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 , 2023

OR

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

For the transition period from ________ to _______

Commission file number: 001-36272

Element Solutions Inc

(Exact name of Registrant as specified in its charter)

Delaware	**37-1744899**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
500 East Broward Boulevard, Suite 1860	**33394**
Fort Lauderdale, Florida	(Zip Code)
(Address of principal executive offices)	

Registrant's telephone number, including area code: (561) 207-9600

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	ESI	New York Stock Exchange

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 ý No o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes o No ý

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 ý No o

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ý No o

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

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

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

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 Exchange Act) Yes ☐ No ☒

The number of shares of common stock outstanding as of February 16, 2024 was 241,993,444 . The aggregate market value of the common stock held by non-affiliates as of June 30, 2023 was approximately $ 4.28 billion, based upon the last reported sales price for such date on the New York Stock Exchange. All (i) executive officers and directors of the registrant and (ii) all persons who hold 10% or more of the registrant's outstanding common stock have been deemed, solely for the purpose of the foregoing calculation, to be "affiliates" of the registrant.

Documents Incorporated By Reference

Portions of the Company's definitive 2024 Proxy Statement are incorporated by reference into Part III of this 2023 Annual Report.

Element Solutions Inc
ANNUAL REPORT ON FORM 10-K
For the year ended December 31, 2023

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Terms	Definitions
Element Solutions; We; Us; Our; the Company	Element Solutions Inc, a Delaware corporation, and where the context requires, its subsidiaries or operating businesses.
Coventya	Coventya Holding SAS and its subsidiaries.
Coventya Acquisition	Acquisition of Coventya on September 1, 2021.
Credit Agreement	Credit Agreement, dated as of January 31, 2019, as amended from time to time, among, inter alia, Element Solutions and MacDermid, Incorporated, as borrowers, certain subsidiaries of Element Solutions and the lenders from time to time parties thereto.
EBITDA	Earnings before interest, taxes, depreciation and amortization.
E.U.	European Union.
Exchange Act	Securities Exchange Act of 1934, as amended.
GAAP	U.S. Generally Accepted Accounting Principles.
HKW	H.K. Wentworth Limited and its subsidiaries.
HKW Acquisition	Acquisition of HKW on May 5, 2021.
HSO	HSO Herbert Schmidt GmbH & Co. KG, Dipl.-Ing. W. Schmidt GmbH and HSO Hong Kong Holding Limited and its subsidiary.
HSO Acquisition	Acquisition of HSO on January 26, 2022.
Kuprion Acquisition	Acquisition of Kuprion, Inc. on May 19, 2023.
OEM	Original equipment manufacturer.
RSUs	Restricted stock units issued by Element Solutions from time to time under the 2013 Plan.
SEC	Securities and Exchange Commission.
Securities Act	Securities Act of 1933, as amended.
ViaForm Distribution Rights	The rights to sell the Company's ViaForm® electrochemical deposition products directly to customers.
WACC	Weighted average cost of capital.
2013 Plan	Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan.
2023 Annual Report	This annual report on Form 10-K for the fiscal year ended December 31, 2023.
2024 Proxy Statement	Element Solutions’ definitive proxy statement for its 2024 annual meeting of stockholders expected to be filed no later than 120 days after the Company's fiscal year end of December 31, 2023.
3.875% USD Notes due 2028	Element Solutions' $800 million aggregate principal amount of 3.875% senior notes due 2028, denominated in U.S. dollars, issued on August 18, 2020.

Forward-Looking Statements

This 2023 Annual Report contains forward-looking statements that can be identified by words such as "expect," "anticipate," "project," "will," "should," "believe," "intend," "plan," "assume," "estimate," "predict," "seek," "continue," "outlook," "may," "might," "aim," "can have," "likely," "potential," "target," "hope," "goal," "priority" or "confident" and variations of such words and similar expressions. Many of the forward-looking statements include, but are not limited to, statements, beliefs, projections and expectations regarding the expected benefits of the reacquired ViaForm Distribution Rights and the Kuprion Acquisition; deferred payments related to the Kuprion Acquisition; the war between Russia and Ukraine and the Israel-Hamas conflict and other hostilities in the Middle East as well as actions in response thereto and their impact on market conditions and the global economy; the continuing economic impact of the coronavirus (COVID-19) and its variants on the global economy, secular trends and expected growth of our businesses; capital requirements and need for and availability of financing; probability of achievement of the performance target related to certain performance-based RSUs; the impact of new accounting standards and accounting changes; potential share repurchases; our dividend policy and dividend declarations; our hedging activities; timing and outcome of environmental and legal matters; tax planning strategies and assessments; the impact of changes to privacy, cybersecurity, environmental, global trade, tax and other governmental regulations; impairments, including those on goodwill and other intangible assets; price volatility and cost environment; inflation and fluctuations in foreign exchange rates; our liquidity, cash flows and capital allocation; funding sources; expected capital expenditures; debt and debt leverage ratio; pension plan contributions; contractual obligations; general views about future operating results; sustainability goals; expected returns to stockholders; risk management programs; future prospects; and other events or developments that we expect or anticipate will occur in the future.

Although we believe these forward-looking statements are based upon reasonable assumptions regarding our business and expectations about future events, financial performance and trends, there can be no assurance that our actual results will not differ materially from any results expressed or implied in these forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in Part I, Item 1A, *Risk Factors*, of this 2023 Annual Report. In addition, as we operate in a very competitive and rapidly changing environment, new risks may emerge from time to time. Any forward-looking statement included in this 2023 Annual Report is based solely on information currently available and speaks only as of the date on which it is made. We undertake no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise. Please consult any further disclosures on related subjects in our SEC filings.

The invasion of Ukraine by Russia in early 2022 and the sanctions and other measures being imposed in response to this conflict have increased the level of economic and political uncertainty. While none of Russia, Ukraine or Belarus constitutes a material portion of our business and we do not have physical assets in these countries, a significant escalation or expansion of economic disruption or the conflict's current scope could disrupt the global supply chain and increase our costs as well as amplify certain risks discussed in Part I, Item 1A, *Risk Factors*, of this 2023 Annual Report.

Non-GAAP Financial Measures

This 2023 Annual Report contains non-GAAP financial measures, such as Adjusted EBITDA and operating results on a constant currency and organic basis. Non-GAAP financial measures should not be considered in isolation from, a substitute for, or superior to, performance measures calculated in accordance with GAAP. For additional information on these non-GAAP financial measures, including definitions, limitations and reconciliations to their most comparable applicable GAAP measures, see "*Non-GAAP Financial Measures"* in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, and Note 22, *Segment Information*, to the Consolidated Financial Statements, both included in this 2023 Annual Report.

Part I

Item 1. Business

Unless the context otherwise indicates or requires, all product names, trade names, trademarks, service marks or logos used in this 2023 Annual Report are part of our intellectual property, although the "®" and "TM" trademark designations may have been omitted. For financial and other information about our segments and the geographic areas in which we do business, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7, "Financial Statements and Supplementary Data" in Part II, Item 8, as well as Note 1, "Background and Basis of Presentation" and Note 22, "Segment Information" to our audited Consolidated Financial Statements, all included in this 2023 Annual Report.

Business Overview

Element Solutions, incorporated in Delaware in January 2014, is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Our product innovation and product extensions are expected to continue to drive sales growth in both new and existing markets while expanding margins through a consistent focus on increasing customer value propositions.

We believe the majority of our businesses hold strong positions in the high-growth markets we serve. Our extensive global teams of specially trained scientists and engineers develop our products, and our expert sales and service organizations ensure our customers' needs are met every day. Our continuous focus on customer-centric innovation serves as a catalyst to drive changes to existing formulations and opportunities in adjacent markets within our industry. We believe that our customers place significant value on the consistency and quality of our brands, on which we capitalize through significant market share, customer loyalty and supply chain access. In addition, operational risks and switching costs make it difficult for our customers to change suppliers which allows us to retain customers and maintain our market positions.

Our customers use our innovation as a competitive advantage, relying on us to help them navigate through fast-paced, high-growth markets. To that end, we draw upon our broad and longstanding intellectual property portfolio and technical expertise, while working closely with both customers and OEMs on an ongoing basis to develop proprietary solutions tailored to their manufacturing needs. We leverage these close relationships to win qualifications and specifications into their supply chains as well as to identify opportunities for new products; all of which provide potential additional revenue streams.

Our strategy is based on a balance of operational excellence and prudent capital allocation. Our operating teams focus on the strong execution of customer-led product development, superior technical sales support and continuous supply chain optimization. Our senior leadership aims to foster an environment of accountability and success for our operating teams while also evaluating and executing on high-return capital allocation opportunities that can drive improvements in long-term shareholder value.

Acquisitions

We may pursue targeted and opportunistic acquisitions in our existing and adjacent end-markets that seek to strengthen our current businesses, expand and diversify our product offerings, and enhance our growth and strategic position.

ViaForm Distribution Rights - On June 1, 2023, we reacquired the right to market and distribute directly (rather than through our exclusive distributor) our ViaForm® electrochemical deposition products by terminating a long-standing distribution agreement for $200 million, including $170 million paid at closing and a deferred payment of $30.0 million. The deferred payment and a receivable of $13.5 million were settled in the fourth quarter of 2023. The receivable was settled with $6.1 million of inventory and $7.4 million cash (which reduced the purchase price paid by the cash received). Following the completion of the transaction, we now manage all aspects of the ViaForm® product line in-house, which we believe will result in a more efficient supply chain and improved customer outcomes for leading semiconductor fabricators.

Kuprion Acquisition - On May 19, 2023, we completed the Kuprion Acquisition for $15.9 million, net of cash with potential additional payments in various installments, which are not to exceed $259 million in aggregate, to be made upon the achievement of certain milestones associated with product qualification and revenue through December 31, 2030. Kuprion, Inc. is a developer of next-generation nano-copper technology for the semiconductor, circuit board and electronics assembly markets.

Business Segments

Our operations are organized into two reportable segments: Electronics and Industrial & Specialty. In 2023, we achieved sales of $2.33 billion, to which our Electronics and Industrial & Specialty segments contributed approximately 61% and 39%, respectively. In the first quarter of 2023, operational responsibility of our Films business was transferred from our Graphics Solutions business within our Industrial & Specialty segment to our Circuitry Solutions business in our Electronics segment. In addition, we transferred certain product lines between our Assembly Solutions business and our Semiconductor Solutions business, both of which are part of our Electronics segment, to align more closely with our current business structure. Historical information has been reclassified to reflect these changes for all periods presented in this 2023 Annual Report.

Our segments share a common focus on attractive niche markets, which we believe will grow faster than the diverse end-markets they each serve. Both segments provide products that, in substantially all cases, are consumed by customers as part of their production process, providing us with reliable and recurring revenue as products are replenished in order to continue production. We provide highly-technical service and support to customers and OEMs in order to optimize their manufacturing processes. While they typically represent only a small portion of our customers' costs, our products, along with our high-value added technical support, are seen as integral to customer product performance.

Neither of our segments is subject to significant seasonality.

Electronics

Our Electronics segment researches, formulates and sells specialty chemicals and process technologies for all types of electronics hardware, from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the electronics manufacturing process and the functionality of end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways and its "assembly materials," such as solder, pastes, fluxes and adhesives, join those pathways together.

Electronics provides solutions through the following businesses:

Assembly Solutions - representing approximately 51% of the segment's 2023 net sales. As a global supplier of surface mount technologies (SMT), fluxes, thermal management materials, coatings and other attachment materials, we develop high-performing innovative materials that are used to assemble consumer electronics from circuit boards, discrete electronic components, connectors and integrated circuit substrates. We believe our growth in this business will be driven by the increasing use of electronics in consumer, automotive, telecommunications, memory, medical, aerospace and other markets. Of our total net sales for Assembly Solutions, approximately 50% is metal content whose price fluctuations are generally passed through to our customers.

Circuitry Solutions - representing approximately 30% of the segment's 2023 net sales. As a global supplier of chemical formulations to the electronics industry, we design and manufacture proprietary "wet" chemical processes and materials used by our customers to manufacture printed circuit boards and memory storage devices. Our product portfolio is focused on specialized consumable chemical processes and materials, such as circuit formation, primary metallization, electroplate, surface finishes and flexible/formable films. We believe our growth in this business will be driven by demand in wireless mobile devices, internet infrastructure, high performance computing, and the increasing use of electronics in automobiles.

Semiconductor Solutions - representing approximately 19% of the segment's 2023 net sales. As a global supplier to the semiconductor industry, we provide advanced copper interconnects, die attachment, sintered silver material, adhesives, wafer bump processes and photomask technologies to our customers for integrated circuit fabrication and semiconductor packaging. We believe our growth in this business will be driven by advanced electronics packaging, necessary to meet the growing needs of high performance computing, artificial intelligence, the internet of things, next-generation wireless communications and the increasing content and complexity of electronics in automotive applications.

Products

A selection of Electronics' product offerings is presented below:

Assembly Solutions	
Electronic Assembly Materials	Electonic assembly materials are used in circuit board and high-performance electronic device assembly. Our product offering is primarily focused on SMT, including solder pastes, adhesives and preforms. The portfolio also includes thermal management materials, encapsulants, coatings, fluxes and other solder materials, all of which facilitate wave solder and surface mount assembly activities. Key brands include *Alpha*, *Innolot*, *AccuFlux*, *Powerbond, Kester, Electrolube, and Alpha HiTech.*
Circuitry Solutions	
Circuit Board Metallization	Circuit board metallization products are used to plate holes drilled through printed circuit boards to connect opposite sides of the board and multi-layered printed circuit boards. Products include *Shadow, Blackhole, MacuSpec*, *M-System and Systek*.
Circuit Formation Products	Circuit formation products consist of an assortment of products for defining circuit patterns and bonding conductors to insulating materials.
Electronic Materials	Electonic materials are specialty products developed for evolving electronic applications, including photovoltaics, memory disk and molded interconnect devices manufacturing as well as lead frame and dielectric plating solutions.
Surface Finishes	Surface finishes are metallic and organic surface finishes products that promote wire bondability, provide contact functionality and preserve solderability of the circuit board prior to component assembly. Key brands include *Sterling, Entek, Affinity* and *Ormecon*.
Film and Smart Surface Solutions	Films and smart surfaces solutions include 3D formable films, 2D films, texturing Lacquers and circuitry & component attach materials which are used in the creation of in-mold electronic (IME) structures for human-machine interfaces (HMI). Key brands include *Xtraform, Autotex and Autoflex.*
Semiconductor Solutions	
Semiconductor Materials & Packaging Applications	Semiconductor materials & packaging applications are advanced plating chemistries and assembly materials used for semiconductor chip fabrication and packaging. Our plating portfolio consists of copper, nickel and precious metals used in wafer-level packaging applications as well as damascene metallization used for transistor interconnection. Our semiconductor assembly materials portfolio includes sintered materials, die attach pastes and films, thermal interface materials, adhesives, getters, solder flux and solder pastes. Our *Argomax* line of advanced sinter technology is used in power semiconductor and solid state lighting markets to improve reliability and device performance. Other key brands include *ALPHA, ViaForm, MICROFAB, ATROX, TrueHeight, Staydry, Kester* and *Compugraphics*.

Industrial & Specialty

Our Industrial & Specialty segment researches, formulates and sells specialty chemicals and process technologies that enhance surfaces or improve industrial processes in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids in offshore energy production. The segment's products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end-markets.

Industrial & Specialty provides solutions through the following businesses:

Industrial Solutions - representing approximately 76% of the segment's 2023 net sales. As a global supplier of industrial metal and plastic finishing chemistries, we primarily design and manufacture chemical systems that protect and decorate surfaces. Our high-performance functional coatings improve resistance to wear and tear, such as chrome plating of shock absorbers for cars, or provide corrosion resistance for appliance parts. Our decorative performance coatings apply finishes for parts in various end-markets, such as automotive interiors or jewelry surfaces. As part of our broader sustainable solutions platform, we also provide both chemistry and equipment for turnkey wastewater treatment, recycling and reuse solutions. Our industrial customer base is highly diverse and includes customers in the following end-markets: appliances and electronics equipment; automotive parts; industrial parts; plumbing goods; construction equipment and transportation equipment. We believe our growth in this industry will be primarily driven by increased worldwide automobile production with elevated fashion elements and higher content per vehicle as well as general economic growth.

Graphics Solutions - representing approximately 16% of the segment's 2023 net sales . As a supplier of consumable materials used to transfer images onto consumer packaging materials, our products are used to improve print quality and printing productivity. We produce and market photopolymers through an extensive line of flexographic plates that are used in the consumer packaging and printing industries. Photopolymers are molecules that change properties upon exposure to light. Flexography is a printing process that utilizes flexible printing plates made of rubber or other flexible plastics. We believe growth in this business will be driven by consumer demand and market shifts favoring the use of package imaging technologies that, like ours, offer a lower total cost of ownership to customers.

Energy Solutions - representing approximately 8% of the segment's 2023 net sales. As a global supplier of specialized fluids to the offshore energy industry, we produce water-based hydraulic control fluids for major oil and gas companies and drilling contractors to be used in offshore deep-water production and drilling applications. We believe our growth in this business will be driven by continued capital expenditures in energy exploration and production.

Products

A selection of Industrial & Specialty's product offerings is presented below:

Industrial Solutions	
Electroless Nickel	Electroless nickel is applied to a variety of metal and plastic surfaces to enhance corrosion resistance, wear resistance, solderability and to repair worn or over-machined surfaces in a variety of applications.
Plating Products	Plating products are high-performance coatings used in multiple applications. Our *CuMac* range of products is used for plating on aluminum wheels, plastic substrates and zinc-based die castings while our *evolve* plating process applies to chromium-free plating on plastics.
Pre-treatment and Cleaning Solutions	Pre-treatment and cleaning solutions are applied to prepare the surfaces of a wide variety of industrial products for subsequent treatment. This product family includes a complete line of aqueous and semi-aqueous pre-treatment and cleaning products.
Functional Conversion Coatings	Functional conversion coatings are applied to metals to enhance corrosion resistance and paint adhesion in a wide spectrum of industrial applications where heavy-duty usage and exposure to unfavorable environments are anticipated.
Wastewater Solutions	Wastewater solutions are treatment and recycling systems that allow for less waste discharge and a more sustainable use of resources including water, metals and other production inputs.
Water Treatment	Water treatment consists of *Fernox,* our water treatment product line, which is used for the filtration, corrosion inhibition, and conditioning of water in residential and commercial boiler systems.
Graphics Solutions	
Solid Sheet Printing Elements	Solid sheet printing elements are digital and analog printing sheets, used in the flexographic printing and plate-making processes. Our extensive line of *LUX* flexographic plates, including our *LUX ITP 60* plate, are used in the commercial packaging, letterpress newspaper and publication industries.
Liquid Imaging Products	Liquid imaging products are liquid photopolymers used to produce printing plates for transferring images onto commercial packaging. Our key products are *LTL photopolymer*, *M Clear photopolymer* and *M Stamp 40 photopolymer*. We also offer products that are used in the production of liquid photopolymer plates, such as substrate, coverfilms and detergents.
Energy Solutions	
Offshore Fluids	Offshore fluids are used to operate valves for the deep-water oil extraction and transportation process, and drilling fluids are used to operate valves for drilling rigs on the ocean floor. Production and drilling fluids are water-based hydraulic fluids used in subsea control systems.

Competitive Strengths

We believe the following competitive strengths differentiate our businesses from competitors and contribute to our ongoing success:

- ***Industry Leading Positions*.** We diligently focus on building and maintaining leading positions in niche sectors of high-growth markets by offering innovative products and high value-added services to our customers. We believe our scale and global reach in product development, marketing and formulation provide us with advantages over many competitors, allowing us to maintain our market positions and drive profitable growth. Our extensive market presence contributes to our ability to attract new customers and successfully enter new end-markets.

- ***Customer Driven Innovation.*** We work closely with our customers, OEMs and other industry participants to develop new products and identify new market opportunities. We participate in a variety of dynamic end-markets where new unmet needs are always materializing. Our sales and technical service teams provide continuous insights that help ensure our research and development efforts are appropriately focused. Customer requirements can lead to improved or uniquely tailored formulations of existing product offerings or to the development of completely new products to satisfy previously unmet needs. Tailoring products for specific OEMs leads to long-term relationships and significant customer switching costs.
- ***Comprehensive Offering of Critical Products*.** We provide our customers with a comprehensive offering of products that meet many of their specialty chemical needs. In many cases, we offer a full suite of products with complementary capabilities that provide a complete functional solution to our customers. We believe the ability to provide an "end-to-end" product offering is a significant competitive advantage over many of our smaller competitors. Additionally, we believe our breadth of touchpoints from circuit formation through circuit assembly is unique in the market and allows for a broader dialogue with customers in electronics end-markets. We also believe that our existing product offerings provide many opportunities for growth in adjacent end-markets.
- ***Stable Cash Flow and Low Capital Requirements.*** Our businesses typically generate high margins and require low capital expenditures which translate into high cash flow margins and returns on capital. Instead of large investments in physical assets to sustain business or grow, we focus our investments on our technological innovation or sales and services areas. Our business involves the formulation of a broad range of specialty chemicals created by blending raw materials and incorporating them into multi-step technological processes. This model allows us to conservatively manage our fixed asset investments. We believe our existing fixed asset base is well-maintained and, accordingly, requires low ongoing capital expenditures.
- ***Performance-Driven Culture, Experienced Management and Board with Proven Track Record .*** We place a premium on maintaining an expert and qualified employee base to provide innovative products and specialized technical service to our customers. We believe we have outstanding people who can deliver superior performance under the guidance and oversight of proven, experienced leadership. Our culture is performance-driven and decentralized. We empower our business teams and hold them accountable for their outcomes and business judgment. We measure our performance against industry benchmarks relating to efficiency growth and profitability, and drive operational excellence through continuous improvement. Our experienced management team is complemented by our experienced Board of Directors, which includes individuals with proven track records of successfully managing and growing businesses. In addition, both of our segments are led by executives who have extensive experience in their respective fields.

Business Strategies

We are building a best-in-class global specialty chemical solutions company. Our primary long-term measures of success are the value we create for our customers, the growth opportunities we provide for our people and the growth in the intrinsic value of our shares, which is a byproduct of value to customers, a strong meritocratic culture and prudent capital allocation. We regularly develop new products and processes and leverage our existing technologies and global footprint to profitably enter new markets. Our efforts are directed by the following key business strategies:

- ***Commercial Excellence.*** We understand that reliably meeting our customers' needs through a focus on high-quality and reliable service leads to success for all parties. From product development and applications excellence through quality manufacturing and on-time delivery, we demand a customer-focus from all levels of the organization. We believe that we can capitalize on our existing technical capabilities, sophisticated process know-how, and strong industry relationships to enable customer success.
- ***Market Leading Innovation.*** Our customers participate in dynamic markets driven by innovation, which means that we too must place a strong emphasis on innovation. We work alongside our customers and OEMs to develop leading edge products based on our significant intellectual property portfolio, process experience and technical expertise. Building on our core competencies in product innovation, applications development and technical service should help drive organic growth. Innovation helps develop new high-growth markets and technologies and expand upon our existing portfolio with new products for current and adjacent markets.
- ***Enabling Sustainability.*** It is both socially responsible and commercially compelling to develop sustainable solutions that exceed the increasingly stringent environmental standards of our customers and regulators. As part of our innovation and product development process, we actively partner with governments, industry groups and universities to develop commercially viable, environmentally friendly solutions for our customers' use around the world. Enabling our customers to improve their environmental footprint will allow us to do well by doing good.

- ***Decisiveness and Action Orientation.*** A customer-oriented, customer-service driven organization requires decentralized decision making. We encourage our employees to make decisions and empower them to act swiftly to meet the ever-changing local needs of our customers. Clear communication, strong strategic alignment and a culture that rewards good judgement allow us to ensure the right decisions are being made by our trusted global workforce.
- ***Recruitment and Talent Development*.** Our success is a by-product of the efforts and capabilities of our people from our research and development laboratories to our customers' manufacturing floors. Our technical expertise and innovation track records are the result of a specialized, highly-skilled workforce. Our ability to drive profitable growth through technical process know-how, strong customer relationships and industry knowledge relies on our ability to attract, grow and retain highly-skilled and motivated teams at all levels of our organization.
- ***Disciplined and Prudent Capital Allocation*.** Our capital efficient business model translates to stable, substantial free cash flow. Our ability to grow the intrinsic value of our shares relies on deploying that capital prudently. We intend to be opportunistic with the allocation of our free cash flow and may pursue organic investments in priority markets, bolt-on and strategic acquisitions, as well as stockholder-friendly capital returns, such as share repurchases or dividends. Our investment decisions will be driven by comparing relative and absolute risk adjusted returns expectations.

Customers

Our businesses have diverse customer bases and sell products either directly to end-user customers or through intermediaries. We also have collaborative relationships with many OEMs and industry partners, who specify our chemistries and technologies for use in their products or grant us development rights to their intellectual property.

We believe that we are able to attract new customers successfully through our international reach, coupled with our local knowledge and on-the-ground presence, which enable us to meet the needs of our customers. We operate a relatively large number of small and medium-sized facilities located close to our customers throughout the world's major economic regions. This close proximity to our global customers' local sites enables access to key growth markets and, along with our efficient formulation process, allows for "just in time" supply chain management.

We believe that our businesses are not materially dependent upon any single customer with no customer representing 10% or more of our consolidated net sales in 2023, 2022 or 2021.

Due to the relatively short cycle times in the majority of our businesses, our order backlog levels are minimal.

Selling & Marketing

We employ a customer-centric and highly-technical sales and marketing force worldwide. These professionals have robust technical expertise and local market knowledge and cultivate strong customer relationships. Our local sales and marketing teams closely monitor market trends and maintain active dialogue with our customers to assess and understand their constantly evolving challenges. We use this information from our local sales teams to anticipate future needs and respond rapidly to changing market conditions or technologies in order to swiftly deliver customized, value-added solutions to our customers. This feedback loop is an important source of new product ideas and helps guide our capital allocation decisions and research and development initiatives.

Our methods for selling and marketing our proprietary products vary slightly by geographic region. We generate business through the efforts of regional sales, technical and service personnel as well as distributors. In addition to regional sales and service staff, we maintain a group of global personnel focused on coordinating sales projects and obtaining design specifications for complex projects involving multiple customers within the manufacturing supply chain.

Human Capital Management

We strive to embody the five elements of our culture, our “5 Cs”: Challenge, Commit, Collaborate, Choose and Care. These core values are the foundation of our organization. We believe they reinforce our strategic objectives and empower our employees when serving and engaging with our customers globally.

At December 31, 2023, we employed over 5,300 full-time employees, of which approximately 40% are research and development chemists and experienced technical service and technical sales personnel. Our full-time employees are based throughout the world, with approximately 80% employed outside of the U.S. In certain countries where we operate, our employees are also members of unions or are represented by works councils. We believe our relationships with our employees and collective bargaining unions are satisfactory.

Occupational Health and Safety. As a specialty chemical company, the success of our business is fundamentally connected to the safety of our employees. To promote worker safety, we use comprehensive management tools, including policies, training requirements, best practices and processes, and product safety standards. We routinely train and educate our employees on workplace safety and security, including by hosting an annual Global Safety Day during which our leaders emphasize the importance of safety through seminars, videos and targeted discussions. As part of our safety program, we track injury and illness rates locally and maintain emergency and disaster recovery plans. We also care for our employees' health and offer benefits and programs designed to support their physical, mental and financial well-being.

Diversity, Equity and Inclusion. We are committed to becoming a more inclusive and diverse organization. We believe diversity, equity and inclusion drive innovation, which in turn allows us to compete effectively. Our talent program is based on policies designed to ensure fair hiring practices and prevent discrimination and harassment as well as diversity training on a targeted basis. Throughout 2023, we continued to strengthen our hiring initiatives with a focus on candidates historically underrepresented in our industry, including multiethnic backgrounds. This led to diverse candidate slates for approximately 90% of our U.S.-based roles. Within the Company, we focused on our female representation in our High Potential (HiPo) leadership program to increase the number of female leaders at ESI. In addition, our newly-created employee resource groups (ERGs), with the assistance of their executive sponsors, support diverse employees and aim to raise awareness of different cultures within the workplace, cultivate diversity as a business strength and support ESI's talent acquisition strategy to attract and retain diverse candidates.

Talent Retention and Development. With our focus on innovation and service, key elements of our human capital strategy are the attraction, acquisition and engagement of highly-skilled employees. Accordingly, we offer many training opportunities to cultivate talent, improve targeted skills and facilitate internal mobility to create a high-performing and diverse workforce. We track internal KPIs related to career development and internal promotion, and regularly review talent development and succession plans for each of our functions and segments to identify and develop a pipeline of talent to maintain business operations. In addition, we conduct regular global employee culture surveys to gauge employees' perception of the Company as a place to work as well as their views of leadership, understanding of our culture, and sense of inclusion. These surveys are part of our continuous improvement mindset around building a robust culture that is both engaging and aligned with our core value of "Care."

Social and Community Impact. We believe that building connections among our employees, their families and our communities creates a more meaningful, fulfilling and enjoyable workplace. We understand that the best workforce comes from thriving communities and accordingly invest in our communities to support them. Through our engagement programs, our employees can connect to volunteering opportunities and nonprofit organizations of their choice which support causes they care about, locally and/or globally, including education, humanitarian relief and minorities. The ESI Foundation further brings our purpose to life by matching employee donations to qualified charitable organizations in the communities where our employees live and work. It also focuses on causes important to the environmental and social well-being of these communities, such as The Canopy Project®, which in 2023 helped us celebrate Earth Day with the planting of trees around the world. In 2023, global donations through our ESI Cares program benefited over 500 charitable organizations, including charities who focus on human rights and humanitarian initiatives, such as Equality Now and Doctors Without Borders USA.

In early 2023, we published our latest Environmental, Social and Governance (ESG) report in which we describe, among other ESG initiatives and data, our progress towards our sustainability goals, which include improving occupational health and safety performance and increasing diversity, equity and inclusion. For more information on our workforce prosperity efforts, social and community impact and sustainability goals, see the Sustainability section of our website.

Research and Development

Innovation is a key element of our culture and critical to our success. Continued investment in research and development ensures that we remain ahead of emerging trends and continue to strengthen our strong positions in our market niches. Our research and development activities are also focused on developing products and improving formulations and processes, not only to respond to or anticipate customers' changing needs, but also to drive growth or otherwise add value to our core business operations and those of our customers. We accelerate market introductions and increase the impact of our local product offerings through collaboration with partners in the academic and commercial sectors (customers and value-chain partners) and by working with customers and OEMs on tailored application development around the world through our technical service teams. We plan to continue making meaningful investments in a broad range of research and development efforts.

Our commitment to technological innovation and extensive intellectual property portfolio enables us to develop differentiated products at the forefront of technological advances. Research resulting in new, proprietary formulations is performed principally in the United States, Germany, United Kingdom and India. During 2023, our research and development expenses totaled $68.1 million which includes $15.7 million of research and development costs associated with purchase accounting related to the Kuprion Acquisition. Substantially all research and development activity was performed internally.

Competitive Environment

Our markets are competitive and subject to rapid changes in technology. Our businesses compete in markets for specialty chemicals for electronic applications, general metal and plastic finishing, offshore oil and gas exploration and production, and consumer packaging.

Our businesses compete primarily on the basis of quality, technology, performance, reliability, brand, reputation, service, range of products and services and support. We maintain extensive technical support and testing services for our customers and are continuously developing new products to meet their needs. Further consolidation within our industry or other changes in the competitive environment could result in larger competitors that compete with us across several business areas. In addition, some of our competitors may have greater financial, technical and marketing resources than we do and may be able to devote greater resources to promoting and selling certain products. We believe, however, that our ability to manufacture, sell, service and develop new products and applications enable us to compete successfully. Some large competitors operate globally, as we do, but most operate only locally or regionally. We also face competition from many smaller companies that specialize in particular segments of the markets in which we compete.

The specific competitive environment of each of our segments is described below:

Electronics

Our Electronics segment provides a broad line of proprietary chemical compounds and supporting services, and broadly competes within the specialty chemicals industry. Although competition varies by end-market and geography, our most significant competitors are MKS Instruments, DuPont de Nemours, Inc., Henkel Corporation, Senju Metal Industry Co. and Uyemura International.

Industrial & Specialty

Our Industrial & Specialty segment provides a broad line of proprietary chemical compounds and supporting services, and broadly competes within the specialty chemicals industry. Although competition varies by end-market and geography, our most significant competitors are MKS Instruments, DuPont de Nemours, Inc., BP p.l.c., Miraclon Corp. and XSYS Global.

