Company records asset retirement obligations in which the Company will be required to retire tangible long-lived assets. These are primarily related to its PCC satellite facilities and mining operations. The Company has also recorded the provisions related to conditional asset retirement obligations at its facilities. The Company has recorded asset retirement obligations at all of its facilities except where there are no contractual or legal obligations. The associated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset.

The following is a reconciliation of asset retirement obligations as of December 31, 2024 and 2023:

	December 31,	
(millions of dollars)	2024	2023
Asset retirement obligation, beginning of period	$ 20.8	$ 23.8
Accretion expense	1.6	1.1
Other	6.5	(3.8)
Payments	(0.8)	(0.1)
Foreign currency translation	(0.5)	(0.2)
Asset retirement obligation, end of period	$ 27.6	$ 20.8

The Company mines various minerals using a surface mining process that requires the removal of overburden. In certain areas and under various governmental regulations, the Company is obligated to restore the land comprising each mining site to its original condition at the completion of the mining activity. This liability will be adjusted to reflect the passage of time, mining activities, and changes in estimated future cash outflows.

In the third quarter of 2024, the Company recorded an additional $7.0 million of asset retirement obligations in relation to our mining business.

The current portion of the liability of approximately $0.6 million is included in other current liabilities and the long-term portion of the liability of approximately $27.0 million is included in other non-current liabilities in the Consolidated Balance Sheet as of December 31, 2024.

Accretion expense is included in cost of goods sold in the Company's Consolidated Statements of Income.

Note 21. Segment and Related Information

The Company determines its operating segments based on the discrete financial information that is regularly evaluated by its chief operating decision maker, our Chief Executive Officer, in deciding how to allocate resources and in assessing performance. The Company's operating segments are strategic business units that offer different products and serve different markets. They are managed separately and require different technology and marketing strategies.

The Company has two reportable segments: the Consumer & Specialties segment and the Engineered Solutions segment.

The Consumer & Specialties segment serves consumer end markets directly and provides mineral-based solutions and technologies that are essential to our customers' products. The two product lines in this segment are Household & Personal Care - our mineral-to-shelf product line that serves pet care, personal and household care, fluid purification and other consumer oriented markets, and Specialty Additives, delivering specialty mineral additives to a variety of consumer and industrial end markets including paper, packaging, construction, automotive, and food and pharmaceuticals.

The Engineered Solutions segment combines all engineered systems, mineral blends, and technologies that are designed to aid in customer processes and projects. The two product lines in this segment are High-Temperature Technologies – combining all of our mineral-based blends, technologies, and systems serving the foundry, steel, glass, aluminum and other high-temperature processing industries, and Environmental & Infrastructure, which includes environmental and remediation solutions such as geosynthetic clay lining systems, water remediation technologies as well as drilling, commercial building and infrastructure-related products.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. The Company evaluates performance based on the operating income of the respective business units. The costs deducted to arrive at operating profit do not include several items, such as net interest or income tax expense. Depreciation expense related to corporate assets is allocated to the business segments and is included in their income from operations. However, such corporate depreciable assets are not included in the segment assets. Intersegment sales and transfers are not significant.

Segment revenues, expenses, operating income and a reconciliation of the operating segment totals to the applicable line items on the consolidated financial statements is as follows:

	Year Ended December 31,					
	2024			2023		
(millions of dollars)	Consumer & Specialties	Engineered Solutions	Total	Consumer & Specialties	Engineered Solutions	Total
Net Sales	$ 1,140.2	$ 978.3	$ 2,118.5	$ 1,160.2	$ 1,009.7	$ 2,169.9
Cost of goods sold	890.4	680.4	1,570.8	938.6	724.4	1,663.0
Segment production margin	249.8	297.9	547.7	221.6	285.3	506.9
Marketing and administrative expenses	71.7	125.8	197.5	69.1	124.6	193.7
Research and development expenses	12.6	10.4	23.0	11.5	9.7	21.2
Gain on sale of assets, net	—	(12.3)	(12.3)	—	—	—
Impairment of assets	—	—	—	71.7	—	71.7
Restructuring and other items, net	—	—	—	0.9	3.2	4.1
Litigation expenses	—	—	—	26.8	—	26.8
Segment income from operations	$ 165.5	$ 174.0	$ 339.5	$ 41.6	$ 147.8	$ 189.4