Sources and Availability of Raw Materials

Our businesses formulate a broad range of specialty chemicals, which we create by blending raw materials and incorporating them into multi-step technological processes. Our global operations depend upon obtaining adequate supplies of raw materials on a timely basis. We typically purchase our major raw materials as-needed from outside sources and we work closely with these suppliers to help ensure continuity of supply while maintaining high quality and reliability. As part of our sustainability efforts, we recycle certain raw materials, primarily tin, in our own smelting and refining facility in the U.S. for further use in our manufacturing process. We seek to use local sources where possible but the majority of the raw materials we use are obtainable from multiple conformant sources worldwide.

Patents, Trademarks and Proprietary Products

We maintain an extensive intellectual property portfolio, which we developed or acquired over a number of years. This portfolio includes a combination of patents, copyrights, trade secrets, trade names, trademarks and other forms of intellectual property rights in major markets and other commercially-relevant jurisdictions worldwide. Although we believe the ownership of such intellectual property rights is an important factor in our businesses, we also rely on the innovative skills, technical competence and selling abilities of our personnel.

We regularly file patent applications to protect innovations arising from our research and development. At December 31, 2023, we owned, had applications pending, or licensed the rights to, approximately 2,800 domestic and foreign patents, which have remaining lives of varying duration. Although certain of these patents are important to our business, no specific group or groups of intellectual property rights are material, and we have many proprietary products which are not covered by patents.

We also rely on confidentiality agreements and patent, trade secret, trademark and copyright law as well as judicial enforcement to protect our technologies, processes, product composition, formulations and other intellectual property rights. In addition, we implement confidentiality procedures, contractual exclusivity and other rights necessary to protect our proprietary intellectual property, formulations, processes and other product-related rights. We also enter into invention or patent assignment agreements, when applicable, with our employees, consultants, contractors and other third-parties who may be engaged in discovery or development of intellectual property and other proprietary rights. Finally, we seek to include provisions in our material transfer agreements, license and development agreements and other agreements that provide for the transfer of intellectual property rights back to us to the greatest extent possible under the circumstances of any specific transaction and development project.

Government Regulations

As a global manufacturer and distributor of specialty chemicals, our operations are, or may in the future be, subject to extensive domestic and foreign laws, regulations, rules and ordinances relating to safety, health and environmental matters (or SH&E requirements), including product safety, worker health and safety and environmental protection matters, such as discharges of pollutants, the management, handling, generation, emission, release, discharge, treatment, storage and disposal of hazardous substances and wastes and the cleanup of contaminated properties.

Compliance with SH&E requirements has not had, and in the future is currently not expected to have, a material effect on our capital expenditures, results of operations and competitive position as compared to prior periods. However, current governmental, regulatory and societal demands for increasing levels of product safety, such as chemical composition, packaging and labeling, and environmental protection, such as the management, movement and disposal of hazardous substances, are resulting in increased pressure for more stringent regulatory control with respect to the chemical industry. As a result, in the future we may incur significant costs, including cleanup costs for contaminated sites and related fines or penalties, and face third-party claims for property or natural resource damage or personal injuries relating to past or future violations or liabilities.

In addition, as climate change and other ESG-related treaties, initiatives and programs are adopted and implemented throughout the world, we expect that this trend of increased regulation will continue in the future and there can be no assurance that future material capital expenditures or incremental operating expenses will not be required in order to ensure compliance. However, climate-related regulations, including those limiting or taxing greenhouse gas (GHG) emissions, may also provide new opportunities for us. We continue to develop technologies to help our facilities and our customers lower energy consumption, improve efficiency and lower emissions. We also serve a variety of clean technology customers and as such, may benefit from the upcoming transition to a lower carbon economy.

We believe we are in material compliance with environmental laws and regulations applicable to our operations, and consider the liabilities recorded at December 31, 2023 for our various environmental matters to be appropriate.

Available Information

Our internet website address is *www.elementsolutionsinc.com*. We make available free of charge, through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, and proxy statements for our annual meetings of stockholders as soon as reasonably practicable after these are electronically filed with or furnished to the SEC. The SEC also maintains an internet website available at *www.sec.gov* that contains reports, proxy and information statements and other information filed by issuers, such as Element Solutions.

The information on or linked to our website is not incorporated by reference into, and does not form a part of, this 2023 Annual Report or any of our other SEC filings.

Corporate Information

Our principal executive offices are located at 500 East Broward Boulevard, Suite 1860, Fort Lauderdale, Florida 33394 and our telephone number is (561) 207-9600.

Item 1A. Risk Factors

The following discussion of "risk factors" identifies the material factors that may adversely affect our business, financial condition or results of operations. Potential investors should carefully consider these risks and the other information in this 2023 Annual Report when evaluating our business. This discussion is not all inclusive and additional risks that are currently unknown to us or that we currently consider to be immaterial may also impair our business operations and cause our future results to differ from our expectations.

BUSINESS & OPERATIONAL RISKS

We may be unable to compete successfully in the competitive markets in which we operate and, as a result, we may experience pricing pressure, fewer customer orders, reduced margins and the loss of market share.

We may be unable to compete successfully in the competitive markets in which we operate. In these markets, we encounter competition from numerous and varied competitors in all areas of our businesses. Some of our competitors have longer operating histories, greater resources, greater brand recognition and a larger base of customers than we do. As a result, we may lose business, customers and market shares if we are unable to devote greater resources to the research and development, manufacturing, formulation, promotion, sale or support of our products, withstand adverse changes in economic conditions or prices of raw materials, and/or maintain competitive pricing. In addition, our competitors could enter into exclusive arrangements with our existing or potential customers or suppliers which could limit our ability to generate sales, acquire necessary raw materials and/or significantly increase costs.

In addition, the markets in which we operate are driven by consumer preferences that are rapidly changing as well as frequent new product introductions and improvements. As a result, we must develop new products and services that offer distinct value to our customers in order to compete successfully. We seek to provide products tailored to the often-unique and evolving needs of our customers which require an ongoing level of innovation. Our inability to anticipate customers' changing needs or adapt to emerging technological and business trends accurately, control research and development costs or execute our innovation strategy could adversely affect our ability to sustain our market positions and/or penetrate new markets.

Consolidation of our competitors could also place us at a competitive disadvantage and reduce our profitability. We operate in industries which are fragmented on a global scale, but in which there has been a trend toward consolidation in recent years. Consolidations of our competitors may jeopardize the strength of our positions in one or more of our markets which could adversely affect our business, financial condition or results of operations as well as our growth potential.

If we don't successfully execute our go-to-market strategy, our business and financial performance may suffer.

Our go-to-market strategy is focused on leveraging our existing portfolio of products and services as well as introducing new products and services to meet the demands of our customers in a continually changing technological landscape. To successfully execute this strategy, we must emphasize the aspects of our core business where demand remains strong, identify and capitalize on organic growth, and innovate by developing new products and services that will enable us to expand beyond our existing technology categories. Any failure to successfully execute this strategy, including any failure to invest sufficiently in strategic growth areas and support our research and development activities, could adversely affect our business, financial condition or results of operations.

In addition, the process of developing new high-technology products or enhancing existing products is complex, costly and uncertain. After we develop a product, we must be able to manufacture appropriate volumes quickly while also managing costs and maintaining the high-quality level that our customers expect. Any delay in the development, forecast, production and/or marketing of a new product could result in us not being among the first to market which could further harm our competitive position.

Meeting customer demand depends in part on our ability to obtain timely deliveries from our suppliers and contract manufacturers. To help ensure continuity of supply to our customers, we have increased our procurement efforts to shorten lead times. These increases in materials inventory and purchase commitments have resulted, and could continue to result, in excess and/or obsolete inventory charges if the demand for our products is ultimately less than our expectations.

Our substantial international operations subject us to risks of doing business in foreign countries which could affect our business, financial condition or results of operations.

Our products are manufactured, formulated, distributed and sold globally. In 2023, approximately 75% of our net sales were generated from non-U.S. operations. As a result, we face certain risks inherent in international trade which may reduce our sales and harm our business, including:

- political uncertainties, war, terrorism and other instability risks and their impact on the global economy, market conditions and supply chain operations, including risks caused by the ongoing war between Russia and Ukraine, the Israel-Hamas conflict and other hostilities in the Middle East and the increased tariffs and trade restrictions between China and the U.S.;
- changes in global or local economic conditions, including inflation, hyperinflation, fluctuations in interest rates and other increasing price levels in certain sectors, such as energy, impacting availability and cost of goods and services;
- fluctuations in currency values and currency exchange rates for countries in, or with which, we conduct business;
- changes or uncertainty in international, national or local legal environments, including tax, data handling, privacy, intellectual property, consumer protection, environmental and antitrust laws;
- adverse tax consequences, including as a result of changes in taxation and regulatory requirements, transfer pricing practices involving our foreign operations, and additional withholding taxes or other taxes on foreign income;
- foreign exchange controls or other currency restrictions and limitation on the movement of funds, potentially leading to the inability to readily repatriate earnings from foreign operations effectively;
- natural disasters, extreme weather events, regional or global health concerns, such as the COVID 19 pandemic;
- establishing and maintaining relationships with local distributors and OEMs;
- governmental regulations and/or sanctions affecting the import and export of products, including global trade barriers, additional taxes, tariff increases, cash repatriation restrictions, retaliations and boycotts between the U.S. and other countries, including Russia and China;
- import and export control and licensing requirements; risk of non-compliance with the Foreign Corrupt Practices Act of 1977, U.S. export control and trade sanction laws, SEC rules regarding conflict minerals sourcing and other similar anti-corruption and international trade laws or regulations in other jurisdictions;
- greater difficulty in safeguarding intellectual property than in the U.S.;
- difficulty in staffing and managing geographically diverse operations and ensuring compliance with our policies and procedures; and
- challenges in maintaining an effective internal control environment, including language and cultural differences, varying levels of GAAP expertise and internal control over financial reporting.

In addition, while progress has been made to contain the COVID-19 pandemic, it remains a global challenge. The pandemic, and the responses of business and governments to the pandemic, have at times resulted in increased border controls or closures, increased transportation costs and increased security threats to our supply chain. Countries in which we operate, such as China, may continue to close borders, impose prolonged quarantines, and further restrict travel and other activities. If we are unable to successfully manage these and/or any of the risks listed above, we could experience a loss of sales and profitability and/or an impairment or loss of assets, any of which could have a material adverse impact on our business, financial condition or results of operations.

Failure to attract and retain key personnel, including our executive officers, or effectively manage succession could have an adverse impact on our business, financial condition or results of operations.

Our business involves complex operations. As a result, our success depends to a significant degree on the skills, experience and efforts of our executive management and other key personnel as well as their ability to provide uninterrupted leadership and direction. In addition, due to the specialized and technical nature of our business, our future performance depends upon our ability to attract, develop and retain skilled employees, such as specialized research and development and sales and service personnel, in order to maintain our efficient production processes, drive innovation in our product offerings and maintain our deep customer relationships. The failure to attract and retain key personnel, or effectively manage succession, could have an adverse material impact on our business, financial condition or results of operations.

In addition, we are highly dependent on the experience and track records of Sir Martin E. Franklin, our other Board members and our executive leadership team. If one or more of our executive officers or Board members were to cease to be employed by us or to serve as directors, or if we were unable to replace them in a timely manner, our business, financial condition, results of operations and/or stock price could be adversely affected.

Our reliance on certain key customers, contract manufacturers and suppliers could adversely affect our overall sales and profitability.

Although our business is not materially dependent upon any single customer, the loss of one or more key customers may impair our results of operations for the affected earnings periods. In addition, there is limited available manufacturing capacity that meets our quality standards and regulatory requirements. If we are unable to arrange for sufficient production capacity among our suppliers or contract manufacturers, or if our suppliers or contract manufacturers encounter production, quality, financial or other difficulties (including due to the COVID-19 pandemic, labor or geopolitical disturbances or natural disasters), we may be unable to meet our customers' demands. Finally, we rely on independent distributors to distribute our products and to assist us with the marketing and sale of certain of our products. There can be no assurance that our distributors will focus adequate resources on selling our products to end users, or will be successful in selling our products, which could materially adversely affect our business and results of operations.

We may not realize the anticipated benefits of acquisitions or divestitures which may adversely affect our existing businesses, reputation and financial condition.

We have completed several acquisitions and divestitures and may in the future pursue additional opportunistic strategic transactions. Our ability to achieve the anticipated benefits of acquisitions or divestitures depends on many factors, including our ability to negotiate favorable terms, close such transactions in a timely and cost-effective manner and successfully integrate any businesses we acquire.

With respect to acquisitions, we may be exposed to successor liability relating to actions taken before the acquisition date. The due diligence we conduct in connection with an acquisition, the controls and policies we implement and any contractual guarantees or indemnities that we receive from the sellers of acquired companies or assets may not be sufficient to protect us from, or compensate us for, actual liabilities. Acquisitions also involve compliance and reputational risks as well as risks relating to differing levels of management and internal control effectiveness, systems integration, impairment charges relating to recorded goodwill and intangible assets, significant accounting charges, completion fees and integration expenses. Sizable acquisitions may also require a material increase in funding to address capital expenditures, working capital requirements and employee retention.

In addition to unanticipated delays, costs and other issues, divestitures may also expose us to liabilities or claims for indemnification for retained liabilities or indemnification obligations associated with the assets or businesses that we sell. The magnitude of any such liability or obligation may be difficult to quantify at the time of the transaction, as it was the case for certain liabilities retained in connection with the sale of our Agricultural Solutions business in 2019. We cannot predict the ultimate resolution of these matters, and there can be no assurance that any such resolution, which may take several years, will not adversely impact our financial position or results of operations.

INDUSTRY RISKS

Industry and consumer trends may cause significant fluctuations in our results of operations and have a material adverse effect on our financial condition.

The specialty chemical industry is subject to constant and rapid technological change, product obsolescence, price erosion, evolving standards, finite product lifecycles, raw material price fluctuations, and changes in product supply and demand. For example, the mobile device market, particularly smartphones and tablets, is characterized by rapidly changing market conditions, frequent product introductions and intense competition based on features and price; all of which could impact our sale volumes and margins. In the automotive industry, demand for our products and services may be affected by technological advances, changing automotive OEM specifications and other factors beyond our control that impact production levels of our customers, such as interest rates, fuel prices, shifts in vehicle mix, consumer confidence, regulatory and legislative oversight requirements and trade agreements. In addition, technological changes in our customers’ products or processes may make certain of our specialty chemicals unnecessary or obsolete. Customers also have found, and may continue to find, alternative materials or processes, which no longer require our products. All these factors, consumer trends and industry characteristics may impact the demand for our products which may cause significant fluctuations in our results of operations and adversely affect our financial condition and cash flow.

Fluctuations in the supply and prices of raw materials and in other costs may negatively impact our business, financial condition or results of operations.

The unavailability or increased prices of raw materials could have a material adverse impact on our business, financial condition or results of operations. We use a variety of specialty and commodity chemicals in our formulation processes, and such formulation operations depend upon obtaining adequate supplies of raw materials on a timely basis from numerous suppliers in various countries. We typically purchase our major raw materials under existing supply agreements or on an as-needed basis from outside sources. The availability and prices of raw materials may be subject to curtailment or change due to, among other things, the financial stability of our suppliers, new laws or regulations, protectionist nationalistic trade policies and practices, changes in exchange rates and worldwide price levels. In some cases, we are limited in our ability to purchase certain raw materials from other suppliers due to minimum purchase requirements contained in certain of our supply agreements. Our responsible sourcing practices could also affect the sourcing, pricing, and availability of certain conflict minerals we use in our products. If only a limited pool of our suppliers can demonstrate that they are compliant with the applicable rules, we may not be able to obtain the conflict minerals we need in sufficient quantities or at competitive prices. Further, if we are unable to price our products competitively to timely reflect volatility in prices of raw materials or if we do not accurately estimate the amount of raw materials needed for a specific geographic region, our margins could be adversely affected.

In addition, if the costs of energy, shipping or transportation increase and we are unable to pass along those costs to our customers, our profit margins and working capital would be adversely impacted. Higher commodity and energy prices could result from volatility caused by market fluctuations, supply and demand, currency fluctuations, production and transportation disruptions, climate change and weather conditions and other world events. Passing along these costs to our customers by increasing our prices could result in long-term sales declines or loss of market share if our customers were to find alternative suppliers or choose to reformulate their consumer products to use fewer ingredients which could in turn have an adverse long-term impact on our business, financial condition or results of operations.

LEGAL & REGULATORY RISKS

Intellectual Property

If we are unable to protect our intellectual property rights, our business, financial condition or results of operations could be adversely affected.

Protection of our proprietary processes, methods, formulations and other technology is important to our business. To protect our intellectual property rights, we generally rely on patent, trade secret, trademark and copyright laws of the U.S. and certain other countries in which our products are manufactured or sold as well as nondisclosure and confidentiality agreements. The laws of other countries may not protect our intellectual property rights to the same extent as the laws of the U.S. Failure to protect our existing intellectual property rights, domestically or internationally, may result in the loss of valuable technologies and our competitors offering similar products, potentially resulting in the loss of one or more competitive advances and decreased sales and/or market shares. Additionally, we rely in some cases upon unpatented proprietary manufacturing expertise, continuing technological innovation and other trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality agreements with our employees and third-parties to protect our intellectual property, our confidentiality agreements could be breached and may not provide meaningful protection for, or adequate remedies to protect, our trade secrets or proprietary manufacturing expertise in the event of unauthorized use or disclosure of information.

Further, protecting against the unauthorized use of our products, technology and other proprietary rights is difficult, time-consuming and expensive, and we cannot be certain that the steps we are taking will prevent or minimize the risks of such unauthorized use. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could also result in substantial costs and diversion of resources, which could significantly harm our results of operations and reputation.

Additionally, we could face infringement claims from our competitors or others alleging our processes or products infringe on their rights. Any settlement or adverse judgment resulting from litigation could result in the payment of material damages and/or require us to change our processes, redesign a certain product partially or completely, stop producing it entirely, obtain a license to continue our use, or potentially be restricted in our use of certain aspects. Further, there is a risk that licensing opportunities may not be available to us on acceptable terms, if at all. Regardless of their merit, infringement claims can be time-consuming, divert the time and attention of our management and technical personnel, and result in material litigation costs.

Finally, our exposure to risks associated with the use of intellectual property may increase as a result of acquisitions, as we would have an unavoidable lower level of visibility into the development process of any newly acquired technologies and the steps taken to safeguard against the risks of infringing the rights of third parties.

Global Regulations

Changes in our effective tax rate, tax cost and tax liabilities could adversely affect our financial condition, results of operations and liquidity.

In 2023, approximately 75% of our net sales were generated outside of the U.S. Given the global nature of our business, a number of factors may increase our effective rate and tax cost, including:

- the geographic mix of jurisdictions in which profits are earned and taxed;
- the statutory tax rates and tax laws in the jurisdictions in which we conduct business;
- the resolution of tax issues arising from tax examinations by various tax authorities; and
- the valuation of our deferred tax assets and liabilities.

Additionally, tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change, with or without notice, due to economic, political, and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes. For example, several countries where we do business have announced plans to implement global minimum tax regimes based on the Organization for Economic Cooperation and Development's Anti-Base Erosion and Profit Shifting Project. The final form of these global minimum tax regimes is uncertain but is expected to change various aspects of the existing international legal framework under which our global tax obligations are determined. While the ultimate impact of these changes is unknown, there can be no assurance that they will not materially and adversely affect our business, financial condition, results of operations and cash flows.

Moreover, we are regularly examined by various tax authorities throughout the world. The final resolution of tax audits and any related litigation may differ from our historical provisions and accruals resulting in additional tax liabilities, which may have an adverse impact on our tax provision, net income and cash flow. Although we believe our tax estimates and accruals are reasonable, there can be no assurance that the tax authorities will agree and we may have to engage in litigation to achieve the results reflected in such estimates and accruals, which may be time-consuming and the costs incurred significant. There can be no assurance that we will be successful or that any final determination will not materially and adversely affect our business, financial condition, results of operations and cash flows.

Chemical manufacturing is inherently hazardous and may result in accidents, which may disrupt our operations or expose us to significant losses or liabilities.

The hazards associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes are inherent in our operations as our research and development, manufacturing, formulating and packaging activities involve the use of hazardous materials and the generation of hazardous waste. We cannot eliminate the risk of accidental contamination, discharge or injury resulting from those materials. Also, our suppliers or contract manufacturers may use and/or generate hazardous materials in connection with producing our products. We may be required to indemnify our suppliers, contract manufacturers or waste disposal contractors against damages and other liabilities arising out of the production, handling or storage of our products or raw materials or the disposal of related wastes. Potential risks include explosions and fires, chemical spills and other discharges or releases of toxic or hazardous substances or gases, or pipeline and storage tank leaks and ruptures. Those hazards may result in personal injury and loss of life, damage to property and contamination of the environment, all or any of which may result in a suspension of operations and the imposition of civil or criminal fines, penalties and other sanctions, cleanup costs, and claims by governmental entities or third-parties. As we are dependent on the continued operation of our production facilities (including third-party manufacturing on a tolling basis), the loss or shutdown of operations over an extended period could have a material adverse effect on our financial condition or results of operations.

Because our operations currently use and generate, and have historically used and generated, hazardous materials and waste, we are subject to regulatory oversight and investigation, remediation, and monitoring obligations at our current and former Superfund sites, as well as third-party disposal sites, under federal laws and their state and local analogues, including the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, the Clean Air Act, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and analogous foreign laws. We are also subject to ongoing obligations at active sites in the U.S. and are conducting closure activities pursuant to the RCRA and CERCLA at several of our sites in the U.S. The costs and liabilities associated with these obligations and activities may be substantial and, to the extent not covered by insurance, may materially impact our financial condition.

Our products are subject to numerous, complex government regulations, and compliance with these regulations could require us to incur additional costs or to reformulate or discontinue certain of our products.

Our products are subject to numerous, complex federal, state, local and foreign customs regulations, imports and international trade laws, export control, antitrust laws, environmental and chemicals manufacturing, global climate change, health and safety requirements and zoning and occupancy laws that regulate manufacturers generally or, more particularly, govern the importation, promotion and sale of our products, the operation of our production and warehouse facilities and our relationship with our customers, suppliers, employees and competitors.

Our products and manufacturing processes are also subject to numerous regulations and ongoing reviews by certain governmental authorities. Governmental, regulatory and societal demands for increasing levels of product safety, such as chemical composition, packaging and labeling, and environmental protection, such as the management, movement and disposal of hazardous substances, are resulting in increased pressure for more stringent regulatory control with respect to the chemical industry. Such regulations include the European Union's REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals), which has been a continuing source of compliance obligations and restrictions on certain chemicals, REACH-like regimes, which have now been adopted in several other countries, the E.U. Poison Center Notification (PCN) and the U.S. Toxic Substances Control Act (TSCA). The TSCA, for example, was amended in June 2016 to expand the authority of the U.S. Environmental Protection Agency (EPA) to evaluate and regulate new and existing chemicals and this mandate creates uncertainty about whether existing chemicals of importance to our business may be designated for restriction and whether any new chemical approval process may become more difficult and costly. U.S. regulations related to the use in our products of certain conflict minerals, and similar laws in other jurisdictions, such as the E.U. Conflict Minerals Regulation, also apply to us. All of these regulations and these types of changes in our regulatory environment, particularly in, but not limited to, the U.S., the E.U. and China, may require us to re-design our products or supply chain to ensure compliance with the applicable standards or use different types or sources of materials, which could have an adverse impact on the efficiency of our manufacturing process, the performance of our products, add greater testing lead-times for product introductions or other similar effects. In turn, these changes could materially alter our market share and reputation, or otherwise have a material adverse effect on our business, financial condition and results of operations.

In addition, we have incurred, are incurring and will incur in the future, costs and capital expenditures to comply with environmental, health and safety laws and regulations. For example, we have several product lines that rely on lead-based solder and many others that historically did so. Legal claims have been brought alleging harmful exposures or contamination as a result of lead-based solder, and it is possible that we may face additional claims in the future. We are also currently involved in various environmental investigations due to historic operations. Liability under some environmental laws relating to contaminated sites can be joint and several and imposed retroactively, regardless of fault or the legality of the activities that gave rise to the contamination. Some of our formulating and manufacturing facilities have an extended history of chemical formulating and manufacturing operations or other industrial activities, and contaminants have been detected at some of our sites and offsite disposal locations. Ultimate environmental costs and liabilities are difficult to predict and may significantly vary from current estimates. To the extent available, we maintain what we believe to be adequate insurance coverage. However, there can be no assurance that we won’t incur losses beyond the limits or outside the terms of such coverage, or that we will be able to maintain adequate insurance at rates we consider reasonable. In addition, the discovery of additional contaminants, the inability or failure of other liable parties to satisfy their obligations, the imposition of additional cleanup obligations, or the commencement of related third-party claims could result in additional material costs and negatively impact our financial condition or results of operations.

Our offshore oil industry products are subject to the hazards inherent in the offshore oil production and drilling industry, and we may incur substantial liabilities or losses as a result of these hazards.

In the offshore oil industry, we are subject to the hazards inherent in the offshore oil production and drilling industry. Our offshore business produces water-based hydraulic control fluids for major oil companies and drilling contractors to be used for potentially hazardous offshore deepwater production and drilling applications. Offshore deepwater oil production and drilling are subject to hazards that include blowouts, explosions, fires, collisions, capsizing, sinking and damage or loss to pipeline, subsea or other facilities from severe weather conditions. Those hazards could result in personal injury and loss of life, severe damage to, or destruction of, property and equipment, pollution or environmental damage and suspension of operations. A catastrophic occurrence at a location where our products are used may expose us to substantial liability for personal injury, wrongful death, product liability or commercial claims. To the extent available, we maintain insurance coverage that we believe is customary in this industry. Such insurance does not, however, provide coverage for all liabilities, and there can be no assurance that our insurance coverage will be adequate to cover claims that may arise, or that we will be able to maintain adequate insurance at rates we consider reasonable. The occurrence of a significant offshore deepwater oil production or drilling event that results in liability to us that is not fully insured could have a material adverse effect on our financial condition or results of operations.

Certain of our products may be subject to various export control regulations and exports may require a license from the U.S. Department of State or the U.S. Department of Commerce.

As a global company, we are subject to various laws and regulations relating to the export of products, services and technology. In the U.S., these laws include, among others, the U.S. Export Administration Regulations (EAR), administered by the U.S. Department of Commerce's Bureau of Industry and Security, and the International Traffic in Arms Regulations (ITAR), administered by the U.S. Department of State's Directorate of Defense Trade Controls. Some of our products or technology may have military or strategic applications governed by the ITAR or represent so-called "dual use" items governed by the EAR. Although the majority of our relevant products are currently subject to automatic approval and do not require government licenses to be exported to certain jurisdictions or persons, this may change in the future if these laws and regulations are amended or if new laws or regulations are adopted. Any failure to comply with these laws and regulations could result in civil or criminal penalties, fines, investigations, adverse publicity and restrictions on our ability to export our products, any of which could result in a material adverse effect on our business, financial condition or results of operations.

Failure to comply with anti-corruption laws could subject us to penalties and damage our reputation.

Our international operations are subject to the U.S. Foreign Corrupt Practices Act of 1977, the United Kingdom Bribery Act 2010 and similar anti-bribery laws in other jurisdictions which generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. Under these laws, companies may also be held liable for actions taken by third-parties acting on their behalf, such as strategic or local partners or representatives. Our policies mandate compliance with these anti-bribery laws, including the requirements to maintain accurate information and internal controls. However, in certain of the jurisdictions where we conduct business, we face a heightened risk for corruption, extortion, bribery, pay-offs, theft and other improper practices. There can be no assurance that our internal control policies and procedures will protect us from acts committed by our employees or agents. Failure by us or our intermediaries to comply with applicable anti-corruption laws may result in civil and/or criminal penalties or other sanctions, including disgorgement of profits and contract suspensions or cancellations, any of which could damage our reputation and have a material adverse effect on our business, financial condition or results of operations.

Failure to comply with international trade restrictions and economic sanctions laws and regulations could adversely affect our business, financial condition or results of operations.

We have operations, assets and/or generate sales in countries all over the world, including countries that are or may become the target of trade and economic restrictions from the U.S. and/or other countries, which we refer to collectively as "Economic Sanctions Laws." Economic Sanctions Laws are complex and change with time as international relationships and confrontations between and among nations evolve. For example, the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) and the U.S. State Department monitors trade restrictions and economic sanctions and impose penalties upon U.S. persons and entities and, in some instances, non-U.S. entities, for conducting activities or transacting business with certain countries, such as recently Russia and Belarus in the context of the Russia-Ukraine conflict as well as governments, entities, or individuals subject to Economic Sanctions Laws. We have established policies and procedures to assist with our compliance with Economic Sanctions Laws, and we believe we do not unlawfully conduct business in any sanctioned countries. However, given the breadth of our international operations and the scope of our sales globally, including via third-party distributors over whom we may have limited or no control, coupled with the complexity and ever-changing nature of Economic Sanctions Laws driven by geopolitical events, there can be no assurance that our controls and procedures have prevented in the past or will prevent at all times in the future a violation of these laws. Failure to comply with Economic Sanctions Laws, or allegations of such failure, could lead to investigations and/or actions being taken against us which could materially and adversely affect our reputation and have a material adverse effect on our business, financial condition or results of operations.

Changes in data privacy and data protection laws and regulations, or any failure to comply with such laws and regulations, could adversely impact our business.

Our global business is subject to a wide variety of domestic and foreign laws and regulations designed to protect the privacy of customers, employees and other third parties, including, without limitation, the General Data Protection Regulation (GDPR) in the E.U. and the California Consumer Protection Act (CCPA) in the U.S. Additional states, as well as foreign jurisdictions, have enacted or are proposing similar data protection regimes, resulting in a rapidly evolving and uncertain governing landscape. Complying with these various laws and regulations is difficult and could require us to incur substantial costs or change our business practices in a manner adverse to our business. In addition, there can be no assurance that our controls and procedures enable us to be fully compliant. Any failure, or perceived failure, by us to comply with the GDPR, the CCPA or any other applicable regulatory requirements or orders, within the E.U., the U.S. or elsewhere, could result in proceedings or actions against us by governmental entities or individuals; subject us to significant fines, penalties, and/or judgments; require us to change our business practices; limit the offering of our products and services in certain countries; or otherwise adversely affect our business, as we would be at risk to lose both customers and sales, and incur substantial costs.

FINANCIAL RISKS

Our net sales and gross profit vary depending on our product, customer and geographic mix for any given period which makes it difficult to forecast future operating results.

Our net sales and gross profit vary among our products, customers and markets, and therefore may be different in future periods from historic or current periods. Overall gross profit margins in any given period are dependent in large part on the product, customer and geographic mix reflected in that period’s net sales. Market trends, competitive pressures, commoditization of products, increased component or shipping costs, regulatory conditions and other factors may also result in reductions in revenue or pressure on the gross profit margins in a given period. The varying nature of our product, customer and geographic mix between periods has historically materially impacted our net sales and gross profit between periods during certain recessionary times and may lead to difficulties in measuring the potential impact of market conditions, regulatory changes and/or other factors on our business. As a result, we may be challenged in our ability to forecast our future operating results.

Unfavorable currency exchange rate fluctuations could adversely affect our results of operations.

The reporting currency for our financial statements is the U.S. dollar. However, a large portion of our net sales (approximately 75% in 2023) are generated from our non-U.S. operations, which means that we have net sales, substantial assets, liabilities and costs denominated in currencies other than the U.S. dollar. To prepare our Consolidated Financial Statements, we must translate those sales, assets, liabilities and expenses into U.S. dollars at then-applicable exchange rates. Consequently, increases and decreases in the value of the U.S. dollar versus other currencies will affect the amount of these items in our Consolidated Financial Statements, even if their value has not changed in their original currency. These translations could result in significant changes to our results of operations from period to period. Additionally, volatility in currency exchange rates may adversely impact our financial condition, cash flows and liquidity. There can be no assurance that the techniques we employ to mitigate the impact of exchange rate fluctuations, including foreign currency hedging activities, will be effective risk management strategies, and our financial condition or results of operations could be adversely impacted.

Our Credit Agreement and other debt agreements contain restrictions that limit our flexibility in operating our business.