	Year Ended December 31,		
	2022		
(millions of dollars)	Consumer & Specialties	Engineered Solutions	Total
Net Sales	$ 1,124.6	$ 1,000.9	$ 2,125.5
Cost of goods sold	937.0	723.5	1,660.5
Segment production margin	187.6	277.4	465.0
Marketing and administrative expenses	63.1	120.7	183.8
Research and development expenses	10.8	9.6	20.4
Acquisition-related expenses	2.1	—	2.1
Litigation expenses	32.6	—	32.6
Segment income from operations	$ 79.0	$ 147.1	$ 226.1

	Year Ended December 31,		
(millions of dollars)	2024	2023	2022
Segment income from operations	$ 339.5	$ 189.4	$ 226.1
Interest expense, net	(56.4)	(59.2)	(43.9)
Other non-operating deductions, net	(4.7)	(4.9)	(3.8)
Unallocated expenses:			
Provision for credit losses	30.0	—	—
Restructuring and other items, net	—	2.8	—
Acquisition-related expenses	—	0.3	3.0
Litigation expenses	11.3	2.4	—
Unallocated corporate expenses	11.7	12.1	8.3
Debt extinguishment expenses	(1.8)	—	(6.9)
Non-cash pension settlement charge	—	—	(3.5)
Income before tax and equity in earnings	$ 223.6	$ 107.7	$ 156.7

Segment information for the years ended December 31, 2024, 2023 and 2022 was as follows:

	Year Ended December 31,		
(millions of dollars)	2024	2023	2022
Depreciation, Depletion and Amortization			
Consumer & Specialties	$ 47.2	$ 47.2	$ 48.0
Engineered Solutions	47.7	47.7	46.2
Total	$ 94.9	$ 94.9	$ 94.2
Segment Assets			
Consumer & Specialties	$ 1,289.4	$ 1,244.8	$ 1,107.5
Engineered Solutions	2,028.0	2,028.5	2,187.5
Corporate	76.5	73.3	106.6
Total	$ 3,393.9	$ 3,346.6	$ 3,401.6
Capital Expenditures			
Consumer & Specialties	$ 45.2	$ 56.8	$ 44.3
Engineered Solutions	39.3	31.2	34.0
Corporate	5.0	5.5	4.0
Total	$ 89.5	$ 93.5	$ 82.3

Financial information relating to the Company's operations by geographic area was as follows:

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Net Sales			
United States	$ 1,089.4	$ 1,144.0	$ 1,135.6
Canada/Latin America	151.2	150.2	148.3
Europe/Africa	521.1	525.5	496.8
Asia	356.8	350.2	344.8
Total International	$ 1,029.1	$ 1,025.9	$ 989.9
Consolidated net sales	$ 2,118.5	$ 2,169.9	$ 2,125.5
Long-Lived Assets			
United States	$ 1,849.1	$ 1,842.0	$ 1,915.8
Canada/Latin America	14.6	17.7	16.4
Europe/Africa	147.3	157.0	162.8
Asia	110.6	114.7	112.1
Total International	$ 272.5	$ 289.4	$ 291.3
Consolidated long-lived assets	$ 2,121.6	$ 2,131.4	$ 2,207.1

Net sales and long-lived assets are attributed to countries and geographic areas based on the location of the legal entity. No individual foreign country represents more than 10% of consolidated net sales or consolidated long-lived assets.

The Company's sales by product category are as follows:

	Year Ended December 31,		
(millions of dollars)	**2024**	**2023**	**2022**
Household & Personal Care	$ 530.0	$ 517.6	$ 476.2
Specialty Additives	610.2	642.6	648.4
High-Temperature Technologies	713.2	720.9	702.5
Environmental & Infrastructure	265.1	288.8	298.4
Total	$ 2,118.5	$ 2,169.9	$ 2,125.5

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Minerals Technologies Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Minerals Technologies Inc. and subsidiaries (the Company) as of December 31, 2024 and December 31, 2023, the related consolidated statements of income, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three-year period ended December 31, 2024, and the related notes and financial statement schedule (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and December 31, 2023, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 21, 2025 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of talc litigation liability

As discussed in Note 17 to the consolidated financial statements, the Company and certain of the Company's subsidiaries are among numerous defendants in a number of cases seeking damages for alleged exposure to asbestos-contaminated talc products sold by the Company's subsidiary BMI Oldco Inc. (Oldco). On October 2, 2023, the Company's subsidiaries, Oldco and Barretts Ventures Texas LLC, filed voluntary petitions for relief under Chapter 11 of the U.S. Bankruptcy Code in the United States Bankruptcy Court for the Southern District of Texas (the "Chapter 11 Cases") to address and comprehensively resolve Oldco's liabilities associated with talc.

We identified the evaluation of the talc litigation liability as a critical audit matter. A high degree of complex auditor judgment was required to evaluate the Company's talc litigation liability due to the nature of the estimate and key assumptions, including the assessment of the likelihood of a loss being incurred and whether a reasonable estimate of the loss or range of loss for the future and existing talc claims could be made.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's talc litigation liability estimation process. This included controls over determining the key assumptions noted above and claims data utilized in the process. We evaluated the reasonableness of the Company's talc litigation liability estimate by:

- evaluating the professional qualifications, knowledge, skills, and ability of the Company's external specialist used in compiling and evaluating claims data
- assessing the talc related legal cases settled during the year and the open cases as of December 31, 2024, by evaluating letters obtained directly from the Company's external and internal legal counsel
- testing a selection of claims data used in the Company's talc accrual calculation by comparing the selected items to underlying claims documentation
- discussing the status and processing of significant known, actual, and potential litigation, and the status of ongoing Oldco bankruptcy proceedings with the Company's in-house legal counsel, as well as external counsel
- evaluating management's assessment regarding whether an unfavorable outcome is reasonably possible or probable and reasonably estimable.

Measurement of projected pension benefit obligations

As discussed in Note 16 to the consolidated financial statements, the Company's projected pension benefit obligations were $342.3 million as of December 31, 2024. The Company estimates the liability related to their pension plans using actuarial models that include assumptions about the Company's discount rates.

We identified the measurement of the Company's projected pension benefit obligations as a critical audit matter. Specialized skills are required to evaluate the Company's assumptions. In particular, especially complex auditor judgement was required to assess the discount rates used in the determination of projected pension benefit obligations.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's pension process, including a control related to the Company's assessment of the discount rates utilized within the actuarial models. We obtained an understanding of the actuarial models used by the Company in selecting the discount rate for each plan and inquired as to whether there have been changes to this methodology in the current year. We also involved an actuarial professional with specialized skills and knowledge, who assisted in evaluating the Company's analysis of the discount rates and assessed the discount rates considering the timing and amount of benefit payments used in the determination of the projected pension benefit obligation.

/s/ KPMG LLP

We have served as the Company's auditor since 1992.

New York, New York
February 21, 2025

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Minerals Technologies Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Minerals Technologies Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2024 and 2023, the related consolidated statements of income, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three-year period ended December 31, 2024, and the related notes and financial statement schedule (collectively, the consolidated financial statements), and our report dated February 21, 2025 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report On Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

New York, New York
February 21, 2025

Management's Report On Internal Control Over Financial Reporting

Management of Minerals Technologies Inc. is responsible for the preparation, integrity and fair presentation of its published consolidated financial statements. The financial statements have been prepared in accordance with U.S. generally accepted accounting principles and, as such, include amounts based on judgments and estimates made by management. The Company also prepared the other information included in the annual report and is responsible for its accuracy and consistency with the consolidated financial statements.