Our Credit Agreement, the indenture governing our 3.875% USD Notes due 2028 and other debt agreements governing our outstanding debt contain restrictive clauses, which may limit our operational and financial flexibility, including, among other things, our ability to grant liens, pay cash dividends, enter new lines of business, repurchase our shares of common stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. In addition, our Credit Agreement contains customary remedies, including the right of the lenders to take action with respect to the collateral securing outstanding loans, that would apply should we default or otherwise be unable to satisfy our debt obligations. To the extent an event of default occurs, we may not be able to borrow under the Credit Agreement and therefore, may not be able to pursue certain business initiatives or certain transactions that might otherwise be advantageous, meet extraordinary capital needs, finance future operations, plan for or react to market conditions, or otherwise take actions that we believe are in the best interest of our businesses. As a result, our business prospects, financial condition or results of operations may be adversely impacted.

In addition, our Credit Agreement requires that we meet certain financial ratios, including a first lien net leverage ratio based on net debt to EBITDA. EBITDA is a non-GAAP measure of liquidity defined in the Credit Agreement. Our ability to meet these financial covenants depends upon the future successful operating performance of our businesses. If we fail to comply with the Credit Agreement covenants, we would be in default under our term loan and revolving credit facilities and, unless we were to obtain waivers from our lenders, the maturity of our outstanding debt could be accelerated, which could adversely impact our results of operations, financial position and cash flows.

We and our subsidiaries may incur significant additional indebtedness in the future, which would result in additional restrictions upon our business and impact our financial condition.

Our Credit Agreement provides for senior secured credit facilities in an initial aggregate principal amount of $1.53 billion, consisting of term loans B-2 of $1.15 billion maturing in 2030 and a revolving facility of $375 million maturing in 2027. At December 31, 2023, we had $1.15 billion outstanding under the term loans and full availability of our unused borrowing capacity of $369 million, net of letters of credit, under the revolving facility. We and our subsidiaries may incur significant additional indebtedness in the future. Although our Credit Agreement and the indenture governing our 3.875% USD Notes due 2028 contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of significant qualifications and exceptions, and indebtedness incurred in compliance with these restrictions could be substantial. In addition, subject to specified conditions, without the consent of the then-existing lenders, we may add certain incremental term loans or revolving credit facilities, or increase commitments under our revolving credit facility, by up to the sum of (x) the greater of (i) $460 million and (ii) 100% of our consolidated EBITDA, less certain amounts of indebtedness, and (y) an unlimited amount of secured or unsecured incremental debt if, on a pro forma basis, our total first lien net leverage ratio does not exceed certain levels (as described in the Credit Agreement).

Any significant indebtedness incurred by us or our subsidiaries could have the following material consequences:

- require us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows to fund acquisitions, working capital, capital expenditures, dividends, research and development efforts and other general corporate purposes;
- expose us to the risk of increased interest rates as certain of our borrowings include instruments with variable rates of interest;
- increase our cost of borrowing;
- increase our vulnerability to general adverse economic and industry conditions;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
- place us at a competitive disadvantage compared to less-leveraged competitors or competitors with comparable debt governed by more favorable terms.

We may also enter into additional debt transactions or credit facilities, including equipment loans, working capital lines of credit, senior notes and other long-term debt, which may increase our indebtedness and result in additional restrictions upon our businesses. In addition, major debt rating agencies regularly evaluate our debt based on a number of factors, including our degree of leverage. There can be no assurance that we will be able to maintain our existing debt ratings, and failure to do so could adversely affect our cost of funds, liquidity and access to capital markets.

Changes in interest rates and exchange rates would increase the cost of servicing our debt and impact our results of operations and financial condition.

In order to mitigate our exposure to interest rate and foreign currency risks, we entered into interest rate and cross-currency swaps covering 100% of our outstanding term loans, effectively converting them from U.S. dollar denominated debt obligations into fixed-rate euro-denominated debt through the term of the swap agreements. As of December 31, 2023, swaps relating to approximately $390 million in notional value mature in January 2025 and approximately $760 million in December 2028. If we are unable to renew or elect not to replace these swaps, the cost of servicing our term loans may increase due to fluctuations in interest rates, currency values and/or currency exchange rates, which could reduce our profitability and cash flows and have a material adverse effect on our financial condition.

Any future impairment of our tangible or intangible long-lived assets may materially affect our results of operations.

As a result of our historical acquisitions, as of December 31, 2023, we had approximately $3.22 billion of intangible assets and goodwill. Under GAAP, we review our intangible assets and long-lived assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. For example, considering Graphics Solutions' lower than expected results, we conducted an interim impairment test on this reporting unit in the third quarter of 2023 which resulted in an impairment charge of $80.0 million. Other indicators that may signal that an asset has become impaired include changes in our strategy for our overall business or use of acquired assets, unexpected negative industry or economic trends, decreased market capitalization relative to net book values, prolonged decline in the value of our stock price, unanticipated competitive activities, change in consumer demand, loss of key personnel and/or acts by governments and judicial courts. To the extent any of our acquired assets do not perform as anticipated, the value of such assets may be negatively affected. As a result, we may be required to record impairment charges, which could be substantial and negatively impact our results of operations and financial position.

GENERAL RISKS

If we experience a significant disruption in our information technology systems or if we fail to implement new systems and software successfully, our business operations and financial condition could be adversely affected.

We depend on information technology systems throughout the Company to, among other functions, control our manufacturing processes, process orders and bill, collect and make payments, interact with customers and suppliers, manage inventory and otherwise conduct business. We also depend on these systems to respond to customer inquiries, implement our overall internal control processes and maintain records of our property, plant and equipment. The failure of our information technology systems to perform as we anticipate, including as a result of significant network or power outages, could disrupt our business and result in transaction errors, processing inefficiencies and the loss of sales and customers. As we upgrade or change systems, we may also experience interruptions in service, loss of data or reduced functionality and other unforeseen material issues, which could adversely impact our ability to provide quotes, receive and fulfill customer orders and otherwise run our business in a timely manner. As a result, our results of operations could be adversely affected.

Material cybersecurity-related events may materially disrupt our operations and harm our reputation and results of operations.

Information technology security threats, including security breaches, computer malware, cyber-attacks and other unauthorized access attempts are increasing, in both frequency and sophistication. Any such disruption, if successful, could result in data leaks or otherwise compromise confidential, proprietary and/or business critical information, cause a disruption in our operations or harm our reputation and results of operations. As previously announced, we have in the past experienced a cyber intrusion and may in the future be subject to additional intrusion events. There can be no assurance that the controls and procedures that we put in place will be sufficient or adequate to protect us. Further, as cyber threats are continually evolving, we may be required to devote additional resources to modify or enhance our systems in the future. Any breaches or compromises of data, and/or misappropriation of information resulting from such disruptions could result in violation of privacy and other laws, litigation, fines, negative publicity, loss of investor confidence, lost sales, business delays, indemnity obligations and/or material costs not covered by insurance, any of which could have a material adverse effect on our business, financial condition or results of operations.

Corporate responsibility, specifically related to ESG matters, may impose additional costs and expose us to new risks.

Increasing focus on ESG matters requires that we devote significant time and resources on ESG tracking and reporting, including the continuous monitoring of various and evolving standards and progress toward our published sustainability goals. Certain organizations, which provide corporate governance and other risk information to stockholders, have developed, and others may in the future develop, scores and ratings to evaluate companies based upon their ESG metrics and disclosures. Certain investors, particularly institutional investors, use these scores to benchmark companies and make investment and/or voting decisions. In this rapidly evolving ESG disclosure context, we may face reputational risk in the event we don't successfully execute our ESG strategy and/or if our ESG disclosures do not meet the expected standards or requirements set by our constituencies.

Further, as climate change and other global environmental concerns increase, changes in environmental and climate laws or regulations, in the U.S. and throughout the world, could lead to multiple disparate standards, in the U.S. and in foreign countries in which we operate, that may change over time, which could result in significant revisions to our methodologies for reporting ESG data, previously reported ESG metrics, our current goals, reported progress in achieving such goals, or our ability to achieve such goals in the future. Evolving environmental and climate laws or regulations could also lead to new or additional investment in product designs, incremental operating expenses and increased environmental expenditures in order to ensure compliance. We expect these ESG disclosure and regulatory trends to continue, and the ultimate cost related to reporting and, where required, compliance could be material.

We have numerous equity instruments outstanding that could require the future issuance of additional shares of common stock, which issuance could result in significant dilution of ownership interests and have an adverse effect on our stock price.

Under our 2013 Plan, 15,500,000 shares of our common stock were initially reserved for issuance in connection with the vesting of equity-based awards to be granted to our officers, other employees and directors. The issuance of additional shares upon satisfaction of the applicable vesting conditions of these grants could result in a stockholder's percentage ownership being diluted. Specifically, at December 31, 2023, the following equity-based awards were outstanding:

- 3,872,289 RSUs with each RSU representing a contingent right to receive one share of our common stock or, for performance-based RSUs, multiple shares depending upon the underlying performance metrics and our performance during the applicable performance period; and
- 384,685 options which, once vested, are exercisable to purchase shares of our common stock, on a one-for-one basis, at any time at the option of the holder.

We may also issue additional shares of our common stock, or other securities that are convertible into or exercisable for our common stock, in connection with future acquisitions, for capital raising purposes or for other business purposes; which issuances could also result in significant dilution of ownership interest.

Volatility of our stock price could adversely affect us and our stockholders.

Our stock price may experience substantial price volatility as a result of many factors, including, without limitation, coverage or sentiment in the media or the investment community; speculation; announcement of acquisitions or divestitures; quarterly financial results and comparisons to estimates by the investment community or financial outlook provided by us; issuance of additional debt or equity; changes in key personnel or business strategy; material litigation or governmental investigations; and expectations regarding capital allocation, including any future shares repurchases and/or any future dividend payments, or any determination to cease repurchasing stock or paying dividends. General or industry specific market conditions, stock market performance or macroeconomic and geopolitical factors unrelated to our performance may also affect the price of our stock. Further, in the past, market fluctuations and price declines in a company's stock have led to securities class action litigation, which could have a substantial cost and divert management time and resources regardless of their outcome.

Future issuances or sales of our common stock may depress the price of our common stock.

We cannot predict the size of future issuances of our shares of common stock or the effect, if any, that future issuances or sales of our shares will have on the market price of our common stock. Sales of substantial amounts of our shares, including sales by our executive officers, directors or significant stockholders, and shares issued in connection with any acquisition, or the perception that such sales or issuance could occur, may adversely affect prevailing market prices for our common stock. Decline in the stock price of our common stock may also make it more difficult for us to finance acquisitions with shares of common stock and/or sell additional equity or equity-related securities in future offerings at a time and price we deem necessary or appropriate.

We may issue preferred stock in the future, and the terms of the preferred stock may reduce the value of our common stock.

Our Board of Directors is authorized to create and issue one or more series of preferred stock, and to determine the number of shares constituting the series as well as the designations, powers, preferences, rights, qualifications, limitations and restrictions of each series, including dividend rights, conversion or exchange rights, voting rights, redemption rights and terms and liquidation preferences, without stockholder approval. The creation and issuance of one or more series of preferred stock could affect the rights of our common stockholders or reduce the value of our common stock they hold. For example, our Board could, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power of our common stockholders or have certain anti-takeover effects.

There can be no assurance that we will continue to declare dividends.

Future dividends are subject to declaration by our Board of Directors in its sole discretion. To the extent the Board determines to pay dividends on our common stock in the future, we will pay dividends at the times and in the amounts as the Board determines appropriate. The Board may, however, reduce or discontinue entirely the payment of such dividends at any time. Paying dividends will depend upon many factors, including our financial condition and results of operations, our available cash and current and anticipated cash needs, capital requirements and access to capital markets, covenants associated with our Credit Agreement, the indenture governing our 3.875% USD Notes due 2028 and/or other debt obligations, contractual, legal, tax and regulatory restrictions and other factors that the Board may deem relevant. Therefore, there can be no assurance that we will have the ability and/or sufficient funds to pay dividends or as to the amounts of these dividends, if any.

If we fail to establish and maintain adequate internal controls over financial reporting, we may not be able to report our financial results in a timely and reliable manner, which could harm our business and adversely impact our stock price.

We are required by the SEC to establish and maintain adequate internal control over financial reporting that provides reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with GAAP. We are likewise required, on a quarterly basis, to evaluate the effectiveness of our internal controls and to disclose any material changes and material weaknesses in those internal controls. We have in the past experienced, and in the future may experience again, material weaknesses and potential problems in implementing and maintaining adequate internal controls as required by the SEC. If we fail to achieve and maintain the adequacy of our internal controls, we may not be able to conclude that we have effective internal control over financial reporting. If we cannot provide financial reports in a timely and reliable manner, or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and our stock price could drop significantly.

We are dependent on cash flows from our operating subsidiaries to fund our debt obligations, capital expenditures and ongoing operations.

We do not have any material assets or operations other than ownership of equity interests of our operating subsidiaries. Our operations are conducted almost entirely through our subsidiaries, and our ability to generate cash to meet our obligations or to pay dividends, if any, is highly dependent on the earnings of, and receipt of funds from, our subsidiaries through dividends or intercompany loans, in particular from MacDermid, Incorporated. As a result, we are dependent on the income generated by our subsidiaries, and to some degree on our ability to repatriate earnings from our foreign operations effectively, to meet our debt service obligations, expenses and operating cash requirements or to pay dividends or repurchase shares of our common stock. For example, the amount of dividends, if any, which may be paid to us by our subsidiaries depends on many factors, including our subsidiaries' results of operations and financial condition, limits on dividends or otherwise under applicable law and their constitutional documents, documents governing their indebtedness, and other factors which may be outside our control. If our subsidiaries are unable to generate sufficient cash flows or if we are unable to repatriate earnings effectively, or if we are unable to do so without incurring substantial costs, we may be unable to service our debt obligations, pay our expenses and/or meet our operating cash requirements or to make future dividend payments or shares repurchases, if any.

Supply Chain and business disruptions, including those related to climate change, could have a material impact on our future sales and financial condition, and may not be covered by insurance.

We believe our customers rely on our ability to timely deliver products of constant quality which are integral to their manufacturing processes and overall product performance. Our ability to meet these expectations relies on continuous access to multiple sources of raw materials and working closely with our suppliers and contract manufacturers to help ensure continuity of supply while maintaining high quality.

Natural or human-induced disasters, such as earthquakes, tsunamis, floods, hurricanes, cyclones or typhoons, fires, power or water shortages, telecommunications failures, terrorist acts, civil unrest, conflicts or wars, and epidemics, pandemics or other health crises, such as the COVID 19 pandemic, could seriously harm our operations as well as the operations of our customers and suppliers. The negative impacts of any such events on our business operations and demand for our offerings will depend on future developments and actions taken in response to such events which may be outside our control, highly uncertain, and cannot be predicted at this time. Among other impacts, such events could limit our ability to access the quantity and quality of raw materials we need and/or increase the price of these materials as worldwide supply and demand may be seriously impacted. In addition, extreme weather, natural disasters or other unexpected events could result in physical damage to, and closure of, one or more of our manufacturing or sale facilities, temporary or long-term disruption in our supply chain and/or disruption of our ability to deliver products and services to our customers and/or increase the risk of chemical spills, other discharges or releases of toxic or hazardous substances or pipeline ruptures, all of which could in turn adversely affect our operations, financial condition, reputation and/or stock price. Current or future insurance arrangements may not provide protection for costs that may arise from such events, particularly if these are catastrophic in nature or occur in combination. In addition, as climate change, low carbon and other ESG-related treaties, initiatives and programs are adopted and implemented throughout the world, there can be no assurance that future material capital expenditures or incremental operating expenses will not be required in order to ensure compliance. We believe climate change serves as a risk multiplier increasing both the frequency and severity of natural disasters that may affect our worldwide business operations. Further, the long-term effects of climate change on general economic conditions are unclear, and changes in the supply or demand of our products, or available sources of the raw materials we use in our manufacturing processes, may affect the availability or cost of our products.

Any long-term disruption in our ability to timely deliver our products and services to our customers could have a material adverse effect on our business, results of operations and financial condition.

We are governed by Delaware law, which has anti-takeover implications.

We are governed by Delaware law, the application of which may have the effect of deterring hostile takeover attempts or a change in control. In particular, Section 203 of the Delaware General Corporation Law imposes certain restrictions on merger, business combinations and other transactions between us and holders of 15% or more of our common stock. A Delaware corporation may opt out of that provision either with an express provision in its original certificate of incorporation or in an amendment to its certificate of incorporation or by-laws approved by its stockholders. We have not opted out of this provision. Section 203 could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us, which may negatively affect our stock price.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cybersecurity is a part of our risk management framework, and we have established policies and processes designed to manage cybersecurity defenses, controls and programs, including ISO 27001 compliant security procedures. Our processes are evaluated by expert cybersecurity firms through various security assessments and audits, which help us identify and mitigate cyber-related risks to our businesses. We also engage with providers of information systems as part of our continuing efforts to enhance the effectiveness of our security measures. Our vendor risk management (VRM) program, through which we screen external providers, helps us identify and evaluate known risks associated with these third parties.

Our information security program is led by our Chief Information Security Officer (CISO) who manages a global information security team responsible for assessing and mitigating cyber-related threats. The cybersecurity expertise of our CISO and his team includes information security management roles, hands-on cyber incident response experience, forensic and network intrusion investigations and security risk assessments.

Our CISO regularly reports to senior management on cybersecurity risks and incidents, including the nature of threats, the state of our defense and detection capabilities, incident response plans and employee training activities, as applicable. In addition, as part of the Board's oversight of the Company's risk management program, our CISO provides periodic updates to the Board on the state of our cybersecurity management program in addition to, when needed, ad hoc information about any significant cybersecurity matters and/or strategic risk management decisions.

Item 2. Properties

At December 31, 2023, our physical presence included 53 manufacturing sites, of which 12 included research facilities, and 10 stand-alone research centers. Of our manufacturing facilities, 8 were located in the U.S. with the remaining international facilities located primarily in Asia and Europe. We owned 25 of our manufacturing facilities, of which 6 included research facilities, and 4 stand-alone research centers. In addition to the remaining manufacturing and research facilities, we leased the majority of our office, warehouse and other physical locations. Among our two segments, Electronics and Industrial & Specialty utilize 21 and 19 of our manufacturing facilities, respectively, with the remaining 13 manufacturing facilities being shared between the two segments.

We believe that all of our significant facilities and equipment are in good condition, well-maintained, adequate for our present operations and utilized for their intended purposes. See Note 6, *Property, Plant and Equipment, Net* , to the Consolidated Financial Statements included in this 2023 Annual Report for amounts invested in land, buildings, machinery, and equipment, and Note 16, *Leases*, to the Consolidated Financial Statements included in this 2023 Annual Report for information about our operating lease commitments.

Item 3. Legal Proceedings

In the ordinary course of business, we are involved in various legal disputes, investigations, claims and other legal proceedings, including, but not limited to, product liability claims, contractual disputes, premises claims, tax examinations as well as employment, environmental and health and safety matters. Where appropriate, we may establish loss contingencies for such proceedings based on an assessment of whether the risk of loss is remote, reasonably possible or probable. We also maintain insurance to mitigate certain of such risks. Although we cannot predict with certainty the ultimate resolution of the various legal proceedings, investigations and/or claims asserted against us, we believe that the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on our business, financial condition or results of operations. Due to their inherent uncertainty, however, there can be no assurance as to the ultimate outcome of current or future legal proceedings, investigations or claims and it is possible that a resolution of one or more such matters could result in fines and penalties that could adversely affect our business, financial condition or results of operations.

In addition, we are involved in various claims relating to environmental matters at current and former plant sites and waste management sites. We engage or participate in remedial and other environmental compliance activities at certain of these sites. At other sites, we have been named as a potential responsible party pursuant to the federal Superfund Act and/or state Superfund laws comparable to the federal law for site remediation. Based on currently available information, we do not anticipate any material losses in excess of the liabilities recorded. However, it is possible that, as additional information becomes available, the impact of an adverse determination could have a different effect. For additional information regarding environmental matters and liabilities, see Note 17, *Contingencies, Environmental and Legal Matters* , to the Consolidated Financial Statements included in this 2023 Annual Report.

Item 4. Mine Safety Disclosure

Not applicable.

Part II

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

Market for our Common Stock

Our common stock is traded on the New York Stock Exchange under the symbol "ESI." On February 16, 2024, there were approximately 172 registered holders of record of our common stock, par value $0.01 per share, and the closing price of our common stock was $23.86.

Dividends

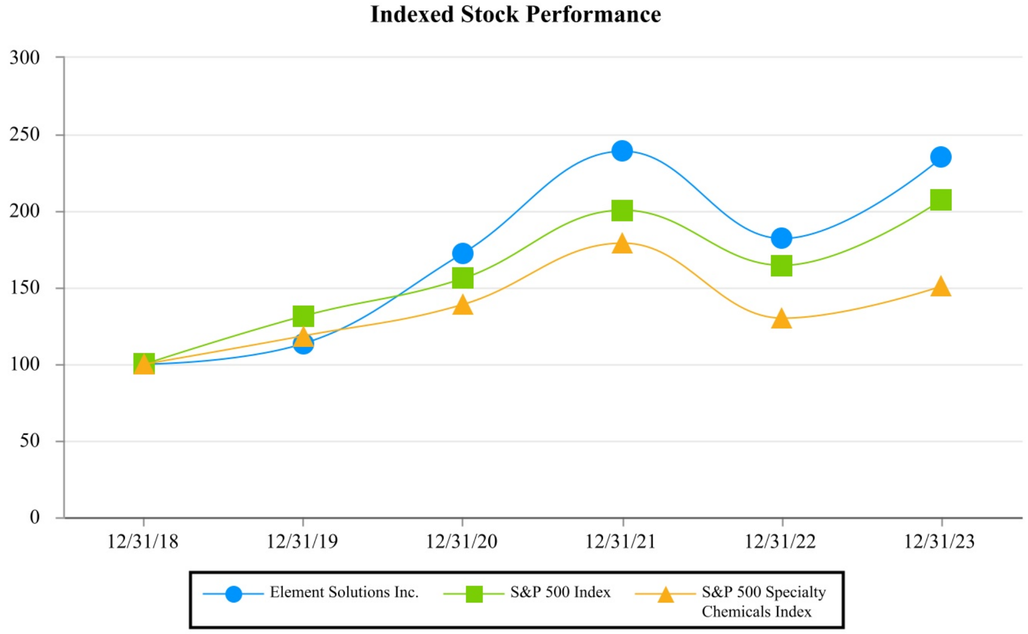
We declared and paid cash dividends on our common stock of $77.4 million, $78.4 million and $61.9 million during the years ended December 31, 2023, 2022 and 2021, respectively.

On February 13, 2024, our Board declared a cash dividend of $0.08 per outstanding share of our common stock. The dividend is expected to be paid on March 15, 2024 to stockholders of record at the close of business on March 1, 2024.

We currently expect to continue to pay a cash dividend on a quarterly basis; however, the actual declaration of any cash dividends, as well as their amounts and timing, will be subject to the final determination of our Board of Directors based on factors including our future earnings and cash flow generation.

Performance Graph

The following graph shows a comparison of cumulative total stockholder returns for our common stock, the Standard and Poor's 500 Index and the S&P 500 Specialty Chemicals Index from December 31, 2018 through December 31, 2023, assuming a $100 investment in our common stock on December 31, 2018 and the reinvestment of all dividends thereafter.



The stock performance shown on this graph is based on historical data and is not indicative of, or intended to forecast, possible future performance of our common stock. This performance graph and related information is not deemed to be "soliciting material" or "filed" with the SEC and should not be deemed incorporated by reference into any of our prior or future SEC filings under the Securities Act or the Exchange Act.

Equity Compensation Plan Information

The information regarding our equity compensation plans will be included in the 2024 Proxy Statement under the heading "Executive Compensation Tables - Equity Compensation Plan Information," and is incorporated by reference into this 2023 Annual Report.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

None.

Item 6. [Reserved]

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations section should be read in conjunction with “Financial Statements and Supplementary Data” included in Part II, Item 8 of this 2023 Annual Report and our audited Consolidated Financial Statements and notes thereto included elsewhere in this 2023 Annual Report. “Overview” and "2023 Highlights" briefly present our business and certain significant events addressed in this section or elsewhere in this 2023 Annual Report. This 2023 Annual Report should be read in its entirety for a complete description of our business and discussion of these events.

Overview

Element Solutions, incorporated in Delaware in January 2014, is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Our product innovation and product extensions are expected to continue to drive sales growth in both new and existing markets while expanding margins through a consistent focus on increasing customer value propositions.

Our operations are organized into two segments: Electronics and Industrial & Specialty. In 2023, we achieved net sales of $2.33 billion, to which our Electronics and Industrial & Specialty segments contributed approximately 61% and 39%, respectively.

Each of our segments is described below:

Electronics – The Electronics segment researches, formulates and sells specialty chemicals and material process technologies for all types of electronics hardware, from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the electronics manufacturing process and the functionality of end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways and its "assembly materials," such as SMT, pastes, fluxes and adhesives, join those pathways together. The segment provides specialty chemical solutions through the following businesses: Assembly Solutions, Circuitry Solutions and Semiconductor Solutions.

Industrial & Specialty – The Industrial & Specialty segment researches, formulates and sells specialty chemicals and material process technologies that enhance surfaces or improve industrial processes in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids in offshore energy production. These fully consumable products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end-markets. The segment provides specialty chemical solutions through the following businesses: Industrial Solutions, Graphics Solutions and Energy Solutions.

2023 Highlights

- ***ViaForm Distribution Rights*** - On June 1, 2023, we reacquired the right to market and distribute directly (rather than through our exclusive distributor) our ViaForm® electrochemical deposition products by terminating a long-standing distribution agreement for $200 million, including $170 million paid at closing and a deferred payment of $30.0 million which was paid in the fourth quarter of 2023. Following the completion of the transaction, we now manage all aspects of the ViaForm® product line in-house, which we believe will result in a more efficient supply chain and improved customer outcomes for leading semiconductor fabricators.

- ***Kuprion Acquisition*** - On May 19, 2023, we completed the Kuprion Acquisition for $15.9 million, net of cash with potential additional payments in various installments to be made upon the achievement of certain milestones associated with product qualification and revenue through December 31, 2030. Kuprion, Inc. is a developer of next-generation nano-copper technology for the semiconductor, circuit board and electronics assembly markets.

- ***Syndication of $1.15 Billion Term Loans and Debt Reduction*** - In December 2023, we successfully completed the syndication of $1.15 billion of new term loans B-2, which mature in December 2030. The proceeds of this transaction, together with cash on hand, were used to prepay our then existing $1.11 billion term loans B-1 and $150 million term loans A, reducing our gross debt by approximately $105 million. As a result of the swap agreements associated with the new term loans B-2, the Company's effective interest rate was approximately 3.3% at December 31, 2023 with approximately 80% of its capital structure fixed through 2028.

- ***Cash Dividends*** - During the year ended December 31, 2023, approximately $77.4 million was returned to our stockholders in the form of cash dividends.

Acquisitions

We may pursue targeted and opportunistic acquisitions in our existing or adjacent end-markets that seek to strengthen our current businesses, expand and diversify our product offerings, and enhance our growth and strategic position. We expect to achieve commercial and distribution efficiencies by expanding into related categories that can be marketed through our existing distribution channels or provide us with new distribution channels for our existing products. To the extent we pursue future acquisitions, we expect that acquisition candidates would demonstrate a combination of attractive margins, strong cash flow characteristics, niche leading positions and consumable products that generate recurring revenue. We believe the diversity of the niche end-markets we serve will enable us to continue our growth and maintain strong cash flow generation throughout economic cycles and mitigate the impact of a downturn in any single market. We will only pursue a candidate when it is deemed to be fiscally prudent and meets our acquisition criteria. We anticipate that any future acquisitions would be financed through a combination of cash on hand, availability under our Credit Agreement and/or new debt or equity offerings.

Foreign Currency Exposure

In 2023, approximately 75% of our net sales originated outside of the U.S. and were denominated in numerous currencies, including the euro, Chinese yuan and British pound. Therefore, fluctuations in foreign exchange rates in any given reporting period may positively or negatively impact our financial performance. Foreign exchange translation negatively impacted our 2023 net sales performance by approximately 1%.

In addition, our foreign subsidiaries are subject to foreign currency risk relating to receipts from customers, payments to suppliers and intercompany transactions that are not in their functional currency, which is typically their local currency. As a result, our foreign subsidiaries may enter, and have entered, into foreign exchange hedges designed to protect against transaction exposures. We actively assess our hedging programs in order to mitigate foreign exchange risk exposures. This includes programs to hedge our foreign currency denominated balance sheet exposures as well as foreign currency anticipated cash flows.

Critical Accounting Estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates that may significantly impact our reported financial results and accompanying disclosures. We base our estimates, assumptions and judgments on historical experience, current conditions as well as other factors that we consider reasonable. Estimates relate to matters that are inherently uncertain and actual results may differ from these estimates and such differences could be material to our financial statements.

We consider the accounting estimates discussed below to be critical to the understanding of our financial statements and involve difficult, subjective or complex judgments that could potentially affect our reported results. See Note 2, *Summary of Significant Accounting Policies* , to the Consolidated Financial Statements included in this 2023 Annual Report for a detailed discussion of the application of these and other accounting policies.

Revenue Recognition

We recognize revenue when a customer obtains control of the products it purchased, which occurs upon shipment or delivery, when title or the risks and rewards of ownership have been passed on to the customer, our performance obligations have been fulfilled and collectability is probable. Estimates for sales rebates, incentives and discounts as well as sales returns and allowances are accounted for as reductions of revenue when the earnings process is complete. Differences between estimated expense and actual costs are typically immaterial and are recognized in earnings in the period such differences are determined.

Most performance obligations relate to contracts with a duration of less than one year, in which we have the right to invoice the customer at the time the performance obligation is satisfied for the amount of revenue recognized at that time. Accordingly, we have elected the practical expedient available under ASC Topic 606, *Revenue from Contracts with Customers* , not to disclose remaining performance obligations under our contracts. We have also elected the practical expedient to expense incremental costs for obtaining contracts with terms of less than one year.

Goodwill

Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired. Our reporting units are determined based upon our organizational structure in place at the date of the goodwill impairment test. The fair value of a reporting unit is based equally on market multiples and the present value of discounted future cash flows. The discounted cash flows are prepared based upon cash flows at the reporting unit level and involve significant judgments related to future growth rates, gross profit, operating expenses and discount rates, among other considerations, from the vantage point of a market participant.

If the fair value of a reporting unit exceeds the carrying value of the net assets assigned to that reporting unit, goodwill is not impaired and no further testing is required. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, the goodwill impairment loss is calculated as the difference between these amounts, limited to the amount of goodwill allocated to the reporting unit.

During the third quarter of 2023, given the lower-than-expected results of the Graphics Solutions reporting unit, we determined that it was more likely than not that the fair value of this reporting unit was less than its carrying value. As a result, we conducted an interim goodwill impairment test which confirmed that goodwill was impaired and recorded an $80.0 million impairment charge in the Consolidated Statement of Operations to reduce the carrying value of this reporting unit to its estimated fair value. This impairment charge was primarily driven by the reduction of the expected long-term cash flows for the business due to profit margin pressures from raw material inflation across the packaging supply chain, the loss of a significant newspaper customer, and a higher WACC as compared to the assumptions used for the 2022 annual goodwill impairment test.

After recording the impairment, the carrying value of the Graphics Solutions reporting unit was equal to its estimated fair value and there have been no events or changes in circumstances that indicated that goodwill was further impaired. As of December 31, 2023, the goodwill assigned to the Graphics Solutions reporting unit was approximately $130 million. Future impairment of this reporting unit may occur if it does not achieve its expected cash flows or macroeconomic conditions result in an increase in the WACC used to estimate fair value.

In 2023, the estimated fair value of our remaining reporting units was considered to be substantially in excess of their respective carrying value.

See Note 7, *Goodwill and Intangible Assets*, to the Consolidated Financial Statements included in this 2023 Annual Report for additional information.

Income Taxes

We recognize deferred tax assets and liabilities based on the differences between the financial statement basis and the tax basis of assets, liabilities, net operating losses and tax carryforwards. A valuation allowance is required to be recognized to reduce the recorded deferred tax asset to the amount that will more likely than not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income by jurisdiction during the periods in which those temporary differences become deductible or when carryforwards can be utilized. We consider the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in this assessment. If these estimates and related assumptions change in the future, we may be required to record additional valuation allowances against our deferred tax assets resulting in additional income tax expense. We evaluate our valuation allowance conclusions on a quarterly basis based on available evidence and realization of deferred tax assets ultimately depends on the existence of sufficient taxable income in the applicable carryback or carryforward periods. Changes in our estimates of and reliance on such evidence may affect the estimate of the realization of the benefits of tax attribute carryforwards.

Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences and carryforwards 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 of such change.

Tax benefits are recognized for an uncertain tax position when we consider it is more likely than not that the position will be sustained upon examination by a taxing authority or upon completion of the litigation process. For a tax position that meets the more-likely-than-not recognition threshold, the tax benefit is measured as the largest amount that is judged to have a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority. The liability associated with unrecognized tax benefits is adjusted periodically due to changing circumstances and when new information becomes available. Such adjustments are recognized in the period in which they are identified.

Recent Accounting Pronouncements

A summary of recent accounting pronouncements is included in Note 3, *Recent Accounting Pronouncements*, to the Consolidated Financial Statements included in this 2023 Annual Report.

Non-GAAP Financial Measures

To supplement our financial results presented in accordance with GAAP in this Management's Discussion and Analysis of Financial Condition and Results of Operations section, we present certain non-GAAP financial measures, such as operating results on a constant currency and organic basis and Adjusted EBITDA. Management internally reviews these non-GAAP measures to evaluate performance on a comparative period-to-period basis in terms of absolute performance, trends and expected future performance with respect to our business. We believe these non-GAAP financial measures, which are each further described below, provide investors with an additional perspective on trends and underlying operating results on a period-to-period comparable basis. We also believe that investors find this information helpful in understanding the ongoing performance of our operations separate from items that may have a disproportionate positive or negative impact on our financial results in any particular period or are considered to be associated with our capital structure.

These non-GAAP financial measures, however, have limitations as analytical tools and should not be considered in isolation from, a substitute for, or superior to, the related financial information that we report in accordance with GAAP. The principal limitation of these non-GAAP financial measures is that they exclude significant expenses and income that are required by GAAP to be recorded in our financial statements and may not be completely comparable to similarly titled measures of other companies due to potential differences in calculation methods. In addition, these measures are subject to inherent limitations as they reflect the exercise of judgment by management about which items are excluded or included in determining these non-GAAP financial measures. Investors are encouraged to review the definitions and reconciliations of these non-GAAP financial measures to their most comparable GAAP financial measures included in this 2023 Annual Report and not to rely on any single financial measure to evaluate our business.

Constant Currency

We disclose operating results, from net sales through operating profit and Adjusted EBITDA, on a constant currency basis by adjusting results to exclude the impact of changes due to the translation of foreign currencies of our international locations into U.S. dollars. Management believes this non-GAAP financial information facilitates period-to-period comparison in the analysis of trends in business performance, thereby providing valuable supplemental information regarding our results of operations, consistent with how we internally evaluate our financial results.

The impact of foreign currency translation is calculated by converting our current-period local currency financial results into U.S. dollars using the prior period's exchange rates and comparing these adjusted amounts to our prior period reported results. The difference between actual growth rates and constant currency growth rates represents the estimated impact of foreign currency translation.

Organic Net Sales Growth

Organic net sales growth is defined as net sales excluding the impact of foreign currency translation, changes due to the pass-through pricing of certain metals and acquisitions and/or divestitures, as applicable. Management believes this non-GAAP financial measure provides investors with a more complete understanding of the underlying net sales trends by providing comparable net sales over differing periods on a consistent basis.

For a reconciliation of GAAP net sales growth to organic net sales growth, see "*Net Sales*" within the "Results of Operations" section below.

Adjusted EBITDA

We define Adjusted EBITDA as EBITDA, excluding the impact of additional items included in GAAP earnings which we believe are not representative or indicative of our ongoing business or are considered to be associated with our capital structure. Management believes Adjusted EBITDA provides investors with a more complete understanding of the long-term profitability trends of our business and facilitates comparisons of our profitability to prior and future periods.

For a reconciliation of "Net income" to Adjusted EBITDA and more information about the adjustments made, see Note 22, *Segment Information*, to the Consolidated Financial Statements included in this 2023 Annual Report.

Results of Operations

			Change - 2023 vs 2022				Change - 2022 vs 2021		
(dollars in millions)	2023	2022	Reported	Constant Currency	Organic	2021	Reported	Constant Currency	Organic
Net sales	$ 2,333.2	$ 2,549.4	(8)%	(7)%	(5)%	$ 2,399.8	6%	13%	5%
Cost of sales	1,414.7	1,596.7	(11)%	(10)%		1,439.0	11%	19%	
Gross profit	918.5	952.7	(4)%	(2)%		960.8	(1)%	5%	
Gross margin	*39.4 %*	*37.4 %*	*200 bps*	*220 bps*		*40.0 %*	*(260) bps*	*(300) bps*	
Operating expenses	744.9	627.4	19%	19%		660.9	(5)%	(1)%	
Operating profit	173.6	325.3	(47)%	(41)%		299.9	8%	17%	
Operating margin	*7.4 %*	*12.8 %*	*(540) bps*	*(480) bps*		*12.5 %*	*30 bps*	*40 bps*	
Other expense, net	(44.5)	(53.3)	(16)%			(48.2)	11%		
Income tax expense	(13.0)	(85.8)	(85)%			(48.3)	78%		
Net income from continuing operations	116.1	186.2	(38)%			203.4	(8)%		
Income from discontinued operations, net of tax	2.1	1.8	19%			0.3	(nm)		
Net income	$ 118.2	$ 188.0	(37)%			$ 203.7	(8)%		
Net income margin	*5.1 %*	*7.4 %*	*(230) bps*			*8.5 %*	*(110) bps*		
Adjusted EBITDA	$ 482.3	$ 526.6	(8)%	(6)%		$ 524.8	0%	8%	
Adjusted EBITDA margin	*20.7 %*	*20.7 %*	*0 bps*	*20 bps*		*21.9 %*	*(120) bps*	*(110) bps*	

(nm) Calculation not meaningful.

Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

Net Sales

Net sales for 2023 decreased 8% on a reported basis, 7% on a constant currency basis and 5% on an organic basis. Electronics' consolidated results were negatively impacted by $61.5 million of pass-through metals pricing and positively impacted by $9.8 million of acquisitions and Industrial & Specialty's consolidated results were positively impacted by $3.9 million of acquisitions.

The following table reconciles GAAP net sales growth to constant currency and organic net sales growth:

	Year ended December 31,		% Change					
(dollars in millions)	2023	2022	Reported Net Sales Growth	Impact of Currency	Constant Currency	Pass-Through Metals Pricing	Acquisitions	Organic Net Sales Growth
Electronics:								
Assembly Solutions	$ 726.1	$ 819.5	(11)%	2%	(9)%	8%	—%	(2)%
Circuitry Solutions	424.3	503.5	(16)%	2%	(14)%	—%	—%	(14)%
Semiconductor Solutions	264.3	288.2	(8)%	1%	(8)%	—%	(3)%	(11)%
Total	$ 1,414.7	$ 1,611.2	(12)%	2%	(10)%	4%	(1)%	(7)%
Industrial & Specialty:								
Industrial Solutions	$ 699.0	$ 728.3	(4)%	1%	(3)%	—%	(1)%	(4)%
Graphics Solutions	142.7	143.0	0%	(1)%	(1)%	—%	—%	(1)%
Energy Solutions	76.8	66.9	15%	(1)%	14%	—%	—%	14%
Total	$ 918.5	$ 938.2	(2)%	1%	(2)%	—%	0%	(2)%
Total	$ 2,333.2	$ 2,549.4	(8)%	1%	(7)%	2%	(1)%	(5)%

NOTE: Totals may not sum due to rounding.

Electronics' net sales for 2023 decreased 12% on a reported basis, 10% on a constant currency basis and 7% on an organic basis.

- Assembly Solutions: net sales decreased 11% on a reported basis and 2% on an organic basis. Pass-through metals pricing had a negative impact of 8% on reported net sales. Foreign exchange had a negative impact of 2% on reported net sales. The decrease in organic net sales was primarily due to lower SMT volumes due to demand weakness in Asia, primarily China.
- Circuitry Solutions: net sales decreased 16% on a reported basis and 14% on an organic basis. Foreign exchange had a negative impact of 2% on reported net sales. The decrease in organic net sales was primarily due to lower demand from mobile phone market customers, primarily in Asia, and a decline in the memory disk end market globally which had a negative 4% impact on organic net sales.
- Semiconductor Solutions: net sales decreased 8% on a reported basis and 11% on an organic basis. The reacquired ViaForm Distribution Rights and the Kuprion Acquisition had a positive impact of 3% on reported net sales. Foreign exchange had a negative impact of 1% on reported net sales. The decrease in organic net sales was primarily due to lower demand for advanced packaging chemistries in the mobile phone and high-end electronics end-markets and precious metal based products partially offset by strong demand from power electronics customers.

Industrial & Specialty's net sales for 2023 decreased 2% on a reported basis, 2% on a constant currency basis and 2% on an organic basis.

- Industrial Solutions: net sales decreased 4% on a reported basis and 4% on an organic basis. Acquisitions had a positive impact of 1% on reported net sales. Foreign exchange had a negative impact of 1% on reported net sales. The decrease in organic net sales was primarily due to lower demand from European construction and industrial manufacturing markets partially offset by a significant equipment sale for a new production line under a multi-year chemistry sales agreement with an automotive customer in the third quarter of 2023 which contributed approximately 1% to organic sales.

- Graphics Solutions: net sales remained approximately flat on a reported basis and decreased 1% on an organic basis. Foreign exchange had a positive impact of 1% on reported net sales. The decrease in organic net sales was primarily due to the rationalization of lower-margin packaging customers and the loss of a large newsprint customer, partially offset by new customer wins and cost inflation driving pricing actions.
- Energy Solutions: net sales increased 15% on a reported basis and 14% on an organic basis. Foreign exchange had a positive impact of 1% on reported net sales. The increase in organic net sales was primarily due to increased global production and drilling activity and cost inflation driven pricing actions.

Gross Profit

	Year Ended December 31,		Change	
(dollars in millions)	**2023**	**2022**	**Reported**	**Constant Currency**
Gross profit:				
Electronics	$ 558.2	$ 593.9	(6)%	(4)%
Industrial & Specialty	360.3	358.8	0%	2%
Total	$ 918.5	$ 952.7	(4)%	(2)%
Gross profit margin:				
Electronics	*39.5 %*	*36.9 %*	*260 bps*	*270 bps*
Industrial & Specialty	*39.2 %*	*38.2 %*	*100 bps*	*130 bps*
Total	*39.4 %*	*37.4 %*	*200 bps*	*220 bps*

Electronics' gross profit for 2023 decreased 6% on a reported basis and 4% on a constant currency basis. The constant currency decrease in gross profit reflects lower net sales in most business lines, partially offset by lower raw material and logistics costs. The increase in gross margin was primarily due to recaptured margin on ViaForm Distribution Rights, lower net sales of products containing pass-through metals in our Assembly business, lower raw material prices and logistics costs.

Industrial & Specialty's gross profit for 2023 remained approximately flat on a reported basis and increased 2% on a constant currency basis. The constant currency increase in gross profit was primarily driven by lower raw material costs in the Industrial Solutions business and growth in the Energy Solutions business, partially offset by declines in the Graphics Solutions business. The increase in gross margin was primarily due to lower logistics costs and growth in our higher margin Energy Solutions business.

Operating Expenses

	Year ended December 31,		Change	
(dollars in millions)	**2023**	**2022**	**Reported**	**Constant Currency**
Selling, technical, general and administrative	$ 596.8	$ 578.6	3%	4%
Research and development	68.1	48.8	40%	40%
Goodwill impairment	80.0	—	(nm)	(nm)
Total	$ 744.9	$ 627.4	19%	19%
Operating expenses as % of net sales				
Selling, technical, general and administrative	*25.6 %*	*22.7 %*	*290 bps*	*270 bps*
Research and development	*2.9 %*	*1.9 %*	*100 bps*	*100 bps*
Goodwill impairment	*3.4 %*	*— %*	*(nm)*	*(nm)*
Total	*31.9 %*	*24.6 %*	*730 bps*	*700 bps*

(nm) Calculation not meaningful.

During the third quarter of 2023, we recorded an impairment charge in our Industrial & Specialty segment of $80.0 million related to our Graphics Solutions reporting unit. See Note 7, *Goodwill and Intangible Assets,* to the Consolidated Financial Statements for further information.

Operating expenses for 2023 increased 19% on a reported basis and 19% on a constant currency basis. Excluding the goodwill impairment charge discussed above, operating expenses for 2023 increased 6% on a reported basis and 7% on a constant currency basis. The constant currency increase was primarily driven by $15.7 million of research and development costs associated with the purchase accounting related to the Kuprion Acquisition, higher personnel costs, $5.5 million of extinguishment costs related to the new term loans and a $5.0 million increase in travel expenses partially offset by $8.4 million of lower stock compensation expense. See Note 4, *Acquisitions,* to the Consolidated Financial Statements for further discussion of the research and development costs associated with the Kuprion Acquisition.

Other (Expense) Income, net

	Year Ended December 31,	
(dollars in millions)	**2023**	**2022**
Interest expense, net	$ (49.3)	$ (51.2)
Foreign exchange gain (loss)	7.9	(5.0)
Other (expense) income, net	(3.1)	2.9
Total	$ (44.5)	$ (53.3)

Interest expense, net

Interest expense, net decreased $1.9 million driven primarily by higher interest income partially offset by the applicable interest related to the $150 million incremental term loans A, which were outstanding from June 2023 through December 18, 2023 when the term loans A were fully prepaid. See Note 11, *Debt*, to the Consolidated Financial Statements for further discussion of this prepayment.

Foreign exchange gain (loss)

For the year ended December 31, 2023, the fluctuations in foreign exchange gain (loss) were primarily driven by the remeasurement of intercompany loans.

Other (expense) income, net

Other expense, net for 2023 included $7.0 million of charges due to highly inflationary accounting for our operations in Turkey, $2.3 million of debt refinancing costs related to the prepayment of our then existing term loans B-1 and term loans A and $0.1 million of net losses associated with metals derivative contracts ($1.3 million of realized losses and $1.2 million of unrealized gains). Other income, net for 2022 included $2.9 million of charges due to highly inflationary accounting for our operations in Turkey and $0.3 million of net gains associated with metals derivative contracts ($1.6 million of realized gains and $1.3 million of unrealized losses). See Note 20, *Other (Expense) Income, Net*, to the Consolidated Financial Statements for further discussion of the highly inflationary accounting impacts and see Note 11, *Debt*, to the Consolidated Financial Statements for further discussion of the debt refinancing costs. The metal derivative contracts primarily relate to inventory associated with pass-through metals pricing in our Assembly Solutions business. See Note 12, *Financial Instruments*, to the Consolidated Financial Statements for further discussion of these derivative instruments.

Income Tax

The income tax expense for 2023 totaled $13.0 million, as compared to $85.8 million in 2022. Our tax expense for 2023 was lower than the U.S. statutory tax rate, mainly due to a one-time benefit of $34.2 million related to changing an election to credit foreign taxes from our previous position which was to deduct foreign taxes. This is comprised of a $37.3 million one-time impact of our intention to amend prior U.S. tax returns offset by $3.1 million from the net increase to valuation allowances on foreign tax credit carryforwards. In addition, the election to credit foreign taxes for the 2023 fiscal year resulted in an incremental $8.2 million of tax expense reduction. Other activity in 2023 tax expense includes a benefit from a U.S. tax deduction related to Foreign Derived Intangible Income ("FDII"), offset by current and deferred taxes based on jurisdictional mix of earnings and withholding taxes. The geographic mix of income earned by our international subsidiaries being taxed at rates different than the U.S. statutory tax rate was constant between the periods with an approximate blended rate outside the U.S. of 21%.

The income tax expense for 2022 included current and deferred taxes based on jurisdictional earnings, withholding taxes, and the impact of U.S. global intangible low-taxed income ("GILTI") and subpart F income regimes.

For additional information see Note 10, *Income Taxes*, to the Consolidated Financial Statements included in this 2023 Annual Report.

Segment Adjusted EBITDA Performance

	Year Ended December 31,		Change	
(dollars in millions)	**2023**	**2022**	**Reported**	**Constant Currency**
Net income:				
Total	$ 118.2	$ 188.0	(37)%	
Adjusted EBITDA:				
Electronics	$ 317.7	$ 360.7	(12)%	(9)%
Industrial & Specialty	164.6	165.9	(1)%	1%
Total	$ 482.3	$ 526.6	(8)%	(6)%
Net income margin:				
Total	*5.1 %*	*7.4 %*	*(230) bps*	
Adjusted EBITDA margin:				
Electronics	*22.5 %*	*22.4 %*	*10 bps*	*30 bps*
Industrial & Specialty	*17.9 %*	*17.7 %*	*20 bps*	*50 bps*
Total	*20.7 %*	*20.7 %*	*0 bps*	*20 bps*

Electronics' Adjusted EBITDA for 2023 decreased 12% on a reported basis and 9% on a constant currency basis. The constant currency decrease was primarily driven by lower gross profits.

Industrial & Specialty's Adjusted EBITDA for 2023 decreased 1% on a reported basis and increased 1% on a constant currency basis. The constant currency increase was primarily driven by growth in the Energy Solutions business and easing cost pressures partially offset by declines in the Graphics Solutions business.

See Note 22, *Segment Information*, to the Consolidated Financial Statements for the reconciliation of "Net income" to Adjusted EBITDA.

Comparison of Fiscal Years 2022 and 2021

For the comparison of fiscal years 2022 and 2021, see " *Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021* " in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations,* included in our 2022 Annual Report on Form 10-K and incorporated by reference into this 2023 Annual Report.

Liquidity and Capital Resources

Our primary sources of liquidity during 2023 were the proceeds from the syndication of our new term loans B of approximately $1.15 billion, the monetization of certain interest rate swaps and cross-currency swaps as well as available cash generated from operations. Our primary uses of cash and cash equivalents were to pay approximately $1.26 billion of debt outstanding, fund the reacquired ViaForm Distribution Rights and the Kuprion Acquisition, pay dividends, pay capital expenditures and fund operations, including working capital. A portion of our interest rate swaps and cross-currency swaps associated with our term loans mature in January 2025. Expiration of these hedges could result in a material increase to interest expense. Our first significant debt principal payment of approximately $800 million is related to the maturity of our 3.875% USD Notes due 2028. In the fourth quarter of 2023, we paid a cash dividend of 8 cents per share. We currently expect to continue to pay a cash dividend on a quarterly basis; however, the actual declaration of any cash dividends, as well as their amounts and timing, will be subject to the final determination of our Board of Directors based on factors including our future earnings and cash flow generation.

For the full year 2024, we expect our capital expenditures to be between $50.0 million and $60.0 million. We believe that our cash and cash equivalents and cash generated from operations, supplemented by our availability under our lines of credit, including our revolving credit facility under the Credit Agreement, will be sufficient to meet our working capital needs, interest payments, capital expenditures, potential dividend payments and other business requirements for at least the next twelve months. However, working capital cycles and/or future repurchases of our common stock and/or acquisitions may require additional funding, which may include future debt and/or equity offerings. Our long-term liquidity may be influenced by our ability to borrow additional funds, manage interest rates, renegotiate existing debt and/or raise new equity or debt under terms that are favorable to us.

We may from time to time seek to repurchase our equity and/or to retire or repurchase our outstanding debt through cash purchases and/or exchanges for equity, in open market purchases, privately negotiated transactions or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions, applicable restrictions under our various financing arrangements, and other factors.

During 2023, approximately 75% of our net sales were generated from non-U.S. operations, and we expect a large portion of our net sales to continue to be generated outside of the U.S. As a result, our foreign subsidiaries will likely continue to generate a substantial portion of our cash. We expect to manage our worldwide cash requirements with available funds generated by the many subsidiaries through which we conduct business and cost-efficient access to those funds. We may transfer cash from certain international subsidiaries to the U.S. and/or other international subsidiaries when we believe it is cost effective to do so. Of our $289 million of cash and cash equivalents at December 31, 2023, $232 million was held by our foreign subsidiaries.

The following is a summary of our cash flows provided by (used in) operating, investing and financing activities during the periods indicated:

	Year Ended December 31,		
(dollars in millions)	**2023**	**2022**	**2021**
Cash provided by operating activities	$ 333.6	$ 295.9	$ 326.0
Cash used in investing activities	$ (250.2)	$ (75.2)	$ (568.9)
Cash (used in) provided by financing activities	$ (58.7)	$ (275.6)	$ 290.0

Year Ended December 31, 2023 compared to Year Ended December 31, 2022

Operating Activities

The increase in net cash flows provided by operating activities of $37.7 million was primarily driven by lower annual incentive compensation payments and improved management of working capital, partially offset by lower cash operating profits (net income adjusted for non-cash items).

Investing Activities

In 2023, we paid approximately $193 million in connection with the reacquired ViaForm Distribution Rights and $15.9 million in connection with the Kuprion Acquisition. In 2022, we paid we paid approximately $23 million in connection with the HSO Acquisition.

Financing Activities

In the second quarter of 2023, we borrowed $150 million of incremental term loans A under our senior credit facility to finance the reacquired ViaForm Distribution Rights. In December 2023 we received proceeds of approximately $1.15 billion from the syndication of our new term loans B-2 which were used to prepay the $1.11 billion term loans B-1 and $150 million term loans A reducing gross debt by $105 million. We paid $77.4 million of cash dividends on shares of our common stock and $7.7 million for shares of our common stock withheld by the Company to satisfy the tax withholding requirements related to the vesting of RSUs included in "Other, net." During 2022, we paid $151 million in aggregate for the repurchase of shares of our common stock under our stock repurchase program, $78.4 million of cash dividends on shares of our common stock and $24.0 million for shares of our common stock withheld by the Company to satisfy the tax withholding requirements related to the vesting of RSUs included in "Other, net."

Pension Plans

We maintain "Domestic Pension Plans," which consist of a non-contributory domestic defined benefit pension plan and Supplemental Executive Retirement Plans (SERPs). These plans are closed to new participants and plan benefits associated with all current participants have been frozen. We also maintain "Foreign Pension Plans" in countries such as Germany and Taiwan, which include a mixture of retirement, death benefit and longevity plans, among others, all of which are deemed immaterial, individually and in the aggregate.

The expected long-term rate of return on assets assumption is developed with reference to historical returns, forward-looking return expectations, the Domestic and Foreign Pension Plans' investment allocations, and peer comparisons. We used a long-term rate of return on plan assets of 7.0% and 3.6% for our Domestic and Foreign Pension Plans, respectively, to determine our net periodic pension expense for 2023. The discount rate used to value the pension obligation was developed with reference to a number of factors, including the current interest rate environment, benchmark fixed-income yields and expected future pension benefit payments. Discount rates of 5.0% and 3.1% were established for the Domestic Pension Plan and Foreign Pension Plans, respectively, at December 31, 2023, compared to rates of 5.2% and 3.5% established for those respective plans at December 31, 2022. We evaluate the Pension Plans' actuarial assumptions on an annual basis, including the expected long-term rate of return on assets and discount rates. A one percent increase in the discount rate would increase the pension plan expense by approximately $0.8 million and decrease the pension benefit obligation by approximately $16.4 million, whereas a one percent decrease in the discount rate would decrease the pension plan expense by approximately $0.7 million and increase the pension benefit obligation by approximately $19.4 million.

Our Domestic Pension Plans' investment policies incorporate an asset allocation strategy that emphasizes long-term growth of capital and acceptable asset volatility as long as such volatility remains consistent with the volatility of the indexes of relevant markets. Our investment policies attempt to achieve a mix of approximately 93% of plan investments for liability-matching, 6% for long-term growth, and 1% for near-term benefit payments. The weighted average asset allocation of the Domestic Pension Plan was 89% fixed income holdings, 10% equity securities and derivatives and 1% cash at December 31, 2023.

The Domestic Pension Plans were underfunded by $8.2 million at December 31, 2023 compared to $16.5 million at December 31, 2022. The increase in the funding position was primarily driven by a $20.8 million return on plan assets partially offset by $8.7 million of interest costs and $4.3 million of actuarial losses due to changes in plan assumptions and experience.

The Foreign Pension Plans were underfunded by $14.8 million at December 31, 2023 compared to $14.5 million at December 31, 2022.

We are not required to make any material plan contributions in 2024. While we do not currently anticipate any, additional future material contributions may be required in order to maintain appropriate funding levels within our plans.

Financial Borrowings

Credit Facilities and Senior Notes

At December 31, 2023, we had $1.93 billion of indebtedness, net of unamortized discounts and debt issuance costs of $17.5 million, which primarily included:

- $1.15 billion of term debt arrangements outstanding under our term loans; and
- $800 million of 3.875% USD Notes due 2028.

Availability under our revolving credit facility and various lines of credit and overdraft facilities totaled $392 million at December 31, 2023 (net of $6.2 million of stand-by letters of credit which reduce our borrowing capacity).

Covenants

At December 31, 2023, we were in compliance with the debt covenants contained in the Credit Agreement and the indenture governing our 3.875% USD Notes due 2028.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to interest rate risk associated with our long-term debt and other financing commitments. At December 31, 2023, we had total debt of $1.93 billion, net of unamortized discounts and debt issuance costs of $17.5 million, including approximately $1.15 billion of variable interest rate debt based on the one-month Secured Overnight Financing Rate (SOFR).

We use interest rate swaps and cross-currency swaps designed to reduce our exposure to interest rate risk and foreign currency risk. We designated the interest rate swaps as cash flow hedges and the cross-currency swaps as net investment hedges. These swaps effectively convert our outstanding term loans under the Credit Agreement, which are U.S. dollar denominated debt obligations, into fixed-rate euro-denominated debt through the expiration of the swaps. The net result of these hedges was an interest rate of approximately 3.3% at December 31, 2023 on the term loans B-2, which could vary in the future due to changes in the euro and the U.S. dollar exchange rate. See Note 12, *Financial Instruments*, to the Consolidated Financial Statements included in this 2023 Annual Report for additional information.

Counterparty Risk

Outstanding financial derivative instruments expose us to credit loss in the event of non-performance by our counterparties. The credit exposure related to these financial instruments is considered in the fair values of such contracts. We review the credit ratings of our counterparties and adjust our exposure as deemed appropriate on a periodic basis. At December 31, 2023, we believe that our exposure to counterparty risk was immaterial.

Foreign Currency Risk

We conduct a significant portion of our business in currencies other than the U.S. dollar, our financial reporting currency. In 2023, approximately 75% of our net sales were generated outside of the U.S. Generally, our foreign subsidiaries use their local currency as their functional currency; the currency in which they incur operating expenses and collect accounts receivable. Our business is exposed to foreign currency risk from changes in the exchange rate primarily between the U.S. dollar and the following currencies: euro, Chinese yuan and British pound. As a result, our operating results could be affected by foreign currency exchange rate volatility relative to the U.S. dollar. We are not able to project, in any meaningful way, the possible effect of these foreign currency fluctuations on translated amounts or future earnings.

We actively assess our foreign exchange risk exposure and may enter into foreign exchange hedges designed to mitigate such risk and protect ourselves against transaction exposures. Our hedging programs include strategies to mitigate our foreign currency denominated balance sheet exposures as well as foreign currency anticipated cash flows. At December 31, 2023, the aggregate U.S. dollar notional amount of foreign currency forward contracts totaled $93.9 million. None of these foreign currency forward contracts were designated as hedges for accounting purposes. Their fair value at December 31, 2023 was a $0.7 million net current liability, and the net realized and unrealized gains on such contracts for 2023 totaled $0.5 million.

Our policies prohibit us from speculating in financial instruments for profit on exchange rate price fluctuations, from trading in currencies for which there are no underlying exposures and from entering into trades for any currency to intentionally increase the underlying exposure.

Commodity Price Risk

Some raw materials and supplies are subject to price and supply fluctuations caused by market dynamics. Our strategic sourcing initiatives are focused on mitigating the impact of commodity price risk. Although some of our commercial agreements allow us to pass on certain unusual increases in component and raw material costs to our customers in limited situations, we may not be fully compensated for such increased costs. To a lesser extent, we are also exposed to fluctuations in the prices of certain utilities and services, such as electricity, natural gas and freight.

Periodically, we employ forward metals contracts or other financial instruments to hedge commodity price or other price risks. Such contracts are generally designated as normal purchases and accounted for similar to other inventory purchases. We continue to review a full range of business options focused on strategic risk management for all raw material commodities. Any failure by our suppliers to provide acceptable raw materials or supplies could adversely affect our production schedules and contract profitability. We assess qualification of suppliers and continually monitor them to control risk associated with such supply base reliance. At December 31, 2023, the aggregate U.S. dollar notional amount of metals futures contracts, none of which were designated as hedges for accounting purposes, totaled $63.8 million. The fair value of the metals forward contracts at December 31, 2023 was a $1.2 million net current liability and net realized and unrealized losses on such contracts for 2023 totaled $0.1 million.

Item 8. Financial Statements and Supplementary Data

See “Index to Consolidated Financial Statements” in this 2023 Annual Report.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Management, with the participation of our CEO and CFO, carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on this evaluation, our CEO and CFO have concluded that our disclosure controls and procedures were effective at December 31, 2023.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of our financial statements in accordance with GAAP, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

However, all internal control systems have inherent limitations and 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 over time due to changes in conditions or the degree of compliance with our policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting at December 31, 2023, using the criteria set forth in the *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management believes that at December 31, 2023 our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting at December 31, 2023 has been audited by PricewaterhouseCoopers LLP, as stated in their report, which appears in this 2023 Annual Report.

Changes to Internal Control Over Financial Reporting

Based on management's evaluation (with the participation of our CEO and CFO), as required by Rule 13a-15(d) under the Exchange Act, there have been no changes in our internal control over financial reporting during the fourth quarter of the year ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Director and Officer 10b5-1 Trading Arrangements

None.

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

(e) In connection with his previously-announced retirement as Executive Vice President, Head of Industrial & Specialty of the Company, effective December 31, 2023 (the "Effective Date"), Michael Goralski and the Company entered into a letter agreement and release (the "Letter Agreement") pursuant to which Mr. Goralski agreed to a customary release and restrictive covenants, including non-competition and non-solicitation obligations as well as confidentiality provisions.

Pursuant to the Letter Agreement, Mr. Goralski received or will be entitled to receive, among other things: (i) regular payroll payments over a period of 12 months at his base salary in effect on the Effective Date, less applicable withholdings, deductions and offsets, if any; (ii) an annual incentive cash bonus for 2023 equal to 65% of his target bonus opportunity pursuant to the Company's annual bonus plan when such bonuses are paid to active employees of the Company; (iii) continuation of coverage under the Company’s medical and/or dental insurance plans at rates applicable to active employees until the earlier of (x) 12 months after the Effective Date, (y) the date on which he becomes eligible for Medicare, or (z) the date on which he becomes eligible for coverage of a new employer; and (iv) subject to their performance and time vesting criteria set forth therein, (x) the vesting of performance-based restricted stock units ("PRSU") awards granted in 2021 and 2022 according to their original performance targets within the performance period set forth therein; provided that with respect to the 2022 PRSUs, Mr. Goralski is entitled to receive the number of shares that would vest at the 50% level, and (y) the vesting of the tranches of the time-based restricted stock units awards granted in 2021, 2022 and 2023 that otherwise vested in February 2024 for active employees. All other equity grants to Mr. Goralski that remained unvested on the Effective Date were forfeited on the Effective Date.

A copy of the Letter Agreement is filed as Exhibit 10.19 to this 2023 Annual Report and is incorporated herein by reference. The foregoing summary of the Letter Agreement is not intended to be complete and is qualified in its entirety by reference to the text of the Letter Agreement.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item regarding the Company's executive officers, directors and Audit Committee of the Board will be included in the 2024 Proxy Statement under the headings "Executive Officers of the Company," "Proposal 1 - Election of Directors" and "Corporate Governance," and is incorporated by reference into this 2023 Annual Report.

The Company has adopted a Business Conduct and Ethics Policy applicable to all directors and employees of Element Solutions, including our CEO, CFO and Chief Accounting Officer. The Company has also adopted a Code of Ethics for Senior Financial Officers applicable, more specifically, to our CEO, CFO and Chief Accounting Officer. The Policy and the Code of Ethics are posted on the Company's website at *www.elementsolutionsinc.com* under “Investors – Corporate Governance – Governance Documents.” We intend to provide disclosure of any amendment to or waiver of the Policy and/or Code of Ethics on our website within four business days following the date of such amendment or waiver.

Item 11. Executive Compensation

The information required by this item will be included in the 2024 Proxy Statement under the headings "Director Compensation," "Compensation Discussion and Analysis," "Report of the Compensation Committee," "Executive Compensation Tables" and "Corporate Governance - Compensation Committee interlocks and Insider Participation," and is incorporated by reference into this 2023 Annual Report.