Management is also responsible for establishing and maintaining effective internal control over financial reporting. The Company's internal control over financial reporting includes those policies and procedures that pertain to the Company's ability to record, process, summarize and report reliable financial data. The Company maintains a system of internal control over financial reporting, which is designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation of reliable published financial statements and safeguarding of the Company's assets. The system includes a documented organizational structure and division of responsibility, established policies and procedures, including a code of conduct to foster a strong ethical climate, which are communicated throughout the Company, and the careful selection, training and development of our people.

The Board of Directors, acting through its Audit Committee, is responsible for the oversight of the Company's accounting policies, financial reporting and internal control. The Audit Committee of the Board of Directors is comprised entirely of outside directors who are independent of management. The Audit Committee is responsible for the appointment and compensation of the independent registered public accounting firm. It meets periodically with management, the independent registered public accounting firm and the internal auditors to ensure that they are carrying out their responsibilities. The Audit Committee is also responsible for performing an oversight role by reviewing and monitoring the financial, accounting and auditing procedures of the Company in addition to reviewing the Company's financial reports. The independent registered public accounting firm and the internal auditors have full and unlimited access to the Audit Committee, with or without management, to discuss the adequacy of internal control over financial reporting, and any other matters which they believe should be brought to the attention of the Audit Committee.

Management recognizes that there are inherent limitations in the effectiveness of any system of internal control over financial reporting, including the possibility of human error and the circumvention or overriding of internal control. Accordingly, even effective internal control over financial reporting can provide only reasonable assurance with respect to financial statement preparation and may not prevent or detect misstatements. Further, because of changes in conditions, the effectiveness of internal control over financial reporting may vary over time.

The Company assessed its internal control system as of December 31, 2024 in relation to criteria for effective internal control over financial reporting described in "Internal Control – Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on its assessment, the Company has determined that, as of December 31, 2024, its system of internal control over financial reporting was effective.

The consolidated financial statements have been audited by the independent registered public accounting firm, which was given unrestricted access to all financial records and related data, including minutes of all meetings of stockholders, the Board of Directors and committees of the Board. Reports of the independent registered public accounting firm, which includes the independent registered public accounting firm's attestation of the effectiveness of the Company's internal control over financial reporting are also presented within this document.

/s/ Douglas T. Dietrich
Chairman of the Board and Chief Executive Officer

/s/ Erik C. Aldag
Senior Vice President, Finance and Treasury, Chief Financial Officer

/s/ Michael A. Cipolla
Vice President, Corporate Controller and Chief Accounting Officer

February 21, 2025

MINERALS TECHNOLOGIES INC. & SUBSIDIARY COMPANIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
(millions of dollars)

Description	Balance at Beginning of Period	Additions Charged to Costs, Provisions and Expenses	Deductions (a)	Balance at End of Period
Year Ended December 31, 2024				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	$ 20.3	1.4	(4.6)	$ 17.1
Year Ended December 31, 2023				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	$ 15.1	2.8	2.4	$ 20.3
Year Ended December 31, 2022				
Valuation and qualifying accounts deducted from assets to which they apply:				
Allowance for doubtful accounts	$ 15.0	4.1	(4.0)	$ 15.1

(a) Includes impact of write-offs, translation of foreign currencies and reclassifications for presentation purposes.