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

The information required by this item will be included in the 2024 Proxy Statement under the headings "Security Ownership" and "Executive Compensation Tables - Equity Compensation Plan Information," and is incorporated by reference into this 2023 Annual Report.

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

The information required by this item will be included in the 2024 Proxy Statement under the headings "Corporate Governance - Certain Relationships and Related Transactions" and "Corporate Governance - Director Independence," and is incorporated by reference into this 2023 Annual Report.

Item 14. Principal Accounting Fees and Services

The information required by this item will be included in the 2024 Proxy Statement under the headings "Report of the Audit Committee" and "Proposal 4 - Ratification of Independent Registered Public Accounting Firm for 2024," and is incorporated by reference into this 2023 Annual Report.

Part IV

Item 15. Exhibits, Financial Statement Schedules

(A) Exhibits

		Incorporated by Reference				Included in this 2023 Annual Report
Exhibit Nb.	**Exhibit Description**	**Form**	**File Nb.**	**Exhibit Nb.**	**Filing Date**	
3.1(a)	Certificate of Incorporation, dated January 22, 2014	S-4 POS	333-192778	3.1	1/24/2014	
3.1(b)	Certificate of Amendment of Certificate of Incorporation, dated June 12, 2014	8-K	001-36272	3.1	6/13/2014	
3.1(c)	Certificate of Amendment of Certificate of Incorporation, dated January 31, 2019	8-K	001-36272	3.1	2/5/2019	
3.2	Amended and Restated By-laws	8-K	001-36272	3.2	2/5/2019	
4.1	Specimen Common Stock certificate	8-K	001-36272	4.1	2/5/2019	
4.2	Description of Common Stock	10-K	001-36272	4.2	2/23/2022	
4.3	Indenture, dated as of August 18, 2020, among the Company, the guarantors named therein and the Trustee	8-K	001-36272	4.1	8/18/2020	
4.4	Form of 3.875% senior notes due 2028 (Exhibit A)	8-K	001-36272	A to 4.01	8/18/2020	
10.1**	Credit Agreement, dated as of January 31, 2019, by and among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative agent	8-K	001-36272	10.1	2/5/2019	
10.2**	Amendment No.1 to Credit Agreement, dated November 26, 2019, among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative agent	8-K	001-36272	10.1	12/3/2019	
10.3**	Amendment No. 3 to Credit Agreement, dated September 1, 2021, among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative and collateral agent	8-K	001-36272	10.1	9/1/2021	
10.4**	Amendment No.4 to Credit Agreement, dated December 17, 2021, among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Barclays Bank PLC, as administrative and collateral agent	10-K	001-36272	10.4	2/23/2022	

Exhibit Nb.	Exhibit Description	Incorporated by Reference Form	File Nb.	Exhibit Nb.	Filing Date	Included in this 2023 Annual Report
10.5**	Amendment No.6 and Joinder to Credit Agreement, dated November 15, 2022, among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Citibank, N.A., as administrative and collateral agent	8-K	001-36272	10.1	11/15/2022	
10.6**	Amendment No. 7 to Credit Agreement, dated June 1, 2023, among, inter alios, the Company, MacDermid, Incorporated, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Citibank, N.A, as administrative and collateral agent	8-K	001-36272	10.1	6/5/2023	
10.7**	Amendment No.8 to Credit Agreement, dated December 18, 2023, among, inter alios, the Company, MacDermid, the subsidiaries of the Company from time to time parties thereto, the lenders from time to time parties thereto, and Citibank, N.A., as administrative and collateral agent.	8-K	001-36272	10.1	12/22/2023	
10.8**	Pledge and Security Agreement, dated as of January 31, 2019, among the Company, MacDermid Incorporated, and the subsidiaries of the Company from time to time parties thereto in favor of Barclays Bank PLC, as collateral agent	8-K	001-36272	10.2	2/5/2019	
10.9†	Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-Q	001-36272	10.2	8/2/2019	
10.10†	Element Solutions Inc 2014 Employee Stock Purchase Plan	10-Q	001-36272	10.3	8/2/2019	
10.11†	Element Solutions Inc 2024 Employee Stock Purchase Plan, approved by the Company's stockholders on June 6, 2023 and effective March 1, 2024	DEF14A	001-36272	Appendix A	4/21/2023	
10.12†	Form of Restricted Stock Unit Agreement (2021) – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-K	001-36272	10.7	2/25/2021	
10.13†	Form of Performance-Based Restricted Stock Unit Award Agreement (2021) – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-K	001-36272	10.9	2/25/2021	
10.14†	Form of Non-Qualified Stock Option Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	8-K	001-36272	10.3	3/25/2016	
10.15†	Form of Incentive Stock Option Agreement – Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan	10-K	001-36272	10.23	2/28/2019	
10.16†	Form of Director and Officer Indemnification Agreement	S-4/A	333-192778	10.12	1/2/2014	
10.17†	Form of Change in Control Agreement	10-K	001-36272	10.2	2/23/2022	

Exhibit Nb.	Exhibit Description	Incorporated by Reference Form	File Nb.	Exhibit Nb.	Filing Date	Included in this 2023 Annual Report
10.18	Advisory Services Agreement, dated October 31, 2013, by and between Element Solutions Inc (f/k/a Platform Specialty Products Corporation) and Mariposa Capital, LLC	S-4/A	333-192778	10.15	1/2/2014	
10.19	Letter Agreement, dated December 20, 2023, by and between the Company and Michael Goralski					X
14.1	Code of Ethics for Senior Financial Officers	10-K	001-36272	14.1	2/28/2019	
21.1	List of Subsidiaries					X
23.1	Consent of PricewaterhouseCoopers LLP					X
24.1	Power of Attorney					X
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1*	Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
97.1	Element Solutions Inc Executive Officer Clawback Policy					X
101.SCH*	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL*	Inline XBRL Extension Calculation Linkbase Document					X
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
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 documents					X
104*	Cover Page Interactive Data File (formatted as Inline XBRL and included in Exhibit 101)					X

* Furnished herewith.

** Certain schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule or exhibit will be furnished supplementally to the SEC upon request.

† Management contract or compensatory plan or arrangement.

(B) Financial Statement Schedule

Schedule II — Valuation and Qualifying Accounts and Reserves

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.

ELEMENT SOLUTIONS INC

By:	/s/ Michael Russnok
	Michael Russnok
	Chief Accounting Officer
Date:	February 21, 2024

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 and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Benjamin Gliklich Benjamin Gliklich	Director, President and Chief Executive Officer (Principal Executive Officer)	February 21, 2024
/s/ Carey J. Dorman Carey J. Dorman	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 21, 2024
/s/ Michael Russnok Michael Russnok	Chief Accounting Officer (Principal Accounting Officer)	February 21, 2024
/s/ Sir Martin E. Franklin Sir Martin E. Franklin	Executive Chairman of the Board	February 21, 2024
/s/ Ian G.H. Ashken Ian G.H. Ashken	Director	February 21, 2024
/s/ Elyse Napoli Filon Elyse Napoli Filon	Director	February 21, 2024
/s/ Christopher T. Fraser Christopher T. Fraser	Director	February 21, 2024
/s/ Michael F. Goss Michael F. Goss	Director	February 21, 2024
/s/ Nichelle Maynard-Elliott Nichelle Maynard-Elliott	Director	February 21, 2024
/s/ E. Stanley O’Neal E. Stanley O’Neal	Director	February 21, 2024

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Element Solutions Inc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Element Solutions Inc and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of operations, of comprehensive income, of changes in stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Interim Goodwill Impairment Assessment – Graphics Solutions Reporting Unit

As described in Notes 2 and 7 to the consolidated financial statements, the Company's consolidated goodwill balance was $2.34 billion as of December 31, 2023 and goodwill associated with the Graphics Solutions reporting unit was approximately $130 million. Goodwill is tested for impairment by management at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired using either a qualitative or quantitative approach. During the third quarter of 2023, given the lower-than-expected results of the Graphics Solutions reporting unit, the Company determined that it was more likely than not that the fair value of this reporting unit was less than its carrying value. As a result, the Company conducted an interim goodwill impairment test which confirmed that goodwill was impaired and recorded an $80.0 million impairment charge in the Consolidated Statement of Operations to reduce the carrying value of this reporting unit to its estimated fair value. The fair value of the reporting unit is based equally on market multiples and the present value of discounted future cash flows. The cash flow model utilized by management in the goodwill impairment test involves significant judgments related to future growth rates, gross profit, operating expenses and discount rates, among other considerations, from the vantage point of a market participant. The estimated fair value of the reporting unit is analyzed in relation to numerous market and historical factors, including current economic and market conditions, company-specific growth opportunities and guideline company information.

The principal considerations for our determination that performing procedures relating to the interim goodwill impairment assessment of the Graphics Solutions reporting unit is a critical audit matter are (i) the significant judgment by management when developing the fair value estimate of the reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to future growth rates, gross profit, operating expenses, discount rate, and guideline company information; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Graphics Solutions reporting unit. These procedures also included, among others, (i) testing management's process for developing the fair value estimate; (ii) evaluating the appropriateness of the valuation methods; (iii) testing the completeness and accuracy of underlying data used by management in the methods; and (iv) evaluating the significant assumptions used by management related to future growth rates, gross profit, operating expenses, discount rate and guideline company information. Evaluating management's assumptions related to future growth rates, gross profit, operating expenses and guideline company information involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the Company's valuation methods and (ii) the reasonableness of the discount rate and guideline company information assumptions.

/s/ PricewaterhouseCoopers LLP
Miami, Florida
February 21, 2024

We have served as the Company's auditor since 2013.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(dollars in millions, except per share amounts)

	Year Ended December 31,		
	2023	**2022**	**2021**
Net sales	$ 2,333.2	$ 2,549.4	$ 2,399.8
Cost of sales	1,414.7	1,596.7	1,439.0
Gross profit	918.5	952.7	960.8
Operating expenses:			
Selling, technical, general and administrative	596.8	578.6	611.2
Research and development	68.1	48.8	49.7
Goodwill impairment	80.0	—	—
Total operating expenses	744.9	627.4	660.9
Operating profit	173.6	325.3	299.9
Other (expense) income:			
Interest expense, net	(49.3)	(51.2)	(54.2)
Foreign exchange gain (loss)	7.9	(5.0)	15.8
Other (expense) income, net	(3.1)	2.9	(9.8)
Total other expense	(44.5)	(53.3)	(48.2)
Income before income taxes and non-controlling interests	129.1	272.0	251.7
Income tax expense	(13.0)	(85.8)	(48.3)
Net income from continuing operations	116.1	186.2	203.4
Income from discontinued operations, net of tax	2.1	1.8	0.3
Net income	118.2	188.0	203.7
Net income attributable to the non-controlling interests	(0.1)	(0.8)	(0.4)
Net income attributable to common stockholders	$ 118.1	$ 187.2	$ 203.3
Earnings per share			
Basic from continuing operations	$ 0.48	$ 0.75	$ 0.82
Basic from discontinued operations	0.01	0.01	—
Basic attributable to common stockholders	$ 0.49	$ 0.76	$ 0.82
Diluted from continuing operations	$ 0.48	$ 0.75	$ 0.82
Diluted from discontinued operations	0.01	0.01	—
Diluted attributable to common stockholders	$ 0.49	$ 0.76	$ 0.82
Weighted average common shares outstanding			
Basic	241.4	245.1	247.4
Diluted	241.8	245.8	247.9

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(dollars in millions)

	Year Ended December 31,		
	2023	**2022**	**2021**
Net income	$ 118.2	$ 188.0	$ 203.7
Other comprehensive (loss) income			
Foreign currency translation:			
Other comprehensive loss before reclassifications, net of tax (benefit) expense of $(11.1), $(6.1) and $ 6.0 for 2023, 2022 and 2021, respectively	(26.1)	(148.5)	(43.2)
Total foreign currency translation adjustments	(26.1)	(148.5)	(43.2)
Pension and post-retirement plans:			
Other comprehensive income (loss) before reclassifications, net of tax expense (benefit) of $ 1.1 , $(1.8) and $ 0.4 for 2023, 2022 and 2021, respectively	3.4	(5.2)	2.9
Total pension and post-retirement plans	3.4	(5.2)	2.9
Available-for-sale debt securities:			
Other comprehensive (loss) income before reclassifications, net of tax benefit of $ 0.0 for 2023 and 2022, respectively	(1.1)	1.1	—
Total unrealized (loss) gain on available-for-sale debt securities	(1.1)	1.1	—
Derivative financial instruments:			
Other comprehensive income before reclassifications, net of tax expense of $ 0.9 , $ 15.8 and $ 7.8 for 2023, 2022 and 2021, respectively	2.9	48.2	6.2
Reclassifications, net of tax benefit of $ 8.4 for 2023 and $ 0.0 for 2022 and 2021, respectively	(27.5)	1.5	18.9
Total unrealized (loss) gain on qualified hedging derivatives	(24.6)	49.7	25.1
Other comprehensive loss	(48.4)	(102.9)	(15.2)
Comprehensive income	69.8	85.1	188.5
Comprehensive loss attributable to the non-controlling interests	0.5	1.4	12.2
Comprehensive income attributable to stockholders	$ 70.3	$ 86.5	$ 200.7

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(dollars in millions)

	December 31, 2023	December 31, 2022
Assets		
Cash & cash equivalents	$ 289.3	$ 265.6
Accounts receivable, net of allowance for doubtful accounts of $ 12.6 and $ 14.4 at December 31, 2023 and 2022, respectively	461.8	455.8
Inventories	298.9	290.7
Prepaid expenses	32.5	38.5
Other current assets	115.0	138.1
Total current assets	1,197.5	1,188.7
Property, plant and equipment, net	296.9	277.2
Goodwill	2,336.7	2,412.8
Intangible assets, net	879.3	805.5
Deferred income tax assets	120.5	51.5
Other assets	143.2	168.0
Total assets	$ 4,974.1	$ 4,903.7
Liabilities and stockholders' equity		
Accounts payable	$ 140.6	$ 132.2
Current installments of long-term debt	11.5	11.5
Accrued expenses and other current liabilities	217.3	200.7
Total current liabilities	369.4	344.4
Debt	1,921.0	1,883.8
Pension and post-retirement benefits	28.1	36.7
Deferred income tax liabilities	108.9	121.2
Other liabilities	202.4	168.5
Total liabilities	2,629.8	2,554.6
Commitments and contingencies (Note 17)		
Stockholders' equity		
Common stock, 400.0 shares authorized (2023: 266.2 shares issued; 2022: 265.1 shares issued)	2.7	2.7
Additional paid-in capital	4,196.9	4,185.9
Treasury stock (2023: 24.6 shares; 2022: 24.3 shares)	(341.9)	(334.2)
Accumulated deficit	(1,183.3)	(1,223.8)
Accumulated other comprehensive loss	(345.9)	(298.1)
Total stockholders' equity	2,328.5	2,332.5
Non-controlling interests	15.8	16.6
Total equity	2,344.3	2,349.1
Total liabilities and stockholders' equity	$ 4,974.1	$ 4,903.7

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(dollars in millions)

	Year Ended December 31,		
	2023	**2022**	**2021**
Cash flows from operating activities:			
Net income	$ 118.2	$ 188.0	$ 203.7
Income from discontinued operations, net of tax	2.1	1.8	0.3
Net income from continuing operations	116.1	186.2	203.4
Reconciliations of net income to net cash flows provided by operating activities:			
Depreciation and amortization	166.7	161.3	163.9
Deferred income taxes	(69.9)	15.1	(46.7)
Foreign exchange (gain) loss	(10.6)	3.4	(6.9)
Incentive stock compensation	9.4	17.7	40.1
Goodwill impairment	80.0	—	—
Other, net	42.2	11.4	18.0
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	(6.8)	6.4	(48.7)
Inventories	(9.5)	(31.2)	(46.5)
Accounts payable	0.3	(0.1)	16.8
Accrued expenses	9.9	(33.0)	42.6
Prepaid expenses and other current assets	1.9	(26.6)	(25.1)
Other assets and liabilities	3.9	(14.7)	15.1
Net cash flows provided by operating activities	333.6	295.9	326.0
Cash flows from investing activities:			
Capital expenditures	(52.7)	(47.8)	(46.3)
Proceeds from disposal of property, plant and equipment	1.4	4.8	—
Acquisitions, net of cash acquired	(214.8)	(22.6)	(536.5)
Other, net	15.9	(9.6)	13.9
Net cash flows used in investing activities	(250.2)	(75.2)	(568.9)
Cash flows from financing activities:			
Debt proceeds, net of discount	1,297.1	—	398.0
Repayments of borrowings	(1,264.1)	(16.4)	(10.0)
Repurchases of common stock	—	(151.0)	(19.6)
Dividends	(77.4)	(78.4)	(61.9)
Payment of financing fees	(6.3)	(1.9)	(5.1)
Other, net	(8.0)	(27.9)	(11.4)
Net cash flows (used in) provided by financing activities	(58.7)	(275.6)	290.0
Net cash flows provided by (used in) operating activities of discontinued operations	2.2	1.8	(3.5)
Effect of exchange rate changes on cash and cash equivalents	(3.2)	(11.4)	(5.4)
Net increase (decrease) in cash and cash equivalents	23.7	(64.5)	38.2
Cash and cash equivalents at beginning of period	265.6	330.1	291.9
Cash and cash equivalents at end of period	$ 289.3	$ 265.6	$ 330.1
Supplemental disclosure information of continuing operations:			
Cash paid for interest	$ 56.1	$ 46.9	$ 50.6
Cash paid for income taxes	$ 73.7	$ 66.5	$ 71.2
Supplemental disclosure information of discontinued operations:			
Cash paid for income taxes	$ —	$ —	$ 3.1

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(dollars in millions, except share and per share amounts)

	Common Stock		Additional	Treasury Stock			Accumulated Other	Total	Non-	
	Shares	Amount	Paid-in Capital	Shares	Amount	Accumulated Deficit	Comprehensive (Loss) Income	Stockholders' Equity	controlling Interests	Total Equity
Balance at December 31, 2022	265,062,533	$ 2.7	$ 4,185.9	24,272,748	$ (334.2)	$ (1,223.8)	$ (298.1)	$ 2,332.5	$ 16.6	$ 2,349.1
Net income	—	—	—	—	—	118.1	—	118.1	0.1	118.2
Other comprehensive loss, net of taxes	—	—	—	—	—	—	(47.8)	(47.8)	(0.6)	(48.4)
Issuance of common stock under Employee Stock Purchase Plan	78,375	—	1.3	—	—	—	—	1.3	—	1.3
Dividends ($ 0.32 per share)	—	—	—	—	—	(77.6)	—	(77.6)		(77.6)
Equity compensation expense	—	—	9.7	—	—	—	—	9.7	—	9.7
Exercise/ vesting of stock-based compensation	1,038,192	—		372,007	(7.7)	—	—	(7.7)	—	(7.7)
Changes in non-controlling interests	—	—	—	—	—	—	—	—	(0.3)	(0.3)
Balance at December 31, 2023	266,179,100	$ 2.7	$ 4,196.9	24,644,755	$ (341.9)	$ (1,183.3)	$ (345.9)	$ 2,328.5	$ 15.8	$ 2,344.3

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (continued)
(dollars in millions, except share and per share amounts)

	Common Stock		Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity	Non-controlling Interests	Total Equity
	Shares	Amount		Shares	Amount					
Balance at December 31, 2021	261,937,509	$ 2.6	$ 4,166.6	15,195,525	$ (159.2)	$ (1,331.9)	$ (197.4)	$ 2,480.7	$ 20.1	$ 2,500.8
Net income	—	—	—	—	—	187.2	—	187.2	0.8	188.0
Other comprehensive loss, net of taxes	—	—	—	—	—	—	(100.7)	(100.7)	(2.2)	(102.9)
Issuance of common stock under Employee Stock Purchase Plan	79,075	—	1.3	—	—	—	—	1.3	—	1.3
Repurchases of common stock	—	—	—	8,042,587	(151.0)	—	—	(151.0)	—	(151.0)
Dividends ($ 0.32 per share)	—	—	—	—	—	(79.1)	—	(79.1)	—	(79.1)
Equity compensation expense	—	—	18.1	—	—	—	—	18.1	—	18.1
Exercise/ vesting of stock-based compensation	3,045,949	0.1	—	1,034,636	(24.0)	—	—	(23.9)	—	(23.9)
Changes in non-controlling interests	—	—	(0.1)	—	—	—	—	(0.1)	(2.1)	(2.2)
Balance at December 31, 2022	265,062,533	$ 2.7	$ 4,185.9	24,272,748	$ (334.2)	$ (1,223.8)	$ (298.1)	$ 2,332.5	$ 16.6	$ 2,349.1

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (continued)
(dollars in millions, except share and per share amounts)

	Common Stock		Additional	Treasury Stock			Accumulated Other	Total	Non-	
	Shares	Amount	Paid-in Capital	Shares	Amount	Accumulated Deficit	Comprehensive (Loss) Income	Stockholders' Equity	controlling Interests	Total Equity
Balance at December 31, 2020	261,330,127	$ 2.6	$ 4,122.9	14,229,280	$ (137.7)	$ (1,473.2)	$ (194.8)	$ 2,319.8	$ (1.7)	$ 2,318.1
Net income	—	—	—	—	—	203.3	—	203.3	0.4	203.7
Other comprehensive loss, net of taxes	—	—	—	—	—	—	(2.6)	(2.6)	(12.6)	(15.2)
Issuance of common stock under Employee Stock Purchase Plan	72,067	—	1.2	—	—	—	—	1.2	—	1.2
Repurchases of common stock	—	—	—	864,359	(19.6)	—	—	(19.6)	—	(19.6)
Dividends ($ 0.25 per share)	—	—	—	—	—	(62.0)	—	(62.0)	—	(62.0)
Equity compensation expense	—	—	40.4	—	—	—	—	40.4	—	40.4
Exercise/ vesting of share based compensation	535,315	—	2.1	101,886	(1.9)	—	—	0.2	—	0.2
Acquisition of non-controlling interests	—	—	—	—	—	—	—	—	34.2	34.2
Changes in non-controlling interests	—	—	—	—	—	—	—	—	(0.2)	(0.2)
Balance at December 31, 2021	261,937,509	$ 2.6	$ 4,166.6	15,195,525	$ (159.2)	$ (1,331.9)	$ (197.4)	$ 2,480.7	$ 20.1	$ 2,500.8

See accompanying notes to consolidated financial statements.

ELEMENT SOLUTIONS INC AND SUBSIDIARIES
INDEX TO NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BACKGROUND AND BASIS OF PRESENTATION

Background

Element Solutions was incorporated in Delaware in January 2014 and its shares of common stock, par value $ 0.01 per share, trade on the New York Stock Exchange under the ticker symbol “ESI.”

Element Solutions is a leading global specialty chemicals company whose businesses supply a broad range of solutions that enhance the performance of products people use every day. Developed in multi-step technological processes, these innovative solutions enable customers' manufacturing processes in several key industries, including consumer electronics, power electronics, semiconductor fabrication, communications and data storage infrastructure, automotive systems, industrial surface finishing, consumer packaging and offshore energy. Element Solutions businesses provide products that, in substantially all cases, are consumed by customers as part of their production process, providing the Company with reliable and recurring revenue streams as the products are replenished in order to continue production. Element Solutions delivers its products to customers through its sales and service workforce, regional distributors and manufacturing representatives.

The Company's operations are organized in two reportable segments: Electronics and Industrial & Specialty. The reportable segments represent businesses for which separate financial information is utilized by the chief operating decision maker for the purpose of allocating resources and evaluating performance.

Electronics – The Electronics segment researches, formulates and sells specialty chemicals and process technologies for all types of electronics hardware, from complex printed circuit board designs to advanced semiconductor packaging. In mobile communications, computers, automobiles and aerospace equipment, its products are an integral part of the electronics manufacturing process and the functionality of end-products. The segment's "wet chemistries" for metallization, surface treatments and solderable finishes form the physical circuitry pathways, and its "assembly materials," such as SMT, pastes, fluxes and adhesives, join those pathways together. The segment provides specialty chemical solutions through the following businesses: Assembly Solutions, Circuitry Solutions and Semiconductor Solutions.

Industrial & Specialty – The Industrial & Specialty segment researches, formulates and sells specialty chemicals and process technologies that enhance surfaces or improve industrial processes in diverse industrial sectors from automotive trim to transcontinental infrastructure and from high-speed printing to high-design faucets. Its products include chemical systems that protect and decorate metal and plastic surfaces; consumable chemicals that enable printing image transfer on flexible packaging materials; and chemistries used in water-based hydraulic control fluids for offshore energy production. These fully consumable products are used in the aerospace, automotive, construction, consumer electronics, consumer packaged goods and oil and gas production end-markets. The segment provides specialty chemical solutions through the following businesses: Industrial Solutions, Graphics Solutions and Energy Solutions.

Basis of Presentation

The accompanying Consolidated Financial Statements have been prepared in accordance with GAAP and include the accounts of Element Solutions and all of its controlled subsidiaries. The Company consolidates the income, expenses, assets, liabilities and cash flows of its subsidiaries from the date it acquires control or becomes the primary beneficiary. All intercompany accounts and transactions have been eliminated upon consolidation.

In preparing the Consolidated Financial Statements in conformity with GAAP, management uses estimates and assumptions that may affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. Management applies judgment based on its understanding and analysis of the relevant circumstances, including historical experience and future expectations. These judgments, by their nature, are subject to an inherent degree of uncertainty and, accordingly, actual results could differ significantly from these estimates and assumptions.

The Company transferred operational responsibility of its Films business from its Graphics Solutions business in the first quarter of 2023 and its Industrial Solutions business in the second quarter of 2022, both within its Industrial & Specialty segment, to its Circuitry Solutions business in its Electronics segment. The financial results of this business are not material to the Company's Consolidated Financial Statements. In addition, the Company transferred certain product lines between its

Assembly Solutions business and its Semiconductor Solutions business, both of which are part of its Electronics segment, to align more closely with its current business structure. Historical information has been reclassified to reflect these changes for all periods presented in the Consolidated Financial Statements.

Certain prior year amounts have been reclassified to conform to the current year's presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash and Cash Equivalents – The Company considers all highly-liquid instruments purchased with an original maturity of three months or less to be cash equivalents.

Receivables and Allowance for Doubtful Accounts – The Company determines its allowance for doubtful accounts associated with expected credit losses using a combination of factors to reduce trade receivable balances to their estimated net realizable amount. The Company maintains and adjusts its allowance for credit losses based on a variety of factors, including the length of time receivables have been past due under the applicable contractual terms, current and future macroeconomic trends and conditions, significant one-time events such as bankruptcy filings or deterioration in the customer’s operating results or financial position, historical experience and the financial condition of its customers. Credit risk with respect to accounts receivable is generally diversified due to the large number of entities comprising the Company's customer base and its dispersion across many different geographical regions. At December 31, 2023 and 2022, the Company did not believe it had any significant concentrations of credit risk that could materially impact its results of operations or financial position.

Inventories – Inventories are stated at the lower of cost or net realizable value with cost being determined by the first-in/first-out and average cost methods. The Company regularly reviews inventories for obsolescence and excess quantities, and calculates reserves based on historical write-offs, customer demand, age of inventory, product evolution, usage rates and quantities of stock on hand. Additional obsolescence reserves may be required if actual sales are less favorable than those projected or product lifecycles differ from expectations.

Property, Plant and Equipment, Net – Property, plant and equipment, net is stated at cost less accumulated depreciation. The Company records depreciation on a straight-line basis over the estimated useful life of each asset.

Estimated useful lives by asset class are as follows:

	Average useful life (in years)		
Buildings and building improvements	5	to	20
Machinery, equipment and fixtures	3	to	15
Computer hardware and software	3	to	7
Furniture and automobiles	3	to	7
Leasehold improvements	Lesser of useful life or lease term		

Maintenance and repair costs are expensed as incurred, while renewals and improvements, which significantly extend the useful life of the asset, are capitalized and expensed over its remaining useful life. Costs and accumulated depreciation on assets retired or disposed of are removed from the accounts and any resulting gains or losses are recorded to earnings in the period of disposal.

Business Combinations – The Company allocates the purchase price of acquisitions to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values at the acquisition date. Significant assumptions inherent in the valuation of the intangible assets acquired include the amount and timing of future cash flows, including expected growth rates, profitability and customer attrition rate, and the discount rate applied to the projected cash flows, among other considerations, from the vantage point of a market participant. The excess of the acquisition price over those estimated fair values is recorded as goodwill. Changes to the acquisition date provisional fair values prior to the end of the measurement period are recorded as adjustments to goodwill.

Goodwill – Goodwill is tested for impairment at the reporting unit level annually in the fourth quarter, or when events or changes in circumstances indicate that goodwill might be impaired using either a qualitative or quantitative approach. The Company's reporting units are determined based upon its organizational structure in place at the date of the goodwill impairment test.

The Company may elect to first assess qualitative factors to determine whether it is more likely than not (greater than 50%) that the fair value of a reporting unit is less than its carrying value. Qualitative factors may include, but are not limited to, economic, market and industry conditions, cost factors, and overall financial performance of the reporting units. If we do not perform a qualitative assessment, or if the qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying value, the Company performs a quantitative test.

For the quantitative test, the Company tests for impairment by comparing the fair value of a reporting unit to its carrying value. The fair value of a reporting unit is based equally on market multiples and the present value of discounted future cash flows. The discounted cash flows are prepared based upon cash flows at the reporting unit level. The cash flow model utilized in the goodwill impairment test involves significant judgments related to future growth rates, gross profit, operating expenses and discount rates, among other considerations from the vantage point of a market participant. If the fair value of a reporting unit exceeds the carrying value of the net assets assigned to that reporting unit, goodwill is not impaired and no further testing is required. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, the goodwill impairment loss is calculated as the difference between these amounts, limited to the amount of goodwill allocated to the reporting unit.

The primary components of and assumptions used in the assessment consist of the following:

- *Valuation Techniques* - the Company uses a discounted cash flow analysis, which requires assumptions about short and long-term net cash flows, growth rates and discount rates. Additionally, it considers guideline company and guideline transaction information, where available, to aid in the valuation of the reporting units.
- *Growth Assumptions* - Multi-year financial forecasts are developed for each reporting unit based on several key growth drivers, such as new business initiatives, client service and retention standards, market share changes, historical performance and industry and economic trends, among other considerations.
- *Discount Rate Assumptions* - Discount rates are estimated based on the WACC, which combines the required return on equity and considers the risk-free interest rate, market risk premium, size risk premium and a company-specific risk premium, with the cost of debt, based on rated corporate bonds, adjusted using an income tax factor.
- *Estimated Fair Value and Sensitivitie*s - The estimated fair value of each reporting unit is derived from the valuation techniques described above. This fair value is analyzed in relation to numerous market and historical factors, including current economic and market conditions, company-specific growth opportunities and guideline company information.

Indefinite-Lived Intangible Assets – Indefinite-lived intangible assets are reviewed for potential impairment on an annual basis, in the fourth quarter, or more frequently when events or circumstances indicate that such assets may be impaired, by comparing their estimated fair values to their carrying values. An impairment charge is recognized when the carrying value of an indefinite-lived intangible asset exceeds its estimated fair value. The Company uses the “relief from royalty” method to estimate the fair value of trade name intangible assets for impairment. The primary assumptions used to estimate the present value of cash flows from such assets include sales projections and growth rates being applied to a prevailing market-based royalty rate; the effects of which are then tax effected and discounted using the WACC from the vantage point of a market participant. Assumptions concerning sales projections are impacted by the uncertain nature of global and local economic conditions in the various markets it serves.

Finite-Lived Intangible Assets – Finite-lived intangible assets are amortized on a straight-line basis over their estimated useful lives, which currently range from 8 to 25 years for customer relationships, 3 to 10 years for developed technologies, 5 to 20 years for trade names, 15 years for reacquired distribution rights and up to 5 years for other intangible assets. If circumstances require a long-lived asset group to be tested for possible impairment, the Company first determines if the estimated undiscounted future pre-tax cash flows expected to result from the use of the asset or asset group plus net proceeds expected from disposition of the asset or asset group, if any, are less than its carrying value. When an impairment is identified, the carrying value of the asset is reduced to its estimated fair value.