EXHIBIT 21.1

SUBSIDIARIES OF THE COMPANY

Name of the Company	Jurisdiction of Organization
ADAE, Cetco Sp. Z o.o., s.k.a. (Short Name: ADAE SKA)	Poland
Amcol Australia Pty. Ltd.	Australia
AMCOL CETCO do Brasil Serviços e Produtos de Construção Ltda.	Brazil
AMCOL Dongming Industrial Minerals Company Limited	China
AMCOL Health & Beauty Solutions, Incorporated	Delaware
AMCOL (Holdings) Ltd.	UK
Amcol International B.V.	Netherlands
AMCOL International Corporation	Delaware
AMCOL International Holdings Corporation	Delaware
Amcol International (Thailand) Limited	Thailand
AMCOL Korea Limited	S. Korea
Amcol Mauritius	Mauritius
Amcol Minchem Jianping Co., Ltd	China
Amcol Mineral Madencilik Sanayi ve Ticaret A.S. (Turkey)	Turkey
Amcol Minerals EU Limited	UK
Amcol Minerals Europe Limited	UK
Amcol Minerals and Materials (India) Private Limited	India
AMCOL (Tianjin) Industrial Minerals Company Limited	China
AMCOL de México, S.A., de C.V.	Mexico
American Colloid Company	Delaware
Ameri-Co Carriers, Inc.	Nebraska
Ameri-Co Logistics, Inc.	Nebraska
Animal Care Trading B.V.	Netherlands
APP China Specialty Minerals Pte Ltd.	Singapore
ASMAS Agir Sanayi Malzemeleri Imal ve Tic. A.S (has branch office in Bahrain).	Turkey
BMI Oldco (f/k/a Barretts Minerals Inc.)	Delaware
Barretts Ventures Texas LLC	Texas
Batlhako Mining Ltd.	South Africa
Beihai Minerals Environmental Technology Co., Ltd.	China
Bonmerci Investments 103 (Pty) Ltd.	South Africa
CCS, Cetco Sp. Z o.o., s.k.a.	Poland
CETCO do Brasil Serviços E Produtos Minerais E De Meio-Ambiente Ltda.	Brazil
CETCO Energy Services Company LLC	Delaware
CETCO Energy Services de México, S.A. de C.V.	Mexico
CETCO Energy Services Limited	UK
CETCO Energy Services (Malaysia) Sdn. Bhd.	Malaysia
CETCO (Europe) Ltd	UK
CETCO Germany GmbH	Germany
CETCO Iberia S.L.	Spain
CETCO Iberia Construcciones y Servicios S.L.	Spain
CETCO Lining Technologies India Private Limited	India
CETCO Oilfield Services Asia Ltd.	Malaysia
CETCO Oilfield Services Company Limited	Canada
CETCO Oilfield Services Company Nigeria Limited	Nigeria
CETCO Oilfield Services Pty. Ltd.	Australia
CETCO Poland, Cetco Sp. Zo.o. S.K.A. (aka CETCO Poland)	Poland
CETCO Sp. Zo.o.	Poland
CETCO Technologies (Suzhou) Co., Ltd. (China)	China
Colloid Environmental Technologies Company LLC (Has a branch in Canada)	Delaware

Name of the Company	Jurisdiction of Organization
Comercializadora y Exportadora CETCO Latino América Limitada (aka CVE CETCO Latino America)	Chile
CONCEPT PET Heimtierprodukte GmbH	Austria
COS Employment Services de México, S.A. de C.V.	Mexico
Double A Specialty Minerals Co., Ltd.	Thailand
Gold Lun Calcium (Zhenjiang) Co., Ltd.	China
Gold Sheng Calcium (Zhenjiang) Co., Ltd.	China
Gold Zuan Chemicals (Suzhou) Co., Ltd.	China
Green Roof Insurance Co LLC	Vermont
GW North Manufacturing Inc.	Delaware
GW North Inc.	Delaware
Hi-Tech Specialty Minerals Company Limited	Thailand
Minerals Technologies do Brasil Comercio é Industria de Minerais Ltda.	Brazil
Minerals Technologies Europe S.A. (has branch office in France)	Belgium
Minerals Technologies Holding China Co., Ltd.	China
Minerals Technologies Holdings Inc.	Delaware
Minerals Technologies Holdings Ltd.	United Kingdom
Minerals Technologies India Private Limited	India
Minerals Technologies Investments LLC	Delaware
Minerals Technologies (Jinzhou) Co. Ltd.	China
Minerals Technologies South Africa (Pty) Ltd.	South Africa
Mintech Canada Inc.	Canada
Mintech Japan K.K.	Japan
Minteq Australia Pty Ltd.	Australia
Minteq B.V.	The Netherlands
Minteq Europe Limited.	Ireland
Minteq International GmbH (has branch office in Schongau)	Germany
Minteq International Inc.	Delaware
Minteq International (Suzhou) Co., Ltd.	China
Minteq Italiana S.p.A.	Italy
Minteq Magnesite Limited (has a branch office in Spain)	Ireland
Minteq Shapes and Services Inc.	Delaware
Minteq UK Limited.	United Kingdom
Montana Minerals Development Company	Montana
MTI Bermuda L.P.	Bermuda
MTI Holding Singapore Pte. Ltd.	Singapore
MTI Holdco I LLC	Delaware
MTI Netherlands B.V.	Netherlands
MTI Technologies UK Limited	United Kingdom
MTI Ventures B.V.	Netherlands
MTI Ventures LLC	Delaware
MTX Singapore Holdings Pte. Ltd.	Singapore
Nanocor LLC	Delaware
Normerica Inc.	Canada
Normerica International Corporation	Barbados
Normerica Realty Corporation	Canada
Normerica (Thailand) Co. Ltd.	Thailand
Northdown Industries Inc.	Delaware
PET Holding GmbH	Austria
PT. CETCO Oilfield Services Indonesia	Indonesia
PT Sinar Mas Specialty Minerals	Indonesia
Rayagada Minerals & Chemicals Private Limited	India
REGOS s.r.o.	Slovakia
REGOS Geo, s.r.o.	Slovakia
ROMIN SLOVAKIA, spol. s.r.o.	Slovakia
Shouguang Minerals Environmental Technology Co., Ltd	China
Sivomatic B.V.	Netherlands
Sivomatic GmbH	Austria
Sivomatic GmbH	Germany

Name of the Company	Jurisdiction of Organization
Sivomatic Holding, B.V.	Netherlands
Sivomatic Immovables B.V.	Netherlands
Sivomatic Italia	Italy
Sivomatic Madencilik A.S.	Turkey
Sivomatic Mining B.V.	Netherlands
SMI Poland Sp. z o.o.	Poland
Specialty Minerals Bangladesh Limited	Bangladesh
Specialty Minerals (Beihai) Co., Ltd.	China
Specialty Minerals (Changshan) Environmental Technology Co., Ltd.	China
Specialty Minerals (Changshu) Co., Ltd.	China
Specialty Minerals do Brasil Participacoes Ltda.	Brazil
Specialty Minerals FMT K.K.	Japan
Specialty Minerals France S.A.S. .	France
Specialty Minerals Inc.	Delaware
Specialty Minerals India Holding Inc.	Delaware
Specialty Minerals India Private Limited	India
Specialty Minerals International Inc.	Delaware
Specialty Minerals Malaysia Sdn. Bhd.	Malaysia
Specialty Minerals (Michigan) Inc.	Michigan
Specialty Minerals Nordic Oy Ab	Finland
Specialty Minerals (Portugal) Especialidades Minerais, S.A.	Portugal
Specialty Minerals (Rugao) Co., Ltd.	China
Specialty Minerals Slovakia, spol. sr.o.	Slovakia
Specialty Minerals South Africa (Pty) Limited	South Africa
Specialty Minerals (Thailand) Limited	Thailand
Specialty Minerals UK Limited	United Kingdom
Specialty Minerals (Wuzhi) Co., Ltd.	China
Specialty Minerals (Yanzhou) Co., Ltd.	China
Specialty Minerals (Zhumadian) Environmental Technology Co., Ltd.	China
Tai An Minerals Environmental Technology Co., Ltd.	China
Volcay International LLC	Delaware
Volclay South Africa (Proprietary) Limited	South Africa
Volclay Trading Co.	South Africa

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (Nos. 333-160002, 33-59080, 333-62739, 333-138245, 333-206244, 333-249761 and 333-282854) on Form S-8 of our reports dated February 21, 2025, with respect to the consolidated financial statements of Minerals Technologies Inc. and subsidiaries and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