Leases – The Company determines whether an arrangement is a lease at inception. Right-of-use (or ROU) assets and lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. The interest rate used to determine the present value of future lease payments is the Company's incremental borrowing rate as the implicit rate in its leases is not readily determinable. The incremental borrowing rate is estimated to approximate the interest rate on a collateralized basis for borrowings with similar terms and payments. The Company's leases may include variable payments such as common area maintenance, insurance, real estate taxes, changes in price indices or other costs, which are expensed as incurred. ROU assets also include any lease payments made prior to commencement and are recorded net of any lease incentives received. The Company’s lease terms may include options to extend or terminate the lease when it is reasonably certain that it will exercise that option. Lease expense for fixed lease payments is recognized on a straight-line basis over the lease term.

Contingencies and Commitments – The Company records accruals for loss contingencies and commitments which are both probable and reasonably estimable. Significant judgment is required to determine both probability and the estimated amount of loss. The Company reviews accruals on a quarterly basis and adjusts, as necessary, to reflect the impact of negotiations, settlements, rulings, advice of legal counsel and other current information. Legal fees are expensed as incurred.

Environmental Matters – The Company accrues for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current laws and existing technologies. Costs related to environmental contamination treatment and cleanup are charged to expense. The accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. Accruals for environmental liabilities are included in the Consolidated Balance Sheets as “Accrued expenses and other current liabilities” and “Other liabilities” at undiscounted amounts. Receivables for related insurance or other third-party recoveries for environmental liabilities are recorded when it is probable that a recovery will be realized and are included in the Consolidated Balance Sheets as “Other current assets" and "Other assets."

Employee Benefits – Amounts recognized in the Company's Consolidated Financial Statements related to pension and other post-retirement benefits are determined from actuarial valuations. Inherent in such valuations are assumptions, including expected return on plan assets, discount rates at which the liabilities could be settled, rates of increase in future compensation levels and mortality rates. These assumptions are updated annually and are disclosed in Note 9, *Pension, Post-Retirement and Post-Employment Plans* , to the Consolidated Financial Statements. Actual results that differ from the assumptions are recorded in "Accumulated other comprehensive loss" within Stockholders’ Equity and amortized over future periods and, therefore, affect expense recognized.

The Company considers a number of factors in determining and selecting assumptions for the overall expected long-term rate of return on plan assets, including the historical long-term return experience of its plan assets as well as their current and expected allocation and expected long-term rates of return. Expected long-term rates of return are determined with the assistance of investment advisors. The Company bases its expected allocation of plan assets on a diversified portfolio consisting of domestic and international equity securities, fixed income securities and alternative asset classes. The measurement date used to determine pension and other post-retirement benefits is December 31.

Derivatives – The Company recognizes all contracts that meet the definition of a derivative as either assets or liabilities in the Consolidated Balance Sheets and measures those instruments at fair value. To designate a derivative for hedge accounting at inception and throughout the hedge period, the Company formally documents the nature and relationships between the hedging instrument and hedged item, as well as its risk-management objectives and strategies for undertaking various hedge transactions and the method of assessing hedge effectiveness. Additionally, for hedges of forecasted transactions, the significant characteristics and expected terms of forecasted transactions are specifically identified, and the likelihood of each forecasted transaction occurring is deemed probable. If it is determined that a forecasted transaction will not occur, a gain or loss is recognized in current earnings. Financial instruments qualifying for hedge accounting must maintain a specified level of effectiveness between the hedging instrument and the item being hedged, both at inception and throughout the hedged period. The Company does not engage in trading or other speculative uses of financial instruments. It is the Company's policy to disclose the fair value of derivative instruments that are subject to master netting arrangements on a gross basis in the Consolidated Balance Sheets.

If hedge accounting is applied, the effective portion of unrealized gains and losses associated with the derivatives are deferred as a component of "Accumulated other comprehensive loss" until the underlying hedged transactions are reported in the Company’s Consolidated Statements of Operations. For derivative contracts not designated as hedging instruments, the

Company records changes in the net fair value of such contracts in "Other (expense) income, net" in the Consolidated Statements of Operations. Realized gains and losses on foreign currency forward contracts, commodity derivative contracts and the net periodic payments from interest rate swaps and cross-currency swaps are reflected as "Cash flows from operating activities" in the Consolidated Statement of Cash Flows. Proceeds from the monetization of interest rate swaps are reflected as "Cash flows from operating activities" and proceeds from the monetization of cross-currency swaps are reflected as "Cash flows from investing activities" in the Consolidated Statement of Cash Flows. See Note 12, *Financial Instruments* , to the Consolidated Financial Statements for further information.

Financial Instruments – The Company's financial instruments consist primarily of cash and cash equivalents, accounts receivable, accounts payable and debt. The Company believes that the carrying value of its cash and cash equivalents, accounts receivable and accounts payable are representative of their respective fair values because of their short maturities.

Foreign Currency Translation – The Company's foreign subsidiaries primarily use their local currency as their functional currency. The assets and liabilities of the Company's foreign subsidiaries are translated into U.S. dollars using foreign currency exchange rates prevailing at the balance sheet dates. The Consolidated Statements of Operations are translated at average foreign currency exchange rates for the periods presented. Cumulative currency translation adjustments are included in the stockholders' equity section of the Consolidated Balance Sheets as "Accumulated other comprehensive loss." Net gains and losses from transactions denominated in currencies other than the functional currency of the entity are included in the Consolidated Statements of Operations as "Foreign exchange gain (loss)."

Revenue Recognition – The Company recognizes revenue when a customer obtains control of the products it purchased, which occurs upon shipment or delivery, when title or the risks and rewards of ownership have been passed on to the customer, the Company's performance obligations have been fulfilled and collectability is probable. Estimates for sales rebates, incentives and discounts as well as sales returns and allowances are accounted for as reductions of revenue when the earnings process is complete. Sales rebates, incentives and discounts are typically earned by customers based on annual sales volume targets. The Company records an estimate for these accruals based on contract terms and its historical experience with similar programs, however, changes to these estimates may be required if the historical data used in the calculation differs from actual experience. Differences between estimated expense and actual costs are typically immaterial and are recognized in earnings in the period such differences are determined. Variable consideration for volume discounts, rebates and returns are recorded as liabilities and settled with the customer in accordance with the terms of the applicable contract, typically when program requirements are achieved by the customer.

Most performance obligations relate to contracts with a duration of less than one year, in which the Company has the right to invoice the customer at the time the performance obligation is satisfied for the amount of revenue recognized at that time. The Company expenses incremental costs for obtaining contracts with terms of less than one year.

See Note 22, *Segment Information,* to the Consolidated Financial Statements for a disaggregation of net sales by business unit.

Research and Development **–** Research and development costs, which primarily relate to internal salaries, are expensed as incurred.

Income Taxes – The Company recognizes deferred tax assets and liabilities based on the differences between the financial statement basis and the tax basis of assets, liabilities, net operating losses and tax carryforwards. A valuation allowance is required to be recognized to reduce the recorded deferred tax asset to the amount that will more likely than not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income by jurisdiction during the periods in which those temporary differences become deductible or when carryforwards can be utilized. The Company considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in this assessment. If these estimates and related assumptions change in the future, the Company may be required to record additional valuation allowances against its deferred tax assets, resulting in additional income tax expense. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences and carryforwards 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 of such change.

Tax benefits are recognized for an uncertain tax position when the Company considers it is more likely than not that the position will be sustained upon examination by a taxing authority or upon completion of the litigation process. For a tax position that meets the more-likely-than-not recognition threshold, the tax benefit is measured as the largest amount that is judged to have a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority. The liability associated with unrecognized tax benefits is adjusted periodically due to changing circumstances and when new information becomes available. Such adjustments are recognized in the period in which they are identified.

Stock-Based Compensation Plans – Stock-based compensation is recorded in the Consolidated Statements of Operations as "Selling, technical, general and administrative" expense over the requisite service period based on the estimated grant-date fair value of the awards, effected for forfeitures as they occur. The fair value of RSU awards is determined using the closing price of Element Solutions' common stock on the date of grant. The fair value of stock options is determined using the Black-Scholes option pricing model, and inputs in the model include assumptions related to stock price volatility, expected dividend yield and award terms.

Compensation costs for awards with performance conditions are only recognized if and when it becomes probable that the performance conditions will be achieved. The probability of vesting is reassessed at the end of each reporting period and the compensation costs are adjusted accordingly with the cumulative effect of such a change on current and prior periods being recognized in compensation cost in the period of the change.

Earnings Per Share – Basic earnings per share excludes dilution and is computed by dividing net income attributable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted earnings per share assumes the issuance of all potentially dilutive share equivalents using the if-converted or treasury stock methods, provided that the effects of which are not anti-dilutive. For stock options and RSUs, it is assumed that the proceeds will be used to buy back shares. For stock options, such proceeds equal the average unrecognized compensation plus the assumed exercise of weighted average number of options outstanding. For unvested RSUs, the assumed proceeds equal the average unrecognized compensation expense.

Fair Value Measurements – The Company determines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Inputs used in the valuation techniques to determine fair values are classified based on a three-level hierarchy. The basis for fair value measurements for each level within the hierarchy is described below, with Level 1 having the highest priority and Level 3 having the lowest. The three levels of the fair value hierarchy are as follows:

- Level 1 – inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 – inputs are quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in non-active markets; and model-derived valuations whose inputs are observable or whose significant valuation drivers are observable.
- Level 3 – inputs to valuation models are unobservable and/or reflect the Company’s market assumptions.

The fair value hierarchy is based on maximizing the use of observable inputs and minimizing the use of unobservable inputs when measuring fair value. Classification within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The Company transfers the fair value of an asset or liability between levels of the fair value hierarchy at the end of the reporting period during which a significant change in the inputs used to determine the fair value has occurred.

NAV Practical Expedient is the measure of fair value using the net asset value (or NAV) per share (or its equivalent) as an alternative to the fair value hierarchy discussed above.

3. RECENT ACCOUNTING PRONOUNCEMENTS

There have been no recently adopted accounting pronouncements with a material impact to the Consolidated Financial Statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

Segment Reporting (Topic 280) - In November 2023, the FASB issued ASU No. 2023-07, *"Improvements to Reportable Segment Disclosures,"* which requires the disclosure of significant segment expenses and other segment items on an annual and interim basis. The guidance is effective for annual periods beginning after December 15, 2023 and interim periods within fiscal years beginning after December 15, 2024. The Company is currently evaluating the impact of this new standard on its disclosures to the Consolidated Financial Statements.

Income Taxes (Topic 740) - In December 2023, the FASB issued ASU No. 2023-09, *"Improvements to Income Tax Disclosures,"* which requires enhanced disclosures in the effective tax rate reconciliation and the disclosure of income taxes paid by jurisdiction. The guidance is effective for annual periods beginning after December 15, 2024. The Company is currently evaluating the impact of this new standard on its disclosures to the Consolidated Financial Statements.

4. ACQUISITIONS

ViaForm Distribution Rights

On June 1, 2023, the Company reacquired the right to market and distribute directly (rather than through its exclusive distributor) its ViaForm® electrochemical deposition products by terminating a long-standing distribution agreement for $ 200 million, including $ 170 million paid at closing and a deferred payment of $ 30.0 million which was paid in the fourth quarter of 2023. Following the completion of the transaction, the Company now manages all aspects of the ViaForm® product line in-house, which it believes will result in a more efficient supply chain and improved customer outcomes for leading semiconductor fabricators. The transaction did not meet the accounting definition of a business which precluded any goodwill from being recognized and resulted in the Company capitalizing $ 0.5 million of transaction costs. The financial results of this transaction are included in the Company's Semiconductor Solutions business within its Electronics segment.

In connection with the transaction, the Company recognized a reacquired distribution right intangible asset of $ 187 million, which will be amortized over 15 years, and a receivable of $ 13.5 million, which was settled in the fourth quarter of 2023 with $ 6.1 million of inventory and $ 7.4 million cash (which reduced the purchase price paid by the cash received). The amounts paid are deductible for tax purposes.

Kuprion Acquisition

On May 19, 2023, the Company completed the Kuprion Acquisition for $ 15.9 million, net of cash, with potential additional payments in various installments, which are not to exceed $ 259 million in aggregate, to be made upon the achievement of certain milestones associated with product qualification and revenue through December 31, 2030. The Company acquired Kuprion, Inc. to complement its next-generation nano-copper technology for the semiconductor, circuit board and electronics assembly markets. As the acquisition did not meet the accounting definition of a business and the technology acquired is still in development with no alternative future use, $ 15.7 million was expensed to "Research and development" in the Consolidated Statements of Operations. Any potential earn-out payments to be paid based on milestones will be recognized when probable and estimable and either expensed as additional research and development expense, if the technology did not yet meet the accounting definition of an asset, or capitalized as a developed technology intangible asset. The Company did not make any payments associated with the contingent consideration during the year ended December 31, 2023. Kuprion, Inc. is included in the Company's Semiconductor Solutions business within its Electronics segment. The amount paid, including future consideration, is not deductible for tax purposes.

HSO Acquisition

On January 26, 2022, the Company completed the HSO Acquisition for approximately $ 23 million, net of cash. HSO is a multi-national developer of technology and chemistry for decorative and functional surface finishing with a focus on environmentally sustainable products, especially in the field of plating on plastics. HSO is included in the Company's Industrial Solutions business within its Industrial & Specialty segment and was not material to the Consolidated Financial Statements. In connection with this acquisition, the Company recorded approximately $ 11.7 million of finite-lived intangible assets, primarily customer relationships.

Coventya Acquisition

On September 1, 2021, the Company completed the Coventya Acquisition for $ 486 million, net of cash. Coventya is a global provider of specialty chemicals for the surface finishing industry which complements the Company's industrial portfolio. Coventya is included in the Company's Industrial Solutions business within its Industrial & Specialty segment.

HKW Acquisition

On May 5, 2021, the Company completed the HKW Acquisition for $ 50.9 million, net of cash. HKW specializes in conformal coatings, encapsulation resins, thermal interface materials, contact lubricants and cleaning chemistry which complements the Company's broader electronics portfolio with many applications overlapping with its semiconductor technologies. HKW is included in the Company's Assembly Solutions business within its Electronics segment.

5. INVENTORIES

The major components of inventories, on a net basis, were as follows:

	December 31,	
(dollars in millions)	**2023**	**2022**
Finished goods	$ 176.2	$ 164.4
Work in process	37.5	25.9
Raw materials and supplies	85.2	100.4
Total inventories	$ 298.9	$ 290.7

6. PROPERTY, PLANT AND EQUIPMENT, NET

The major components of property, plant and equipment, net were as follows:

	December 31,	
(dollars in millions)	**2023**	**2022**
Land and leasehold improvements	$ 51.7	$ 52.0
Buildings and improvements	168.5	163.9
Machinery, equipment, fixtures and software	334.3	299.8
Construction in process	66.7	50.3
Total property, plant and equipment	621.2	566.0
Accumulated depreciation	(324.3)	(288.8)
Property, plant and equipment, net	$ 296.9	$ 277.2

For 2023, 2022 and 2021, the Company recorded depreciation expense of $ 42.6 million, $ 41.6 million and $ 39.7 million, respectively.

In January 2021, the Company sold a dormant facility in New Jersey, included in its Electronics segment, and recognized a gain of $ 3.9 million in "Selling, technical, general and administrative" in the Consolidated Statements of Operations. In connection with the sale, the Company received $ 19.0 million in the first quarter of 2021 which is included in "Other, net" in the Consolidated Statements of Cash Flows as a cash inflow from investing activities.

7. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The changes in the carrying amount of goodwill by segment were as follows:

(dollars in millions)	Electronics	Industrial & Specialty	Total
Balance at December 31, 2021	$ 1,292.2	$ 1,234.1 (1)	$ 2,526.3
Acquisition [2]	—	7.1	7.1
Transfer of Films business [3]	80.4	(80.4)	—
Foreign currency translation and other	(68.6)	(52.0)	(120.6)
Balance at December 31, 2022	1,304.0	1,108.8	2,412.8
Transfer of Films business [4]	7.9	(7.9)	—
Goodwill impairment	—	(80.0)	(80.0)
Foreign currency translation and other	(13.2)	17.1	3.9
Balance at December 31, 2023	$ 1,298.7	$ 1,038.0	$ 2,336.7

(1) Includes accumulated impairment losses of $ 46.6 million.

(2) The Company completed the HSO Acquisition on January 26, 2022.

(3) In the second quarter of 2022, the Company transferred operational responsibility of its Films business from its Industrial Solutions business within its Industrial & Specialty segment to its Electronics segment. Goodwill was reallocated using a relative fair value approach and assessed for impairment both before and after the allocation. See Note 1, Background and Basis of Presentation, to the Consolidated Financial Statements for further information.

(4) In the first quarter of 2023, the Company transferred operational responsibility of its Films business from its Graphics Solutions business within its Industrial & Specialty segment to its Electronics segment. Goodwill was reallocated using a relative fair value approach and assessed for impairment both before and after the allocation. See Note 1, Background and Basis of Presentation, to the Consolidated Financial Statements for further information.

Goodwill is tested for impairment at the reporting unit level in the fourth quarter of each year or when events or changes in circumstances indicate that goodwill might be impaired. During the third quarter of 2023, given the lower-than-expected results of the Graphics Solutions reporting unit, the Company determined that it was more likely than not that the fair value of this reporting unit was less than its carrying value. As a result, the Company conducted an interim goodwill impairment test which confirmed that goodwill was impaired and the Company recorded an $ 80.0 million impairment charge in the Condensed Consolidated Statement of Operations to reduce the carrying value of this reporting unit to its estimated fair value. This impairment charge was primarily driven by the reduction of the expected long-term cash flows for the business due to profit margin pressures from raw material inflation across the packaging supply chain, the recent loss of a significant newspaper customer, and a higher WACC as compared to the assumptions used for the 2022 annual goodwill impairment test.

After recording the impairment, the carrying value of the Graphics Solutions reporting unit was equal to its estimated fair value and there have been no events or changes in circumstances that indicated that goodwill was further impaired. As of December 31, 2023, the goodwill assigned to the Graphics Solutions reporting unit was approximately $ 130 million. No impairments of goodwill were recognized for any of the Company's other reporting units during the year ended December 31, 2023 and no impairments of goodwill were recognized during the years ended December 31, 2022 and 2021.

Intangible Assets

The major components of intangible assets were as follows:

	December 31, 2023			December 31, 2022		
(dollars in millions)	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Customer relationships	$ 978.4	$ (505.9)	$ 472.5	$ 967.5	$ (434.1)	$ 533.4
Developed technology	410.0	(316.2)	93.8	408.9	(277.0)	131.9
Trade names	95.9	(30.9)	65.0	96.0	(23.8)	72.2
Reacquired distribution rights	187.0	(7.3)	179.7	—	—	—
Other	0.8	(0.5)	0.3	—	—	—
Indefinite-lived trade name	68.0	—	68.0	68.0	—	68.0
Total	$ 1,740.1	$ (860.8)	$ 879.3	$ 1,540.4	$ (734.9)	$ 805.5

For 2023, 2022 and 2021, the Company recorded amortization expense on intangible assets of $ 124 million, $ 120 million and $ 124 million, respectively. No impairments of indefinite-lived intangible assets were recognized during the years ended December 31, 2023, 2022 and 2021.

Estimated future amortization of intangible assets for each of the next five years is as follows:

(dollars in millions)	Amortization Expense
2024	$ 121.3
2025	115.0
2026	72.8
2027	71.0
2028	70.8

8. LONG-TERM COMPENSATION PLANS

In June 2014, the Company's stockholders adopted the 2013 Plan in connection which a maximum of 15,500,000 shares of common stock were reserved and made available for issuance.

For 2023, 2022 and 2021, compensation expense associated with the Company's long-term compensation plans was as follows:

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
RSUs	$ 9.3	$ 17.4	$ 39.6
Stock options	0.1	0.3	0.5
Total	$ 9.4	$ 17.7	$ 40.1
Unrecognized compensation expense for awards expected to vest	$ 16.5		
Weighted average remaining vesting period (months)	26		

At December 31, 2023, a total of 8,858,192 shares of common stock had been issued, and 4,256,974 RSUs and stock options were outstanding, under the 2013 Plan.

	Total	RSUs	Stock Options
Outstanding at December 31, 2022	4,289,420	3,901,630	387,790
Granted	1,185,157	1,185,157	—
Exercised/Issued	(1,038,192)	(1,035,087)	(3,105)
Forfeited	(179,411)	(179,411)	—
Outstanding at December 31, 2023	4,256,974	3,872,289	384,685

The total fair value of RSUs which vested during 2023, 2022 and 2021 was $ 21.2 million, $ 70.8 million and $ 7.0 million respectively, based on the stock price on the date of vest.

RSUs

The Company granted the following equity classified RSUs under the 2013 Plan:

Year of Issuance:	RSUs	Weighted Average Grant Date Fair Value	Weighted Average Vesting Period (months)
2023	1,185,157	$ 19.75	27
2022	2,847,135	$ 23.23	51
2021	852,890	$ 18.02	28

Certain of the RSUs granted during the period contain performance vesting conditions in addition to a service vesting condition. RSUs granted with service or performance vesting conditions were valued at the grant date stock price. Certain RSUs with performance vesting conditions also contain provisions for additional share awards in the event certain performance conditions are met at the end of the applicable measurement periods. These conditions are generally based on Adjusted EBITDA, adjusted earnings per share and cash return on investment.

In January 2019, certain key executives were granted performance-based RSUs, which vesting was subject to the achievement by the Company of a performance target of adjusted earnings per share of $ 1.36 in any fiscal year ending on or before December 31, 2022, and continuous service which subsequently vested in the first quarter of 2022. Prior to the second quarter of 2021, the Company did not recognize compensation expense for these awards as the achievement of the performance target was not deemed probable. During the second quarter of 2021, the achievement of the performance target became probable, and the Company recorded $ 1.3 million and $ 23.9 million of expense for the years ended December 31, 2022 and 2021, respectively, in "Selling, technical, general and administrative " in the Consolidated Statement of Operations.

In February 2022, certain key executives were granted 1.95 million performance-based RSUs with an aggregate fair value of $ 45.4 million. The vesting of these shares is subject to the achievement by the Company of a performance target of adjusted earnings per share of $ 2.72 by December 31, 2026, and continuous service. If the performance target is achieved, the actual number of shares vested will be determined by applying a total shareholder return (TSR) multiplier based on the Company's TSR relative to a benchmark index for the performance period. The TSR multiplier will range from 0.85 to 1.15 . The Company has not recognized compensation expense for these awards as the achievement of the performance target was not probable at December 31, 2023 and 2022, respectively.

At December 31, 2023, the following equity classified RSUs were outstanding:

	December 31, 2023		
Vesting Conditions:	**Outstanding**	**Weighted Average Remaining Vesting Period (months)**	**Potential Additional Awards**
Service-based	629,333	13	—
Performance-based	1,292,956	15	1,292,956
Performance-based awards deemed not probable	1,950,000	38	—
Total	3,872,289	26	1,292,956

Stock Options

Stock options vest ratably over a three-year period and have contractual lives of ten years from their respective grant dates. The fair value of each stock option grant is calculated using the Black-Scholes option pricing model at the grant date. The Company did not grant any qualified or non-qualified stock options under the 2013 Plan during the years ended December 31, 2023, 2022 and 2021.

At December 31, 2023, there were 384,685 outstanding stock options, which were vested and in-the-money, with an aggregate intrinsic value of $ 3.8 million. There were no unvested outstanding stock options.

9. PENSION, POST-RETIREMENT AND POST-EMPLOYMENT PLANS

For 2023, 2022 and 2021, the net periodic benefit for all plans totaled $ 1.5 million, $ 2.8 million and $ 2.1 million, respectively.

Domestic Defined Benefit Pension Plan

The domestic non-contributory defined benefit pension plan is closed to new participants. Pursuant to this plan, retirement benefits are provided based upon years of service and compensation levels. An investment committee, appointed by the Board, manages the plan and its assets in accordance with the plan’s investment policies. These investment policies incorporate an asset allocation strategy that emphasizes the long-term growth of capital and acceptable asset volatility as long as it is consistent with the volatility of the relevant market indexes. The investment policies attempt to achieve a mix of approximately 93 % of plan investments for liability-matching, 6 % for long-term growth and 1 % for near-term benefit payments. These allocation targets exclude the market value of equity derivatives. The Company believes this strategy is consistent with the long-term nature of plan liabilities and ultimate cash needs of the plan. Plan assets consist primarily of listed stocks, equity security funds, short-term treasury bond mutual funds, long-credit funds and derivatives. The weighted average asset allocation of the plan was 89 % fixed income holdings, 10 % equity securities and derivatives and 1 % cash at December 31, 2023.

Actual pension expense and future contributions required to fund this pension plan will depend on future investment performance, changes in future discount rates, the level of Company contributions and various other factors related to the populations participating in this pension plan. The Company evaluates the plan's actuarial assumptions on an annual basis, including the expected long-term rate of return on assets and discount rate, and adjusts the assumptions, as necessary, to ensure proper funding levels are maintained so that the plan can meet obligations as they become due.

At December 31, 2023 and 2022, the projected benefit obligation for this pension plan totaled $ 171 million and $ 169 million, respectively.

Supplemental Executive Retirement Plans

The Company sponsors SERPs that entitle certain employees to the difference between the benefits actually paid to them and the benefits they would have received under the pension plan described above were it not for certain restrictions imposed by the Internal Revenue Service Code. Covered compensation under the SERPs includes an employee’s annual salary and bonus. At December 31, 2023 and 2022, the projected benefit obligation for the SERPs totaled $ 5.8 million and $ 5.9 million, respectively.

Foreign Pension Plans

The Company's international benefit plans are included in the tables presented below. These plans are not significant, individually or in the aggregate, to the Company's consolidated financial position, results of operations or cash flows. At December 31, 2023 and 2022, the projected benefit obligation for these foreign pension plans totaled $ 19.8 million and $ 19.4 million, respectively.

Certain foreign subsidiaries maintain other benefit plans that are consistent with statutory practices, but do not meet the criteria for pension or post-retirement accounting and have therefore been excluded from the tables presented below. These benefit plans had obligation balances of $ 3.1 million and $ 2.5 million at December 31, 2023 and 2022, respectively, and were recorded in the Consolidated Balance Sheets as "Accrued expenses and other current liabilities" and "Pension and post-retirement benefits."

Domestic Defined Benefit Post-Retirement Medical and Dental Plan

The Company sponsors defined benefit post-retirement medical and dental plans that covers all of its MacDermid, Incorporated, domestic full-time employees, hired prior to April 1, 1997, who retire after age 55 , with at least ten to twenty years of service (depending upon the date of hire). Eligible employees receive a subsidy from the Company towards the purchase of their retiree medical benefits based on the date of retirement. The annual increase in the Company's costs for post-retirement medical benefits is subject to a limit of 5 %. Retirees are required to contribute to the plan costs in excess of their respective Company limits in addition to their other required contributions. The projected benefit obligation for the post-retirement plan at December 31, 2023 was comprised of 39 % retirees, 31 % fully eligible active participants and 30 % other participants. The actuarial determination of the Company's accumulated benefit obligation associated with the plan for post-retirement medical benefits assumes annual cost increases of 2 % or 4 % based on the date of retirement.

The components of net periodic (benefit)/cost of the Domestic and Foreign Pension Plans and Domestic Post-Retirement Medical Benefits were as follows:

	Year Ended December 31,					
	2023		2022		2021	
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Pension and SERP Benefits						
Service cost	$ —	$ 0.6	$ —	$ 0.8	$ —	$ 0.7
Interest cost on the projected benefit obligation	8.7	0.7	6.3	0.3	5.9	0.2
Expected return on plan assets	(10.7)	(0.2)	(10.1)	(0.2)	(9.2)	(0.2)
Amortization of actuarial net (gain) loss	—	(0.1)	—	(0.1)	0.1	0.1
Plan curtailment	—	(0.4)	—	—	—	—
Plan settlement	—	—	—	—	—	0.1
Net periodic (benefit) cost	$ (2.0)	$ 0.6	$ (3.8)	$ 0.8	$ (3.2)	$ 0.9
Post-retirement Medical Benefits						
Interest cost on the projected benefit obligation	$ 0.3		$ 0.2		$ 0.2	
Amortization of actuarial net gain	(0.4)		—		—	
Net periodic cost	$ (0.1)		$ 0.2		$ 0.2	

The weighted average key assumptions used to determine the net periodic (benefit)/cost of the Domestic and Foreign Pension Plans and Domestic Post-Retirement Medical Benefits were as follows:

	Year Ended December 31,					
	2023		2022		2021	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Pension and SERP Benefits						
Discount rate	5.2 %	3.5 %	2.8 %	1.2 %	2.5 %	0.7 %
Rate of compensation increase	3.0 %	3.2 %	3.0 %	2.9 %	3.0 %	2.7 %
Interest crediting rate	5.3 %	3.4 %	5.3 %	3.1 %	5.3 %	2.7 %
Long-term rate of return on assets	7.0 %	3.6 %	4.8 %	3.1 %	4.2 %	3.6 %
Post-retirement Medical Benefits						
Discount rate	5.1 %		2.9 %		2.5 %	

The expected long-term rate of return on assets assumption is developed with reference to historical returns, forward-looking return expectations, the Domestic and Foreign Pension Plans' investment allocations and peer comparisons.

The following tables summarize changes in benefit obligation, plan assets and funded status of the Company's plans:

	Pension and SERP Benefits				Post-Retirement Medical Benefits	
	2023		2022		2023	2022
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Domestic
Change in Projected Benefit Obligation:						
Beginning of period balance	$ 175.2	$ 19.4	$ 227.3	$ 25.5	$ 5.9	$ 7.7
Service cost	—	0.6	—	0.8	—	—
Interest cost	8.7	0.7	6.3	0.3	0.3	0.2
Plan curtailment	—	(0.4)	—	—	—	—
Actuarial loss (gain) due to assumption change	3.0	0.8	(47.5)	(4.0)	0.1	(1.5)
Actuarial loss (gain) due to plan experience	1.3	0.2	0.9	(0.4)	(0.5)	(0.1)
Benefits and expenses paid	(11.6)	(0.8)	(11.8)	(0.7)	(0.4)	(0.4)
Settlement	—	(1.0)	—	(0.4)	—	—
Foreign currency translation	—	0.3	—	(1.7)	—	—
End of period balance	$ 176.6	$ 19.8	$ 175.2	$ 19.4	$ 5.4	$ 5.9
Change in Plan Assets:						
Beginning of period balance	$ 158.7	$ 4.9	$ 219.2	$ 4.5	$ —	$ —
Actual return on plan assets, net of expenses	20.8	0.1	(49.1)	—	—	—
Employer contributions	0.5	1.7	0.4	1.8	0.4	0.4
Benefits paid	(11.6)	(0.8)	(11.8)	(0.7)	(0.4)	(0.4)
Settlement	—	(1.0)	—	(0.4)	—	—
Foreign currency translation	—	0.1	—	(0.3)	—	—
End of period balance	$ 168.4	$ 5.0	$ 158.7	$ 4.9	$ —	$ —
Funded Status						
Funded status of plan	$ (8.2)	$ (14.8)	$ (16.5)	$ (14.5)	$ (5.4)	$ (5.9)
Supplemental Information:						
Accumulated benefit obligation	$ 176.6	$ 17.4	$ 175.2	$ 17.2	$ 5.4	$ 5.9
Plans with Accumulated Benefit Obligation in excess of Plan Assets:						
Accumulated benefit obligation	$ 176.6	$ 15.5	$ 175.2	$ 15.3	$ 5.4	$ 5.9
Fair value plan assets	$ 168.4	$ 2.5	$ 158.7	$ 2.5	$ —	$ —
Plans with Projected Benefit Obligation in excess of Plan Assets:						
Projected benefit obligation	$ 176.6	$ 19.6	$ 175.2	$ 19.0	$ 5.4	$ 5.9
Fair value plan assets	$ 168.4	$ 4.6	$ 158.7	$ 4.3	$ —	$ —

Weighted average key assumptions used to determine the benefit obligations in the actuarial valuations of the pension and post-retirement benefit liabilities were as follows:

	Pension and SERP Benefits				Post-Retirement Medical Benefits	
	2023		2022		2023	2022
	Domestic	Foreign	Domestic	Foreign	Domestic	Domestic
Discount rate	5.0 %	3.1 %	5.2 %	3.5 %	5.0 %	5.1 %
Rate of compensation increase	3.0 %	3.4 %	3.0 %	3.2 %	N/A	N/A
Interest crediting rate	5.3 %	3.3 %	5.3 %	3.4 %	N/A	N/A

(N/A) Not applicable.