New York, New York
February 21, 2025

EXHIBIT 31.1

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Douglas T. Dietrich, certify that:

1. I have reviewed this Annual Report on Form 10-K of Minerals Technologies 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

5. The registrant's other certifying officer(s) 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:

   (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: February 21, 2025

/s/ Douglas T. Dietrich
Douglas T. Dietrich
Chairman of the Board and Chief Executive Officer

EXHIBIT 31.2

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Erik C. Aldag, certify that:

1. I have reviewed this Annual Report on Form 10-K of Minerals Technologies 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

   (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(s) 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:

   (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: February 21, 2025

/s/ Erik C. Aldag
Erik C. Aldag
Senior Vice President - Finance and Treasury
Chief Financial Officer

EXHIBIT 32

SECTION 1350 CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18, United States Code), each of the undersigned officers of Minerals Technologies Inc., a Delaware corporation (the "Company"), does hereby certify that:

The Annual Report on Form 10-K for the year ended December 31, 2024 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 21, 2025

/s/ Douglas T. Dietrich
Douglas T. Dietrich
Chairman of the Board and Chief Executive Officer

Dated: February 21, 2025

/s/ Erik C. Aldag
Erik C. Aldag
Senior Vice President-Finance and Treasury
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to Exchange Act Rule 13a-14(b); is not deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section; and is not deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act of 1934.

Additional Information Regarding Non-GAAP Financial Measures (unaudited)

The following is a presentation of the Company's non-GAAP net income and operating income, excluding special items, and free cash flow for the years ended December 31, 2024, and December 31, 2023 and a reconciliation to GAAP net income and operating income and cash flow from operations, respectively, for such periods. Also presented is the Company's non-GAAP EBITDA (earnings before interest, taxes, depreciation and amortization) and Adjusted EBITDA (excluding special items) for the years ended December 31, 2024 and December 31, 2023. The Company's management believes these non-GAAP measures provide meaningful supplemental information regarding its performance as inclusion of such special items are not indicative of the ongoing operating results and thereby affect the comparability of results between periods. The Company feels inclusion of these non-GAAP measures also provides consistency in its financial reporting and facilitates investors' understanding of historic operating trends.

	Year Ended	
(millions of dollars, except per share data)	**Dec. 31, 2024**	**Dec. 31, 2023**
Net income attributable to MTI	$ 167.1	$ 84.1
Special items:		
Acquisition-related expenses	–	0.3
Restructuring and other items, net	–	6.9
Impairment of assets	–	71.7
Litigation expenses	11.3	29.2
Provision for credit losses	30.0	–
Gain on sale of assets, net	(12.3)	–
Debt extinguishment expenses	1.8	–
Related tax effects on special items	0.9	(22.3)
Net income attributable to MTI, excluding special items	$ 198.8	$ 169.9
Diluted earnings per share, excluding special items	$ 6.15	$ 5.21
Segment Operating Income Data		
Consumer & Specialties Segment	$ 165.5	$ 41.6
Engineered Solutions Segment	174.0	147.8
Unallocated Corporate Expenses	(53.0)	(17.3)
Acquisition-related expenses	–	(0.3)
Consolidated	$ 286.5	$ 171.8
Special Items		
Consumer & Specialties Segment	$ –	$ 99.4
Engineered Solutions Segment	(12.3)	3.2
Unallocated Corporate Expenses	41.3	5.2
Acquisition-related expenses	–	0.3
Consolidated	$ 29.0	$ 108.1

Additional Information Regarding Non-GAAP Financial Measures (unaudited)