Amounts recognized in the Consolidated Balance Sheets and "Accumulated other comprehensive loss" consist of the following:

	Pension and SERP Benefits				Post-Retirement Medical Benefits	
	2023		2022		2023	2022
(dollars in millions)	Domestic	Foreign	Domestic	Foreign	Domestic	Domestic
Balance Sheet						
Accrued expenses and other current liabilities	$ 0.9	$ 0.8	$ 0.6	$ 0.9	$ 0.5	$ 0.5
Pension and post-retirement benefits	7.3	14.0	15.9	13.6	4.9	5.4
Accumulated Other Comprehensive Loss						
Net actuarial (loss) gain	$ (7.4)	$ 1.4	$ (13.1)	$ 2.5	$ 2.1	$ 2.1

The following table presents the fair value of plan assets:

		December 31,	
(dollars in millions)	Classification	2023	2022
Asset Category			
Derivatives	Level 2	$ 7.7	$ (0.8)
Exchange-traded funds holding domestic securities	Level 1	9.6	10.7
Foreign bonds	Level 2	2.0	1.9
Mutual funds holding fixed income securities	Level 1	35.2	37.6
U.S. Treasury bonds	Level 2	30.8	37.4
Cash and cash equivalents	Level 1	5.2	5.8
Sub-Total		90.5	92.6
Assets using net asset value (or NAV) as a practical expedient		82.9	71.0
Total		$ 173.4	$ 163.6

Assets using NAV as a practical expedient include commingled funds that are not actively traded or whose underlying investments are valued using observable marketplace inputs.

At December 31, 2023, expected future benefit payments related to the Company's defined benefit plans were as follows:

	Pension and SERP Benefits			
(dollars in millions)	Domestic	Foreign	Post-Retirement Medical Benefits	Total
2024	$ 13.5	$ 1.1	$ 0.5	$ 15.1
2025	13.4	1.2	0.5	15.1
2026	13.3	1.6	0.5	15.4
2027	13.4	1.3	0.5	15.2
2028	13.5	1.0	0.5	15.0
Subsequent five years	64.3	8.9	2.1	75.3
Total	$ 131.4	$ 15.1	$ 4.6	$ 151.1

The measurement date used to determine pension and other post-retirement medical benefits was December 31, 2023, at which time the minimum contribution level for the following year was determined. The Company is no t required to make any plan contributions in 2024.

10. INCOME TAXES

Income before income taxes and non-controlling interests was as follows:

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
Domestic	$ 2.6	$ 125.0	$ 92.0
Foreign	126.5	147.0	159.7
Total	$ 129.1	$ 272.0	$ 251.7

Income tax expense consisted of the following:

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
Current:			
U.S.:			
Federal	$ 7.9	$ 0.6	$ (3.9)
State and local	2.7	1.8	2.9
Foreign	72.3	68.3	96.0
Total current	82.9	70.7	95.0
Deferred:			
U.S.:			
Federal	(57.2)	17.5	(1.8)
State and local	(0.6)	8.3	(30.3)
Foreign	(12.1)	(10.7)	(14.6)
Total deferred	(69.9)	15.1	(46.7)
Income tax expense	$ 13.0	$ 85.8	$ 48.3

Income tax expense differed from the amounts computed by applying the U.S. federal statutory tax rate to pre-tax income, as a result of the following:

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
U.S. federal statutory tax rate	21 %	21 %	21 %
Taxes computed at U.S. statutory rate	$ 27.1	$ 57.1	$ 52.9
State income taxes, net of federal benefit	1.8	4.6	5.7
U.S. tax on foreign operations	1.8	3.2	3.9
Foreign derived intangible income deduction	(10.8)	—	—
Foreign tax credits	(8.2)	—	—
Foreign tax on foreign operations	13.0	13.0	17.0
Change in valuation allowances	(0.1)	6.4	(63.6)
Tax on undistributed foreign earnings	5.1	5.9	4.7
Changes in uncertain tax positions	1.9	0.2	29.4
Non-deductible goodwill impairment and Kuprion Acquisition research and development charge	20.6	—	—
One-time impact of amended U.S. tax returns	(37.3)	—	—
Other, net	(1.9)	(4.6)	(1.7)
Income tax expense	$ 13.0	$ 85.8	$ 48.3
Effective tax rate	10 %	32 %	19 %

The income tax expense of $ 13.0 million for the year ended December 31, 2023 includes a one-time benefit of $ 34.2 million related to changing an election to credit foreign taxes from our previous position which was to deduct foreign taxes. This is comprised of a $ 37.3 million one-time impact of our intention to amend prior U.S. tax returns offset by $ 3.1 million from the net increase of valuation allowances on foreign tax credit carryforwards. In addition, the election to credit foreign taxes for the 2023 fiscal year results in an incremental $ 8.2 million of tax expense reduction.

The rate for 2023 also includes an increase for non-deductible GAAP expenses related to a goodwill impairment charge of $ 80.0 million recognized in the third quarter of 2023 (see Note 7, *Goodwill and Intangible Assets*, to the Consolidated Financial Statements for further information), as well as $ 15.7 million of research and development expenses related to the Kuprion transaction (see Note 4, *Acquisitions*, to the Consolidated Financial Statements for further information). Other activity in the 2023 tax rate includes a benefit from a U.S. tax deduction related to Foreign Derived Intangible Income ("FDII"), offset by current and deferred taxes based on jurisdictional mix of earnings and withholding taxes.

The income tax expense of $ 85.8 million for the year ended December 31, 2022 includes current and deferred taxes based on jurisdictional earnings, withholding taxes, and the impact of GILTI and subpart F income regimes.

The income tax expense of $ 48.3 million for the year ended December 31, 2021 included the impact of a $ 29.4 million increase to the Company's provision for uncertain tax positions, partially offset by a $ 63.6 million benefit associated with the release of valuation allowances. The release of valuation allowances related to amounts previously recorded against certain U.S. tax attribute carryforwards, which primarily corresponded to certain state net operating losses and interest. The valuation allowances were released as the Company expects improved profitability in its domestic business and a shift to a three-year cumulative income position

The components of deferred income taxes at December 31, 2023 and 2022 were as follows:

	December 31,	
(dollars in millions)	**2023**	**2022**
Deferred tax assets:		
Net operating losses	$ 87.8	$ 98.5
Interest carryforward	81.4	39.4
Capital loss carryforward	53.5	54.2
Tax credits	64.6	32.2
Employee benefits	17.9	18.1
Research and development costs	33.2	28.0
Accrued liabilities	6.4	6.3
Other	40.0	49.6
Total gross deferred tax assets	384.8	326.3
Valuation allowances	(143.6)	(153.2)
Total deferred tax assets	241.2	173.1
Deferred tax liabilities:		
Intangible assets	154.5	175.6
Property, plant and equipment	33.2	28.1
Undistributed foreign earnings	32.3	28.2
Goodwill	9.6	10.9
Total deferred tax liabilities	229.6	242.8
Net deferred tax asset (liability)	$ 11.6	$ (69.7)

The Company provides for income and withholding taxes on previously unremitted earnings of foreign subsidiaries. At December 31, 2023, the Company had accrued a deferred tax liability of $ 32.3 million of income and withholding taxes that would be due upon the distribution of such earnings from non-U.S. subsidiaries to the U.S.

During 2022, the Company’s plans and expectations around the use of cash in subsidiaries and indefinitely reinvested amounts changed and, as a result, the prior assertion was modified and the Company is no longer asserting any of its available foreign earnings are permanently reinvested.

At December 31, 2023, the Company had federal, state and foreign net operating loss carryforwards of approximately $ 0.9 million, $ 540.0 million and $ 243.7 million, respectively. The U.S. federal net operating loss carryforwards expire between 2027 and 2037 or may be carried forward indefinitely. The majority of the state net operating loss carryforwards expire between 2024 and 2039. The foreign tax net operating loss carryforwards expire between 2024 through 2037 or may be carried forward indefinitely. In addition, at December 31, 2023, the Company had capital loss carryforwards, foreign tax credits, and other tax credits of approximately $ 226 million, $ 51.7 million and $ 6.8 million, respectively, available for carryforward. The capital loss carryforwards expire at the end of 2024. The carryforward periods of the remaining tax credits range from ten years to an unlimited period of time. If certain changes in the Company's ownership occur, there could be an annual limitation on the amount of utilizable carryforwards.

Uncertain Tax Positions

The following table summarizes the activity related to the Company’s unrecognized tax benefits:

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
Unrecognized tax benefits at beginning of period	$ 99.8	$ 106.6	$ 82.5
Additions based upon prior year tax positions	19.6	1.0	22.9
Additions based on current year tax positions	9.6	5.3	8.1
Reductions for prior period positions	(15.1)	(5.7)	(4.9)
Reductions for settlements and payments	(1.6)	(1.7)	(0.1)
Reductions due to closed statutes	(1.3)	(1.9)	(1.0)
Currency translation adjustment	0.6	(3.8)	(0.9)
Total unrecognized tax benefits at end of period	$ 111.6	$ 99.8	$ 106.6

At December 31, 2023, the Company had $ 112 million of total unrecognized tax benefits, all of which, if recognized, would impact the Company’s effective tax rate. Due to expected settlements and statute of limitations expirations, the Company estimates that $ 11.2 million of the total unrecognized benefits will reverse within the next twelve months.

The Company recognizes interest and/or penalties related to income tax matters as part of income tax expense, which totaled $ 3.7 million, $ 1.1 million and $ 2.5 million, for 2023, 2022 and 2021, respectively. The Company's liability for interest and penalties totaled $ 13.0 million and $ 10.7 million at December 31, 2023 and 2022, respectively.

At December 31, 2023, the following tax years remained subject to examination by the major tax jurisdictions indicated below:

Major Jurisdictions	**Open Years**	
China	2018	through current
Germany	2018	through current
Taiwan	2018, 2022	through current
United Kingdom	2008, 2021	through current
United States	2020	through current

The Company is currently undergoing tax examinations in several jurisdictions. Although the Company believes it has appropriately accrued for the expected outcome of uncertain tax matters and made reasonable provisions for taxes ultimately expected to be paid, tax liabilities may need to be adjusted as tax examinations continue to progress.

11. DEBT

The Company’s debt obligations consisted of the following:

(dollars in millions)	Maturity Date	Interest Rate	December 31, 2023	December 31, 2022
Term Loans [(1)]	2030	SOFR plus 2.00 %	$ 1,140.2	$ 1,104.5
Senior Notes - $ 800 million [(2)]	2028	3.875 %	792.3	790.8
Total debt			1,932.5	1,895.3
Less: current installments of long-term debt			11.5	11.5
Total long-term debt			$ 1,921.0	$ 1,883.8

[(1)] Term loans, net of unamortized discounts and debt issuance costs of $ 9.8 million and $ 9.5 million at December 31, 2023 and 2022, respectively. The effective interest rate was 3.3 % and 1.6 % at December 31, 2023 and 2022, respectively, including the effects of interest rate swaps and net investment hedges. See Note 12, Financial Instruments, to the Consolidated Financial Statements for further information regarding the Company's interest rate swaps and net investment hedges.

[(2)] Senior notes, net of unamortized debt issuance costs of $ 7.7 million and $ 9.2 million at December 31, 2023 and 2022, respectively. The effective interest rate was 4.1 % at both December 31, 2023 and 2022.

Minimum future principal payments on long-term debt were as follows:

(dollars in millions)	
2024	$ 11.5
2025	11.5
2026	11.5
2027	11.5
2028	811.5
Thereafter	1,092.5
Total	$ 1,950.0

Credit Agreement

The Company is a party to the Credit Agreement, which provides for senior secured credit facilities in an initial aggregate principal amount of $ 1.53 billion, consisting of a new tranche of term loans B-2 of $ 1.15 billion, maturing in 2030, and a revolving credit facility of $ 375 million, maturing in 2027.

The proceeds from the new term loans B-2, together with cash on hand, were used to fully prepay the Company's prior $ 1.11 billion term loans B-1 and $ 150 million term loans A pursuant to the terms of an amendment to the Credit Agreement, dated December 18, 2023. Except for their maturity date, the new term loans B-2 have substantially the same terms as the former term loans B-1, including their annual interest rate based on an adjusted one-month SOFR (as described in the Credit Agreement) plus a spread of 2.00 %. The Company expensed $ 5.5 million to "Selling, technical, general and administrative" and $ 2.3 million to "Other (expense) income, net" in the Consolidated Statements of Operations as a result of this transaction.

In June 2023, the Company had borrowed term loans A in an aggregate principal amount of $ 150 million under the Credit Agreement. The proceeds of the term loans A were used to finance a portion of the reacquired ViaForm Distribution Rights, which transaction closed on June 1, 2023. In December 2023, the Company prepaid the outstanding balance of the term loans A as discussed above.

Guarantees, Covenants and Events of Default

The obligations of the borrowers (the Company and its subsidiary, MacDermid, Incorporated) under the Credit Agreement are guaranteed, jointly and severally, by certain of their domestic subsidiaries and secured by a first-priority security interest in substantially all of their assets and the assets of the guarantors, including mortgages on material real property, subject to certain exceptions.

The Credit Agreement contains customary representations and warranties and affirmative and negative covenants, including limitations on additional indebtedness, dividends, and other distributions, entry into new lines of business, use of loan proceeds, capital expenditures, restricted payments, restrictions on liens on the assets of the borrowers or any guarantor, transactions with affiliates, amendments to organizational documents, accounting changes, sale and leaseback transactions and dispositions. Subject to certain exceptions, to the extent the borrowers have total outstanding borrowings under the revolving credit facility greater than 30 % of the commitment amount under the revolving credit facility, the Company's first lien net leverage ratio should not exceed 5.0 to 1.0, subject to a right to cure.

The borrowers are required to make mandatory prepayments of borrowings, subject to certain exceptions, as described in the Credit Agreement. In addition, the Credit Agreement contains customary events of default that include, among others, non-payment of principal, interest or fees, violation of covenants, inaccuracy of representations and warranties, failure to make payment on, or defaults with respect to, certain other material indebtedness, bankruptcy and insolvency events, material judgments and change of control provisions. Upon the occurrence of an event of default, and after the expiration of any applicable grace period, payment of any outstanding loans under the Credit Agreement may be accelerated and the lenders could foreclose on their security interests in the assets of the borrowers and the guarantors.

At December 31, 2023, the Company was in compliance with the debt covenants contained in the Credit Agreement and had full availability of its unused borrowing capacity of $ 369 million, net of letters of credit, under the revolving credit facility. The Company is required to pay a commitment fee on any undrawn portion of the revolving credit facility which is not material.

Senior Notes

3.875 % USD Notes due 2028

The indenture governing the 3.875 % USD Notes due 2028 provides for, among other things, customary affirmative and negative covenants, events of default and other customary provisions. The notes accrue interest at a rate of 3.875 % per annum, payable semi-annually in arrears, on March 1 and September 1 of each year, and will mature on September 1, 2028, unless earlier repurchased or redeemed. Pursuant to the indenture, the Company has the option to redeem the 3.875 % USD Notes due 2028 prior to their maturity, subject to, in certain cases, the payment of an applicable make-whole premium, or to repurchase them by any means other than a redemption, including by tender offer, open market purchases or negotiated transactions. The 3.875 % USD Notes due 2028 are fully and unconditionally guaranteed on a senior unsecured basis by generally all of the Company’s domestic subsidiaries that guarantee the obligations of the borrowers under the Credit Agreement.

Lines of Credit and Other Debt Facilities

The Company has access to various revolving lines of credit, short-term debt facilities and overdraft facilities worldwide which are used to fund short-term cash needs. At December 31, 2023 and 2022, respectively, there were no amounts outstanding under such facilities. The Company had letters of credit outstanding of $ 6.2 million and $ 6.0 million at December 31, 2023 and 2022, respectively, of which $ 6.2 million and $ 6.0 million at December 31, 2023 and 2022, respectively, reduced the borrowings available under the various facilities. At December 31, 2023 and 2022, the availability under these facilities totaled approximately $ 392 million and $ 391 million, respectively, net of outstanding letters of credit.

12. FINANCIAL INSTRUMENTS

Derivatives and Hedging

In the normal course of business, the Company is exposed to risks relating to changes in interest rates, foreign currency exchange rates and commodity prices. Derivative financial instruments, such as interest rate swaps, net investment hedges, foreign currency exchange forward contracts and commodities derivative contracts are used to manage the risks associated with changes in the conditions of those markets. The counterparties to the Company’s derivative agreements are primarily major international financial institutions. The Company regularly monitors its derivative positions and the credit ratings of its counterparties and does not anticipate nonperformance on their part.

All derivatives are recognized in the Consolidated Balance Sheets at fair value. Realized gains and losses on foreign currency forward contracts, commodity derivative contracts and the net periodic payments from interest rate swaps and cross-currency swaps are accounted for in the Consolidated Statements of Cash Flows as "Operating activities."

Interest Rate and Cross-Currency Swaps

The Company uses interest rate swaps and cross-currency swaps to reduce its exposure to interest rate risk and foreign currency risk. The Company has designated its interest rate swaps as cash flow hedges and its cross-currency swaps as net investment hedges of the foreign currency exposure of a portion of its net investment in certain euro functional subsidiaries. These swaps effectively convert the Company’s outstanding term loans, which are U.S. dollar denominated debt obligations, into fixed-rate euro-denominated debt through their respective expiration dates.

In December 2023, in connection with the funding of the new term loans B-2, the Company terminated and monetized $ 865 million notional of its interest rate swaps and cross-currency swaps related to the term loans A and B-1 which were scheduled to mature in 2024 and 2026. The Company received $ 7.8 million upon the termination of the applicable interest rate swaps, which amount is reflected as "Cash flows from operating activities" in the Consolidated Statement of Cash Flows and recorded the benefit in “Accumulated other comprehensive loss.” A benefit of $ 4.0 million was previously recognized in 2023 while the remainder is being amortized as a reduction to “Interest expense, net” in the Consolidated Statement of Operations ($ 1.3 million through January 2024 and $ 2.5 million through January 2026). In addition, the Company received $ 18.6 million upon the termination of the applicable cross-currency swaps, which amount is included in "Other, net" in the Consolidated Statement of Cash Flows as a cash inflow from investing activities. The benefit will remain in “Accumulated other comprehensive loss” until the hedged net investment is sold or liquidated.

Simultaneously with the funding of the new term loans B-2, the Company entered into interest rate swaps and cross-currency swaps to effectively convert $ 760 million of the new term loans B-2, a U.S. dollar denominated debt obligation, into fixed-rate euro-denominated debt through December 2028. The balance of the term loans B-2, approximately $ 390 million, remains subject to existing swaps scheduled to mature in 2025.

The total notional value of the interest rate swaps and cross-currency swaps held at December 31, 2023 and 2022 was approximately $ 1.15 billion and $ 1.11 billion, respectively. As of December 31, 2023, approximately $ 390 million in notional value matures in January 2025 and the remaining balance in December 2028.

The net periodic payments from the interest rate swaps and cross-currency swaps, excluding the proceeds from the monetization of the cross-currency swaps discussed above, are reflected as "Cash flows from operating activities" in the Consolidated Statement of Cash Flows. Changes in the fair value of interest rate swaps are recorded in "Accumulated other comprehensive loss" and reclassified to "Interest expense, net" in the Consolidated Statements of Operations as the underlying hedged item affects earnings. Changes in the fair value of cross-currency swaps are recorded in "Foreign currency translation" in "Accumulated other comprehensive loss."

The net result of these hedges, excluding the reduction to interest expense from the terminated interest rate swaps discussed above, is an interest rate of approximately 3.3 % at December 31, 2023 on the term loans B-2, which could vary in the future due to changes in the euro and the U.S. dollar exchange rate. The fair value of the interest rate swaps was a net asset of $ 11.9 million and $ 47.3 million at December 31, 2023 and 2022, respectively. The fair value of the cross-currency swaps was a net asset of $ 4.8 million and $ 70.4 million at December 31, 2023 and 2022, respectively.

During 2023 and 2022, these interest rate swaps and cross-currency swaps were deemed highly effective. Excluding the reclassifications associated with the monetization of the terminated interest rate swaps discussed above, the Company expects to reclassify a benefit of $ 19.9 million from "Accumulated other comprehensive loss" to "Interest expense, net" in the Consolidated Statements of Operations within the next twelve months.

Foreign Currency

The Company conducts a significant portion of its business in currencies other than the U.S. dollar and certain subsidiaries conduct business in currencies other than their functional currency, which is typically their local currency. As a result, the Company’s operating results are impacted by foreign currency exchange rate volatility.

At December 31, 2023, the Company held foreign currency forward contracts to purchase and sell various currencies to mitigate foreign currency exposure, primarily with the U.S. dollar, euro and British pound. The Company has not designated any foreign currency exchange forward contracts as eligible for hedge accounting and, as a result, changes in the fair value of foreign currency forward contracts are recorded in the Consolidated Statements of Operations as "Other (expense) income, net."

The total notional value of foreign currency exchange forward contracts held at December 31, 2023 and 2022 was approximately $ 93.9 million and $ 105 million, respectively, with settlement dates generally within one year . The fair value of the foreign currency forward contracts was a net current liability of $ 0.7 million and a $ 0.3 million at December 31, 2023 and 2022, respectively.

Commodities

The Company enters into commodity derivative contracts for the purpose of mitigating its exposure to fluctuations in prices of certain metals used in the production of its finished goods. The Company held derivative contracts to purchase and sell various metals, primarily tin and silver, for a notional amount of $ 63.8 million and $ 45.7 million at December 31, 2023 and 2022, respectively. The fair value of the metals derivative contracts was a net current liability of $ 1.2 million and $ 2.5 million at December 31, 2023 and 2022, respectively. Substantially all contracts outstanding at December 31, 2023 have delivery dates within one year . The Company has not designated these derivatives as hedging instruments and, accordingly, records changes in their fair values in the Consolidated Statements of Operations as "Other (expense) income, net."

Fair Value Measurements

The following table presents the Company’s financial assets and liabilities measured at fair value on a recurring basis:

			December 31,	
(dollars in millions)	**Balance sheet location**	**Classification**	**2023**	**2022**
Asset Category				
Foreign exchange contracts	Other current assets	Level 2	$ 0.2	$ 0.2
Metals contracts	Other current assets	Level 2	0.5	2.5
Interest rate swaps	Other current assets	Level 2	19.9	32.7
Cross-currency swaps	Other current assets	Level 2	5.9	26.1
Interest rate swaps	Other assets	Level 2	4.3	14.6
Cross-currency swaps	Other assets	Level 2	9.6	44.3
Available-for-sale debt securities	Other assets	Level 3	14.2	11.5
Total			$ 54.6	$ 131.9
Liability Category				
Foreign exchange contracts	Accrued expenses and other current liabilities	Level 2	$ 0.9	$ 0.5
Metals contracts	Accrued expenses and other current liabilities	Level 2	1.7	5.0
Cross-currency swaps	Accrued expenses and other current liabilities	Level 2	0.9	—
Interest rate swaps	Other liabilities	Level 2	12.3	—
Cross-currency swaps	Other liabilities	Level 2	9.8	—
Total			$ 25.6	$ 5.5

The fair values of Level 1 and Level 2 derivative assets and liabilities are determined using pricing models based upon observable market inputs, such as market spot and futures prices on over-the-counter derivative instruments, market interest rates and consideration of counterparty credit risk. Level 3 investments are valued using a probability weighted methodology based on possible outcomes of potential liquidity events. Significant assumptions include the enterprise valuation, the timing and type of liquidation events and the risk-free interest rate.

There were no significant transfers of financial instruments between the fair value hierarchy levels during 2023.

The carrying value and estimated fair value of the Company’s long-term debt totaled $ 1.93 billion and $ 1.89 billion, respectively, at December 31, 2023. At December 31, 2022, the carrying value and estimated fair value totaled $ 1.90 billion and $ 1.80 billion, respectively. The carrying values noted above include unamortized discounts and debt issuance costs. The estimated fair value of long-term debt is measured using quoted market prices for similar instruments at the reporting date multiplied by the gross carrying amount of the related debt, which excludes unamortized discounts and debt issuance costs. Such instruments are valued using Level 2 inputs.

Non-Recurring Fair Value Measurement

As a result of the goodwill impairment test conducted in the third quarter of 2023, the Industrial & Specialty segment recorded an impairment charge of $ 80.0 million to reduce the carrying value of the Graphics Solutions reporting unit to its estimated fair value. This measurement was performed on a non-recurring basis as of August 31, 2023 using significant unobservable inputs (Level 3), including the applicable discount rate (WACC) of 10.5 % and the short and long-term projected cash flows, such as future growth rates, of the Graphics Solutions reporting unit. See Note 7, *Goodwill and Intangible Assets,* to the Consolidated Financial Statements for further information.

13. STOCKHOLDERS' EQUITY

Repurchases of Common Stock

During 2023, the Company did not repurchase any shares of its common stock. During 2022 and 2021, as part of its stock repurchase program, the Company repurchased approximately 8.0 million and 0.9 million shares, respectively, of its common stock for approximately $ 151 million and $ 19.6 million, respectively. The repurchases were funded from cash on hand and allocated to treasury shares. The remaining authorization under the Company's stock repurchase program was approximately $ 581 million at December 31, 2023.

Shares withheld by the Company to satisfy tax withholding requirements related to the vesting of RSUs are not considered share repurchases under the stock repurchase program. During 2023, 2022, and 2021, the Company withheld approximately 0.4 million, 1.0 million and 0.1 million shares, respectively, in connection with vesting events for a value of approximately $ 7.7 million, $ 24.0 million and $ 1.9 million, respectively, which are included in "Other, net" in the Consolidated Statements of Cash Flows as cash outflows from financing activities.

14. ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME

Changes in each component of "Accumulated other comprehensive (loss) income," net of tax, during 2023, 2022 and 2021 were as follows:

(dollars in millions)	Foreign Currency Translation Adjustments	Pension and Post-retirement Plans	Available-for-Sale Debt Securities	Derivative Financial Instrument Revaluation	Accumulated Other Comprehensive (Loss) Income
Balance at December 31, 2020	$ (138.8)	$ (3.2)	$ —	$ (52.8)	$ (194.8)
Other comprehensive (loss) income before reclassifications, net	(30.6)	2.9	—	6.2	(21.5)
Reclassifications, pretax	—	—	—	18.9	18.9
Balance at December 31, 2021	(169.4)	(0.3)	—	(27.7)	(197.4)
Other comprehensive (loss) income before reclassifications, net	(146.3)	(5.2)	1.1	48.2	(102.2)
Reclassifications, pretax	—	—	—	1.5	1.5
Balance at December 31, 2022	(315.7)	(5.5)	1.1	22.0	(298.1)
Other comprehensive (loss) income before reclassifications, net	(25.5)	3.4	(1.1)	2.9	(20.3)
Reclassifications, pretax	—	—	—	(35.9)	(35.9)
Tax benefit reclassified	—	—	—	8.4	8.4
Balance at December 31, 2023	$ (341.2)	$ (2.1)	$ —	$ (2.6)	$ (345.9)

15. EARNINGS PER SHARE

A computation of weighted average shares of the Company's common stock outstanding and earnings per share from continuing operations for 2023, 2022 and 2021 is as follows:

	Year Ended December 31,		
(dollars in millions, except per share amounts)	2023	2022	2021
Net income from continuing operations	$ 116.1	$ 186.2	$ 203.4
Net income attributable to the non-controlling interests	(0.1)	(0.8)	(0.4)
Net income attributable to common stockholders	$ 116.0	$ 185.4	$ 203.0
Basic weighted average common shares outstanding	241.4	245.1	247.4
Denominator adjustments for diluted EPS:			
Number of stock options and RSUs	0.4	0.7	0.5
Denominator adjustments for diluted EPS	0.4	0.7	0.5
Diluted weighted average common shares outstanding	241.8	245.8	247.9
Earnings per share from continuing operations attributable to common stockholders:			
Basic	$ 0.48	$ 0.75	$ 0.82
Diluted	$ 0.48	$ 0.75	$ 0.82

For 2023, 2022 and 2021, the following securities were not included in the computation of diluted shares outstanding because either the effect would be anti-dilutive or the applicable performance targets were not yet met:

	Year Ended December 31,		
(amounts in millions)	2023	2022	2021
Shares issuable upon vesting of RSUs and exercise of stock options	3.4	3.6	3.7
Total shares excluded	3.4	3.6	3.7

16. LEASES

The Company primarily has operating lease agreements for certain land, office space, warehouse space and equipment. The following table presents the Company's ROU assets and lease liabilities:

		December 31,	
(dollars in millions)	Balance sheet location	2023	2022
Asset Category			
ROU assets	Other assets	$ 90.3	$ 85.1
Total		$ 90.3	$ 85.1
Liability Category			
Current lease liabilities	Accrued expenses and other current liabilities	$ 15.0	$ 15.9
Non-current lease liabilities	Other liabilities	78.1	71.4
Total		$ 93.1	$ 87.3

Operating lease expense totaled $ 27.3 million, $ 26.2 million and $ 24.3 million for 2023, 2022 and 2021, respectively.

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
Supplemental Information for Operating Leases			
Operating cash payments for operating leases	$ 21.5	$ 19.8	$ 20.8
ROU assets obtained in exchange for operating lease obligations	$ 20.2	$ 40.3	$ 22.5
Weighted average remaining lease term	10 years	10 years	6 years
Weighted average discount rate	4.2 %	3.5 %	3.5 %

Maturities of operating lease liabilities at December 31, 2023 were as follows:

(dollars in millions)	
2024	$ 18.8
2025	15.6
2026	12.6
2027	9.3
2028	7.8
Thereafter	50.8
Total future minimum lease payments	114.9
Less: imputed interest	(21.8)
Present value of lease liabilities	$ 93.1

17. CONTINGENCIES, ENVIRONMENTAL AND LEGAL MATTERS

Environmental Matters

The Company is involved in various claims relating to environmental matters at current and former plants and waste management sites. At certain of these sites, the Company engages or participates in remedial and other environmental compliance activities. At other sites, the Company has been named as a potential responsible party pursuant to the federal Superfund Act and/or state Superfund laws comparable to the federal law for site remediation. After analyzing each individual site, considering the number of parties involved, the level of its potential liability or contribution relating to the other parties, the nature and magnitude of the hazardous waste involved, the method and extent of remediation, the potential insurance coverage, the estimated legal and consulting expense with respect to each site and the time period over which any costs would likely be incurred, the Company estimates the clean-up costs and related claims for each site. The estimates are based in part on discussions with other potential responsible parties, governmental agencies and engineering firms.

The Company accrues for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated based on current laws and existing technologies. The accruals are adjusted periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. The Company's environmental liabilities, which are included in the Consolidated Balance Sheets as "Accrued expenses and other current liabilities" and "Other liabilities," totaled $ 11.3 million and $ 11.6 million at December 31, 2023 and 2022, respectively, primarily driven by environmental remediation, clean-up costs and monitoring of sites that were either closed or disposed of in prior years. While uncertainty exists with respect to the amount and timing of its ultimate environmental liabilities, the Company does not currently anticipate any material losses in excess of the amount recorded. However, new information about the sites, such as results of investigations, could make it necessary for the Company to reassess its potential exposure related to these environmental matters.

As of the date hereof, the Company believes it is not practicable to provide an estimated range of reasonably possible environmental losses in excess of its recorded liabilities. As a result, the Company is unable to ascertain the ultimate aggregate amount of monetary liability or financial impact that may be associated with these matters.

Legal Matters

From time to time, the Company is involved in various legal proceedings, investigations and/or claims in the normal course of its business. Although it cannot predict with certainty the ultimate resolution of these matters, which involve judgments that are inherently subjective, the Company believes that their resolutions, to the extent not covered by insurance, will not, individually or in the aggregate, have a material adverse effect on its consolidated financial position, results of operations or cash flows.

18. RELATED PARTY TRANSACTIONS

The Company is party to an Advisory Services Agreement with Mariposa Capital, LLC, an affiliate of one of its founder directors, whereby Mariposa Capital, LLC is entitled to receive an annual fee of $ 3.0 million and reimbursement for expenses. This agreement is automatically renewed for successive one-year terms unless either party notifies the other in writing of its intention not to renew no later than 90 days prior to the expiration of the applicable term. Amounts paid under this agreement are recorded in the Consolidated Statements of Operations as "Selling, technical, general and administrative" expense.

19. RESTRUCTURING

The Company continuously evaluates its operations in an effort to identify opportunities to improve profitability by leveraging existing infrastructure to reduce operating costs and respond to overall economic conditions.