(millions of dollars, except per share data)	Year Ended Dec. 31, 2024	Year Ended Dec. 31, 2023
Segment Operating Income, Excluding Special Items		
Consumer & Specialties Segment	$ 165.5	$ 141.0
Engineered Solutions Segment	161.7	151.0
Unallocated Corporate Expenses	(11.7)	(12.1)
Consolidated	315.5	279.9
% of Sales	14.9%	12.9%
Operating income growth excluding special items	13%	–
Operating income impact of exited business	3%	–
Operating income growth on underlying basis	16%	–
Cash flow from Operations	$ 236.4	$ 233.6
Capital Expenditures	89.5	93.5
Free Cash Flow	$ 146.9	$ 140.1
Net Income attributable to MTI	$ 167.1	$ 84.1
Add back:		
Depreciation, depletion, and amortization	94.9	95.0
Interest expense, net	56.4	59.2
Equity in earnings of affiliates, net of tax	(6.7)	(4.3)
Net income attributable to non-controlling interests	3.8	4.2
Provision for taxes on income	59.4	23.7
EBITDA	374.9	261.9
Add special items:		
Acquisition-related expenses	–	0.3
Restructuring and other items, net	–	6.9
Impairment of assets	–	71.7
Litigation expenses	11.3	29.2
Provision for credit losses	30.0	–
Gain on sale of assets, net	(12.3)	–
Debt extinguishment expenses	1.8	–
Adjusted EBITDA	$ 405.7	$ 370.0

BOARD OF DIRECTORS

DOUGLAS T. DIETRICH
Chairman of the Board and
Chief Executive Officer,
Minerals Technologies Inc.

JOSEPH C. BREUNIG
Chief Operating Officer,
OrthoLite LLC

JOHN J. CARMOLA
Former Segment President,
Goodrich Corporation

ROBERT L. CLARK
Lead Independent Director, Minerals Technologies Inc.; Former Provost and Senior Vice President for Research, University of Rochester

ALISON A. DEANS
Independent Consultant;
Former Chief Investment Officer,
CRT

FRANKLIN L. FEDER
Former Regional Chief Executive, Officer for Latin America and Caribbean, Alcoa Inc.

KRISTINA M. JOHNSON
Former President of
The Ohio State University

ROCKY MOTWANI
Chief Executive Officer of Cyphlens (formerly Mission3)

CAROLYN K. PITTMAN
Former Senior Vice President and Chief Accounting Officer, Maxar Technologies

MARC E. ROBINSON
Former Senior Vice President, CVS;
Former Global President,
Pfizer Consumer Healthcare;
Former Company Group Chairman,
Johnson & Johnson

CORPORATE OFFICERS

DOUGLAS T. DIETRICH*
Chairman of the Board and
Chief Executive Officer

ERIK C. ALDAG*
Senior Vice President, Finance and Treasury and Chief Financial Officer

BRETT ARGIRAKIS*
Group President, Engineered Solutions

MICHAEL A. CIPOLLA
Vice President, Corporate Controller, and Chief Accounting Officer

ERIN N. CUTLER*
Vice President, Human Resources

JONATHAN J. HASTINGS*
Senior Vice President, Strategy and M&A

TIMOTHY J. JORDAN*
Vice President, General Counsel, Secretary, and Chief Compliance Officer

D.J. MONAGLE III*
Group President, Consumer & Specialties

** Member, MTI Leadership Council*

INVESTOR RELATIONS

LYDIA KOPYLOVA
Vice President, Investor Relations
622 Third Avenue, 38th Floor
New York, NY 10017
(212) 878 -1831

STOCK LISTING
Minerals Technologies Inc. common stock is listed on the New York Stock Exchange (NYSE) under the symbol MTX.

SHAREHOLDER SERVICES
Shareholders of record with questions on account balances, address changes, or other account matters may contact our stock transfer agent and registrar, Computershare.

BY TELEPHONE
(800) 426-5523

BY MAIL
Computershare Investor Services
PO Box 505000
Louisville, KY 40233-5000

ANNUAL MEETING
The 2025 Annual Meeting of Shareholders will be held virtually via live webcast on Wednesday, May 14, 2025, at 9:00 a.m. Eastern Time at www.virtualshareholdermeeting.com/MTX2025.

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MINERALS TECHNOLOGIES

MINERALSTECH.COM