Restructuring expenses were recorded as follows in each of the Company's segments:

	Year Ended December 31,		
(dollars in millions)	**2023**	**2022**	**2021**
Electronics	$ 4.2	$ 3.3	$ 4.3
Industrial & Specialty	7.2	6.2	7.4
Total	$ 11.4	$ 9.5	$ 11.7

At December 31, 2023 and 2022, the Company's restructuring liabilities were not material.

The Company's restructuring plans primarily related to headcount rationalization associated with continued cost saving opportunities within its businesses, including reorganization initiatives following acquisitions. Restructuring expenses were recorded as "Selling, technical, general and administrative" expense in the Consolidated Statements of Operations. There are no material additional costs expected to be incurred in connection with these discrete restructuring activities.

20. OTHER (EXPENSE) INCOME, NET

"Other (expense) income, net," as reported in the Consolidated Statements of Operations, consisted of the following:

	Year Ended December 31,		
(dollars in millions)	**2023**	**2022**	**2021**
Loss on debt extinguishment	$ (2.3)	$ —	$ —
Gain (loss) on derivative contracts	2.7	(0.2)	(15.7)
Highly inflationary accounting [(1)]	(7.0)	(2.9)	—
Other income, net	3.5	6.0	5.9
Total	$ (3.1)	$ 2.9	$ (9.8)

[(1)] In the first quarter of 2022, the Company began applying highly inflationary accounting to its operations in Turkey as its cumulative inflation exceeded 100% for the three years preceding the reporting period.

21. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

"Accrued expenses and other current liabilities," as reported in the Consolidated Balance Sheets, consisted of the following:

	December 31,	
(dollars in millions)	2023	2022
Accrued salaries, wages and employee benefits	$ 58.2	$ 57.0
Accrued taxes (income and non-income)	68.6	59.8
Accrued interest	10.6	10.6
Derivative liabilities	3.5	5.5
Lease liabilities	15.0	15.9
Other current liabilities	61.4	51.9
Total	$ 217.3	$ 200.7

22. SEGMENT INFORMATION

The Company's operations are organized into two reportable segments: Electronics and Industrial & Specialty. These segments represent businesses for which separate financial information is utilized by the chief operating decision maker for purposes of allocating resources and evaluating performance. See Note 1, *Background and Basis of Presentation*, to the Consolidated Financial Statements for information about the transfer of the Company's Films business from the Industrial & Specialty segment to the Electronics segment and the transfer of certain product lines within the Electronics segment in 2023 and 2022.

The Company allocates resources and evaluates the performance of its operating segments based primarily on net sales and Adjusted EBITDA. Adjusted EBITDA for each segment is defined as EBITDA, as further adjusted for additional items included in earnings which the Company believes are not representative or indicative of each of its segments' ongoing business or are considered to be associated with the Company's capital structure. Adjusted EBITDA for each segment also includes an allocation of corporate costs, such as compensation expense and professional fees.

Results of Operations

The following table summarizes financial information regarding each reportable segment's results of operations, including disaggregated external net sales by product category:

(dollars in millions)	Year Ended December 31, 2023	2022	2021
Net Sales:			
Electronics			
Assembly Solutions	$ 726.1	$ 819.5	$ 795.3
Circuitry Solutions	424.3	503.5	511.3
Semiconductor Solutions	264.3	288.2	283.5
Total Electronics	1,414.7	1,611.2	1,590.1
Industrial & Specialty			
Industrial Solutions	699.0	728.3	599.7
Graphics Solutions	142.7	143.0	147.9
Energy Solutions	76.8	66.9	62.1
Total Industrial & Specialty	918.5	938.2	809.7
Total net sales	$ 2,333.2	$ 2,549.4	$ 2,399.8
Adjusted EBITDA:			
Electronics	$ 317.7	$ 360.7	$ 370.6
Industrial & Specialty	164.6	165.9	154.2
Total Adjusted EBITDA	$ 482.3	$ 526.6	$ 524.8

The following table reconciles "Net income" to Adjusted EBITDA:

(dollars in millions)	Year Ended December 31, 2023	2022	2021
Net income	$ 118.2	$ 188.0	$ 203.7
Add (subtract):			
Income from discontinued operations, net of tax	(2.1)	(1.8)	(0.3)
Income tax expense	13.0	85.8	48.3
Interest expense, net	49.3	51.2	54.2
Depreciation expense	42.6	41.6	39.7
Amortization expense	124.1	119.7	124.2
EBITDA	345.1	484.5	469.8
Adjustments to reconcile to Adjusted EBITDA:			
Restructuring expense	11.4	9.5	11.7
Inventory step-up	3.3	0.5	12.9
Acquisition and integration expense	16.8	10.6	14.2
Foreign exchange (gain) loss on internal debt	(9.7)	7.8	(16.6)
Debt refinancing costs	7.8	—	—
Goodwill impairment	80.0	—	—
Kuprion Acquisition research and development charge	15.7	—	—
Adjustment of stock compensation previously not probable (Note 8)	—	1.3	23.9
Other, net	11.9	12.4	8.9
Adjusted EBITDA	$ 482.3	$ 526.6	$ 524.8

Net Sales by Major Country

A major country is defined as one in which total net sales represented 10% or more of the Company's total consolidated net sales in any of the years presented.

	Year Ended December 31,		
(dollars in millions)	2023	2022	2021
United States	$ 576.2	$ 645.3	$ 585.0
China	418.9	498.1	486.5
Other countries	1,338.1	1,406.0	1,328.3
Total	$ 2,333.2	$ 2,549.4	$ 2,399.8

Long-Lived Assets by Major Country

A major country is defined as one with long-lived assets greater than 10% of the Company's total long-lived assets, net in any of the years presented. Long-lived assets represent property, plant and equipment, net.

	December 31,	
(dollars in millions)	2023	2022
United States	$ 94.7	$ 89.7
China	39.4	42.3
Other countries	162.8	145.2
Total	$ 296.9	$ 277.2

Assets by Reportable Segment

Total assets by reportable segment at December 31, 2023 and 2022 are not presented as they are not utilized for purposes of allocating resources and evaluating performance.

Element Solutions Inc

Valuation and Qualifying Accounts and Reserves

(dollars in millions)	Balance at beginning of period	(Charges) Income	Deductions from (increases to) reserves and other [1]	Balance at end of period
Reserves against accounts receivable:				
2023	$ (14.4)	$ (0.1)	$ 1.9	$ (12.6)
2022	(12.2)	(3.2)	1.0	(14.4)
2021	(9.7)	(2.3)	(0.2)	(12.2)

(dollars in millions)	Balance at beginning of period	(Charges) Income	Deductions from (increases to) reserves and other [1]	Balance at end of period
Valuation allowances against deferred tax assets:				
2023	$ (153.2)	$ 21.8	$ (12.2)	$ (143.6)
2022	(151.4)	5.1	(6.9)	(153.2)
2021	(199.1)	57.9	(10.2)	(151.4)

[1] *Other activity consists primarily of currency translation effects.*

Exhibit 10.19

December 20, 2023

Mike Goralski
[Address]
[Address]

Dear Mike,

This letter agreement and release (the “Agreement”) confirms the agreement entered into between you and your Employer regarding the termination of your employment effective December 31, 2023 (“Termination Date”) and explains the package of separation pay and benefits that has been specially developed for you in consideration of a fully bargained for release and settlement of any and all claims that you have presently, may have or have had in the past arising from your employment with and termination of your employment from the Employer up to and including the date you execute this Agreement. Additionally, pursuant to this Agreement, you are releasing all claims against the Company. For purposes of this Agreement, the term “Employer” shall mean Element Solutions Inc. The term “Company” shall mean the Employer and any of its direct or indirect parent or subsidiary corporations or companies, and any of its or their affiliates, divisions, and business units. “Effective Date” is defined in Section 15.

1. CONSIDERATION IN SETTLEMENT. The consideration provided to you under this Agreement is not required under the Employer's policies or otherwise, except as expressly noted, and you acknowledge that you know of no circumstances other than you agreeing to the terms of this Agreement which would require the Employer to provide such consideration. You acknowledge that no representations of any kind have been made by the Employer to induce your execution of this Agreement and that the only representations made to you in order to obtain your consent to this Agreement are as stated herein. The fact that the Employer is offering to make these payments to you on these terms and conditions imposes no obligation whatsoever on the Employer or the Company to offer to pay any amounts to any employee whose employment is terminated with the Employer or the Company now or in the future. Accordingly, if you execute (and do not revoke) this Agreement you will receive:

(a) SEVERANCE PAY. You will receive severance pay totaling $439,192 (“Severance Pay”), less applicable withholdings, deductions and offsets, if any, in regular payroll payment(s) over a period of twelve (12) months (the “Severance Period”) based upon your base salary in effect at the Termination Date. Notwithstanding the foregoing, the Employer may at its option, at any time while any Severance Pay owed hereunder are still outstanding, pay to the Employee the remaining balance of such outstanding Severance Pay in a lump sum. The Severance Pay will be payable in accordance with the Company’s normal payroll procedures starting on the later of your Termination Date and the Effective Date subject to the Offset Section below.

Notwithstanding the foregoing, if subsequent to the commencement of the Severance Period, the Employer discovers that you committed acts while employed with the Employer which constitutes “Cause” (as defined below), the Employer may cease further payments of Severance Pay and other consideration as provided for in this Section and may require you to reimburse the Employer for all payments of Severance Pay and other consideration previously made. For purposes of this Agreement, “Cause” shall mean (i) breach by you of any material provision of any written agreement you may have with the Company or violation in any material respect of any written policy of the Company; (ii) gross negligence or willful misconduct by you in connection with the performance of your duties, or your willful refusal to perform any of your duties or responsibilities; or (iii) fraud, criminal conduct or embezzlement by you.

(b) CONTINUATION OF MEDICAL AND/OR DENTAL INSURANCE BENEFITS . If you elect to continue coverage pursuant to the Employer’s medical and/or dental insurance benefit plans as in effect and amended from time to time, pursuant to the provisions of COBRA as described in (c) below, then, subject to the other terms and conditions of this paragraph, your continued participation (for you and your eligible beneficiaries) will be at the contribution level in effect for active employees until the earlier of (i) twelve (12) months after the Termination Date, (ii) you become eligible for Medicare, or (iii) you become eligible for coverage under medical and/or dental insurance benefit plans, as the case may be, of another employer through future employment**. You must immediately notify the Employer when you become eligible for Medicare or for coverage under medical and/or dental insurance benefits plans of another employer through your future employment.**

(c) COBRA. To the extent provided by the federal Consolidated Omnibus Budget Reconciliation Act of 1985 law, or if applicable, state insurance laws (collectively “COBRA”), and by the Employer’s current group health insurance policies, and subject to the provisions of paragraph (b) above, you will be eligible to continue your group health insurance benefits after the Termination Date at your own expense for up to 18 months at a monthly premium equal to 102% of actual plan cost. Within the timing required by law, you will be provided a separate notice describing your COBRA rights and obligations with respect to continued group health insurance under the applicable state and/or federal insurance laws. Such continuation of coverage under the Severance Period will count as total time covered under COBRA. Specific costs and details will be provided to you on a timely basis.

(d) LONG-TERM INCENTIVE EQUITY AWARDS . During your employment, you were a participant in the Element Solutions Inc long term incentive program (“LTI”), pursuant to which you received (i) a Performance-Based Restricted Stock Award Agreement dated February 17, 2021 (“Award #1”), (ii) a Restricted Stock Unit Agreement dated February 17, 2021 (“Award #2”), (iii) a Performance-Based Restricted Stock Award Agreement dated February 15, 2022 (“Award #3”), (iv) Restricted Stock Unit Agreement dated February 15, 2022 (“Award #4”), and (v) a Restricted Stock Unit Agreement dated February 13, 2023 (“Award #5”), in each case representing LTI awards under the Element Solutions Inc Amended and Restated 2013 Incentive Compensation Plan (the “Plan”). (Award #1, Award #2, Award #3, Award #4 and Award #5 are referred to herein each as an “Award” and collectively as the “Awards”.) Subject to achieving the performance vesting criteria set forth in Award #1, you will continue to be eligible to receive the vesting of Award #1, if, as and when such Award would otherwise vest for full-time, actively employed, similarly situated participants in the Plan generally, even though you will not be a full-time, active employee on the date the restrictions would otherwise lapse. You will be receive the vesting of 50% of Award #3 (i.e. a number of shares equal to achieving 50% of target from Award #3 (but not the “maximum” or “stretch” level of achievement)), as and when the 2022 LTI awards would otherwise vest for full-time, actively employed, similarly situated participants in the Plan generally, even though you will not be a full-time, active employee on the date the restrictions would otherwise lapse. Subject to achieving the respective time vesting criteria set forth in Award #2, Award #4, and Award #5, you will continue to be eligible to receive the vesting of the tranches of such Awards that would otherwise vest in the ordinary course in February 2024, if, as and when such Awards otherwise would vest if you were actively employed, even though you will not be a full-time, active employee on the date the Awards would otherwise vest. The Awards will otherwise continue to be governed by and subject to the terms and conditions of the applicable award agreement and the Plan. Any remaining unvested equity awards not addressed in this paragraph will be forfeited upon termination.

(e) INCENTIVE COMPENSATION. You will be eligible to receive an annual incentive cash bonus for 2023 equal to 65% of your target bonus opportunity pursuant to the Employer's 2023 Annual Incentive Program, in lieu of any other bonus you would otherwise have received for 2023, at the time any such bonuses are paid to active employees of the Employer in the first quarter of 2024. This payment is taxable compensation and subject to any applicable withholding taxes.

(f) NO MITIGATION. Nothing in this Section 1 or any other provision of this Agreement shall be deemed to require you to mitigate the cost of severance pay and benefits provided hereunder.

2. OTHER BENEFIT PLANS. Effective as of the Termination Date, you acknowledge that you are no longer eligible to participate in any of the Employer's or the Company's other benefit plans including, but not limited to the Employer's 401(k) savings plan (the "401(k) Plan").

3. VACATION AND PAID TIME OFF ("PTO") . As of the Termination Date, no further vacation or PTO shall accrue. An amount equal to **21 days** representing your remaining accrued and unused vacation based on your base salary in effect at the time of your termination or, if applicable, any accrued and unused PTO, will be paid in a lump sum on the next pay date following your Termination Date, except as otherwise required by applicable state law, subject to standard payroll deductions and withholdings. This amount represents payment to you in lieu of any and all accrued but unused vacation or PTO time you may still have. You will receive these payments regardless of whether you enter into this Agreement.

4. ELECTION. If you decide not to execute this Agreement, you may elect to receive the Severance Pay and/or benefits defined in any employment contract or other written agreement between you and the Employer which may be in effect on your Termination Date and covers your separation with the Employer, if any. The acceptance of Severance Pay and benefits available under this Agreement shall constitute a waiver of any Severance Pay you would have been entitled to under any other agreement.

5. RETURN OF EMPLOYER AND COMPANY PROPERTY. You acknowledge that prior to and as a condition of your receipt of any Severance Pay and/or consideration as described in this Agreement, you will return all Employer and Company documents (and all copies thereof) and other property, which is in your possession. Such property includes, but is not limited to office keys, credit cards, computers, computer discs and software, printers, fax machines, cellular phones, all documents, files and other information of the Employer and Company whether or not the property meets the definition of "Confidential Information" or "Trade Secrets" under any applicable policy of the Company, agreement between you and the Company or applicable laws, and other related Employer and Company books, equipment or records. Notwithstanding anything to the contrary in this Section 5, you will be permitted to keep (i) your current Company-provided notebook computer, together with power cord and standard factory-included attachments (but not separate monitors or docking stations), and (ii) your current Company-provided i-Phone mobile telephone device; provided, however, after the Termination Date you will be solely responsible for paying for any service and maintenance contracts and obtaining any licenses for software used on the computer and/or mobile telephone device, and the Company will not provide any service or pay for any continued use of such computer or mobile device. You acknowledge that you will not have access to any Company-provided software from and after the Termination Date, and you agree to allow the Company to delete any Company files and software on any Company-provided computer and mobile device.

6. REIMBURSEMENT OF EXPENSES. The Employer shall reimburse you for any and all business expenses for which you are entitled to reimbursement under the Employer's expense reimbursement policies and procedures in effect on the date hereof. All expenses for reimbursement shall

be submitted within thirty (30) days from the date of this Agreement, and the Employer shall process such expenses promptly. Any expenses submitted after this thirty (30) day period will not be paid.

7. NON-DUPLICATION OF BENEFITS. The amount of severance payments hereunder shall be reduced on a dollar for dollar basis by any disability, severance, separation or termination pay benefits that the Employer pays or is required to pay you through insurance or otherwise under any plan or contract or under any federal or state law; provided, however, that the severance payment shall never be less than two (2) weeks' base salary, and such amount is acknowledged to be full and adequate consideration for this Agreement.

8. GENERAL RELEASE OF CLAIMS. You agree to release and hold harmless (on behalf of yourself and your family, heirs, executors, successors and assigns) now and forever, the Employer and the Company and any of the foregoing entities' past, present or future parent and subsidiary corporations, affiliates, divisions, successors and assigns (whether or not incorporated) and any of its past, present or future employees, agents, assigns, officers, directors, shareholders and attorneys whether acting in their individual or representative capacity (the "Released Parties") from and waive any claim that you have presently, may have or have had in the past, known or unknown, against the Released Parties upon or by reason of any matter, cause or thing whatsoever, from the beginning of the world through the date you execute this Agreement, including, without limitation, all claims arising from your employment with, or termination of employment from, the Employer and the Company, or otherwise, including but not limited to, any and all claims brought or that could be brought pursuant to or under any federal, state or local statute (including, without limitation, the Age Discrimination in Employment Act of 1967, the 1990 Older Workers Benefit Protection Act, Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Equal Pay Act, the Americans with Disabilities Act of 1990, the Employee Retirement Income Security Act of 1974, the Family and Medical Leave Act of 1993, the Fair Labor Standards Act, the Worker Adjustment and Retraining Notification Act, as well as any state or local equivalents of any of the foregoing, including, without limitation, the Connecticut Fair Employment Practices Act, the Connecticut Minimum Wage Act, the Connecticut Family and Medical Leave Act, the Connecticut Paid Sick Leave Act and Conn. Gen. Stat. §31-290a, and all other applicable statutes regulating the terms and conditions of your employment), and all other applicable statutes regulating the terms and conditions of your employment), any regulation or ordinance, under the common law or in equity (including any claims for wrongful discharge, slander, libel or otherwise), or under any policy, agreement, understanding or promise, written or oral, formal or informal, between the Released Parties and you, including, without limitation, any claim you might have for severance, termination or severance pay pursuant to the Employer's severance policies or practices as from time to time in effect, or otherwise (the "Released Claims").

You expressly waive and relinquish all rights and benefits under any section of any law or legal principle of similar effect in any other jurisdiction with respect to your release of any unknown or unsuspected claims herein.

Notwithstanding the foregoing, the following are not included in the Released Claims (the "Excluded Claims"): (i) any rights or claims which are not waivable as a matter of law; and (ii) any claims for breach of this Agreement. You represent and warrant that, other than the Excluded Claims, you are not aware of any claims you have or might have against any of the Released Parties that are not included in the Released Claims.

9. NO PENDING ACTION/COVENANT NOT TO SUE. Except to enforce the terms of this Agreement and as provided below, you agree and covenant not to file any suit or other legal action against the Released Parties with regard to any of the Released Claims. You further represent and warrant that as of the date you sign this Agreement no suits, complaints, charges, or other proceedings are

pending against the Released Parties before any court, administrative agency, commission or other forum relating directly or indirectly to the Released Claims.

NOTHING IN THIS AGREEMENT IS INTENDED IN ANY WAY TO LIMIT YOUR RIGHT OR ABILITY TO INITIATE OR PARTICIPATE IN ANY INVESTIGATION OR PROCEEDING CONDUCTED BY ANY FEDERAL, STATE OR LOCAL AGENCY, INCLUDING THE U.S. EQUAL EMPLOYMENT OPPORTUNITY COMMISSION ("EEOC"). NOTWITHSTANDING THE FOREGOING, YOU AGREE TO WAIVE YOUR RIGHT TO RECOVER MONETARY DAMAGES IN ANY SUIT, COMPLAINT, CHARGE OR OTHER PROCEEDING FILED BY YOU OR ANYONE ELSE ON YOUR BEHALF.

10. ADEA WAIVER. You acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA (the "ADEA Waiver"), and that the consideration given for this ADEA Waiver is in addition to anything of value to which you are already entitled. You further acknowledge that you have been advised, as required by the ADEA, that: (i) your ADEA Waiver does not apply to any rights or claims that may arise after the date that you sign this Agreement; (ii) you should consult with an attorney prior to signing this Agreement (although you may choose voluntarily not to do so); (iii) you have twenty-one (21) days to consider this Agreement (although you may choose voluntarily to sign it earlier); (iv) you have seven (7) days following the date you sign this Agreement to revoke the ADEA Waiver (by providing written notice of your revocation to the Company; and (v) this ADEA Waiver will not be effective until the date upon which the revocation period has expired, which will be the eighth day after the date that this Agreement is signed by you provided that you do not revoke it (the "Effective Date'). You further acknowledge that the Employer has provided you with the ADEA Disclosure information (under Title 29 USC Section 626(f)(1)(H)).

11. FUTURE ASSISTANCE. Upon request, you agree to provide such assistance and cooperation in any matter relating to your expertise or experience as the Employer may reasonably request including your attendance and truthful testimony where deemed appropriate by the Employer, to the Employer's defense or prosecution of any existing or future claims or litigations of which the Employer identifies you as potentially having knowledge. The Employer shall pay you reasonable costs and expenses in connection therewith.

12. RIGHT TO COUNSEL. The Employer hereby advises you that you should consult with an attorney prior to execution of this Agreement. You acknowledge that you understand it is in your best interest to have this document reviewed by an attorney of your own choosing and at your own expense, and you hereby acknowledge that you have been afforded not less than twenty-one (21) days during which to consider this Agreement and to have it reviewed by your attorney. To the extent that you decide to execute this Agreement prior to the expiration of the twenty-one (21) day review period, such execution shall constitute a voluntary and knowing valid waiver of such review period.

13. FREE WILL. You are entering into this Agreement of your own free will and without coercion, intimidation or threat of retaliation. You acknowledge and agree that the Employer and/or the Company have not exerted any undue pressure or influence on you in this regard. You acknowledge that you have had reasonable time to determine whether entering into this Agreement is in your best interest and you have read and fully understand the terms set forth in this Agreement. You understand that if you request additional time to review the provisions of this Agreement, a reasonable extension of time will be granted.

14. BREACH OF AGREEMENT/PENALTIES. If you initiate or participate in any lawsuit or other legal action in violation of this Agreement, or if you fail to abide by any of the terms of this Agreement, except to the extent prohibited by law, the Employer may reclaim any amounts paid under this Agreement, without waiving the release granted herein, and terminate any benefit or payments that

are due under the Agreement, in addition to any other remedies it may have. In addition, you shall pay the Employer all of its actual attorneys' fees and costs incurred resulting from, or incident to, such violation and you agree to pay such fees and costs within thirty (30) days of the Employer's written demand.

15. REVOCATION AND EFFECTIVE DATE. This Agreement may be revoked by you within the seven (7) days after the date on which you sign this Agreement and it is received by the Employer. You understand that this Agreement shall not become binding or enforceable until this seven (7) day period has expired without you having so revoked. This Agreement shall become effective on the eighth (8th) day following your signing of this Agreement (the "Effective Date") provided that you have not revoked the Agreement prior to such date. Any such revocation must be made in a signed letter executed by you and received by the Employer at the following address no later than 5 p.m. Eastern Time on the seventh day after you have executed this Agreement: Element Solutions Inc, 500 East Broward Blvd - Suite 1860, Fort Lauderdale, FL 33394, Attention: General Counsel. You understand that if you revoke this Agreement, this Agreement will not be effective or enforceable by you and you will not be entitled to any payments or benefits hereunder. You understand and agree that you will not receive the payments and benefits set forth in this Agreement, except for your execution of this Agreement and the fulfillment of your promises set forth herein. Any notice to be given under this Agreement (other than the revocation, if any, set forth above) shall be given in writing and delivered either personally or sent by certified mail to the Employer c/o General Counsel at the above address and to you at your address in the Employer's records or such other address as you may provide to Employer in writing in advance in accordance with this Section 15.

16. CONFIDENTIALITY. In addition to any agreement related to trade secrets, confidential information and/or work products previously executed by you, including, you will not at any time divulge to any other entity or person any information acquired by you concerning the financial affairs of the Employer or the Company, its affiliates and subsidiaries, its officers, directors, employees and/or shareholders or the Employer's or the Company's business processes or methods or research, development or marketing programs or plans, any other of its trade secrets, any information regarding personal matters of any directors, officers, shareholders, employees or agents of the Employer or the Company or their respective family members, any information concerning this Agreement or the terms thereof or any information concerning the circumstances of your employment with and the termination of your employment from the Employer or the Company, or any information regarding discussions related to any of the foregoing or make, write, publish, produce or in any way participate in placing into the public domain any statement, opinion or information with respect to any of the foregoing or which reflects adversely upon or would reasonably impair the reputation or best interests of the Employer or the Company or any of its directors, officers, employees or agents or their respective family members. Confidential information does not include (i) information which is required to be disclosed by court order, subpoena or other judicial process, (ii) information regarding your job responsibilities during your employment with the Employer to prospective employers in connection with an application for employment, (iii) information regarding the financial terms of this Agreement to your spouse or your tax advisor for purposes of obtaining tax advice provided that such persons are made aware of and agree to comply with the confidentiality obligation, or (iv) information which is necessary to be disclosed to your attorney to determine whether you should enter into this Agreement.

The foregoing prohibitions shall include, without limitation, directly or indirectly publishing (or causing, participating in, assisting or providing any statement, opinion or information in connection with the publication of) any diary, memoir, letter, story, photograph, interview, article, essay, account or description (whether fictionalized or not) concerning any of the foregoing, publication being deemed to include any presentation or reproduction of any written, verbal or visual material in any communication medium, including any book, magazine, newspaper, theatrical production or movie, or television or radio programming or commercial or any posting on the Internet. In addition to any and all other remedies available to the Employer for any violation of this Section, you agree to immediately remit and disgorge to the Employer any and all payments paid or payable to you in connection with or as a result of engaging in any of the above acts.

Nothing herein is intended to interfere with any disclosure right protected by law.

17. DISCLOSURE OF CONFIDENTIAL INFORMATION. In the event that you are required to make disclosure under any court order, subpoena or other judicial process, you will cooperate with the Employer and provide the Employer with prompt written notice, take all steps requested by the Employer to defend against the compulsory disclosure and permit the Employer to participate with counsel of its choice in any proceeding relating to the compulsory disclosure. You acknowledge that all information, the disclosure of which is prohibited by this Agreement, is of a confidential and proprietary character and of great value to the Employer and/or the Company. You also acknowledge that, to the extent you had access to and became acquainted with confidential information of the Employer and/or the Company, any subsequent employment with a competitor of the Employer and/or the Company would inevitably result in a prohibited disclosure of confidential information.

18. COVENANT AGAINST COMPETITION, SOLICITATION. In addition to any agreement related to competition previously executed by you, during the Severance Period, you shall not, without the prior written consent of the Employer's Chief Executive Officer, directly or indirectly own, manage, control or participate in the ownership, management, or control of, or be employed or engaged by or otherwise affiliated or associated with, any other corporation, partnership, proprietorship, firm, association or other business entity, or otherwise engage in competition with, perform services for, own an interest in, or otherwise participate in, a "Competitive Business". This restriction of competition is limited to provision of the same or similar services as those performed by you during your employment with the Employer or any of its direct and indirect subsidiary companies. Notwithstanding the foregoing, this provision shall not prohibit you from performing any services for any entity if such services are performed outside the United States unless those services were provided outside the United States during the term of your employment with the Employer or any of its direct and indirect subsidiary companies, in which case the restriction shall extend to those geographic areas in comity with those services provided; nor shall it prohibit you from performing any service for any entity if such services are in no way related to any business which is competitive with the business of the Employer or any of its direct and indirect subsidiary companies. "Competitive Business" means the business engaged in by the Employer and any or all of its direct and indirect subsidiary companies immediately prior to the Termination Date. Further, during the Severance Period you shall not, and shall not permit any of your employees, agents or others under your control to, directly or indirectly, on behalf of you or any other person, (i) call upon, accept Competitive Business from or solicit Competitive Business of any person who is, or had been at any time during the preceding two years, a customer of the Company or any successor to the business of the Company, or otherwise divert or attempt to divert any business of the Company of any such successor, or (ii) directly or indirectly recruit or otherwise solicit or induce any person who is an employee of, or otherwise engaged by, the Company or any successor to the business of the Company to terminate his or her employment or other relationship with the Company or such successor.

19. NON-ADMISSION. Nothing contained in this Agreement shall be deemed or construed as an admission of wrongdoing or liability on the part of the Employer or the Company.

20. SEVERABILITY CLAUSE. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision or provisions of this Agreement, which shall remain in full force and effect. If any provision of this Agreement is held to be invalid, void or unenforceable in any jurisdiction, any court so holding shall

substitute a valid, enforceable provision that preserves, to the maximum lawful extent, the terms and intent of such provisions of this Agreement. If any of the provisions of, or covenants contained in, this Agreement are hereafter construed to be invalid or unenforceable in any jurisdiction, the same shall not affect the remainder of the provisions or the enforceability thereof in any other jurisdiction, which shall be given full effect, without regard to the invalidity or unenforceability in such other jurisdiction. Any such holding shall affect such provision of this Agreement, solely as to that jurisdiction, without rendering that or any other provisions of this Agreement invalid, illegal or unenforceable in any other jurisdiction. If any covenant should be deemed invalid, illegal or unenforceable because its scope is considered excessive, such covenant will be modified so that the scope of the covenant is reduced only to the minimum extent necessary to render the modified covenant valid, legal and enforceable.

21. OFFSET. The Employer shall be entitled to offset any sums owed by you to the Employer against the severance pay payable pursuant to Sections 1 and/or 4 including, but not limited to, any Severance Pay and/or Employer contributions to your medical and/or dental coverage provided to you prior to the Effective Date of this Agreement.

22. ASSIGNMENT. This Agreement is personal to you and you may not assign any rights or delegate any responsibilities hereunder.

23. GOVERNING LAW AND CHOICE OF FORUM. This Agreement shall be governed by, and construed pursuant to, the laws of the State of Connecticut applicable to transactions executed and to be wholly performed in Connecticut between residents thereof. The parties consent and agree to the exclusive jurisdiction of the Federal and State courts sitting in the State of Connecticut for all purposes.

24. ENTIRE AGREEMENT. This Agreement, including documents referenced herein, expressly supersedes any and all previous understandings and agreements between the Employer and/or the Company and you and constitute the sole and exclusive understanding between the Employer and/or the Company and you concerning the subjects set forth herein, other than any agreements related to non-competition or trade secrets, confidential information and/or work product previously executed by you. This Agreement may not be altered, modified, changed or discharged except in a writing signed by you and agreed to by the Employer. You understand and agree that other than as set forth in this Agreement, you will not receive any compensation, payments or benefits of any kind from the Employer and/or the Company and you expressly agree that you are not entitled and have no right to any additional compensation, payments or benefits other than the payment of vested benefits (if any) under the terms of the Employer's qualified pension plans, as amended from time to time.

To accept the above terms, please execute and return to the undersigned an original of this Agreement in the postage paid envelope included with this letter no later than twenty-one (21) days after the date first written above. Until the Effective Date, you will not receive any of the benefits outlined in this letter.

If you have any questions, please let me know.

Sincerely,

/s/ Benjamin Gliklich
Benjamin Gliklich
Chief Executive Officer
Element Solutions Inc

AGREEMENT AND
<u>ACKNOWLEDGMENT</u>

I, Mike Goralski, acknowledge receipt of the Agreement and I agree to all the terms and conditions set forth in the Agreement. I have read and fully understand the terms set forth in the Agreement and enter into such agreement of my own free will and without coercion, intimidation or threat of retaliation. I also acknowledge and understand that I have been afforded twenty-one (21) days to consider the Agreement and to have the Agreement reviewed by my attorney if I so choose. I further understand that I have seven (7) days to revoke the Agreement after the date I sign the Agreement and that the Agreement shall not be effective or enforceable until the expiration of this seven (7) day revocation period without revocation.

Signature: /s/ Michael Goralski **Date:** 12/20/2023

EXHIBIT 21.1

ELEMENT SOLUTIONS INC

Subsidiaries

The following are subsidiaries of Element Solutions Inc as of December 31, 2023 and the state or jurisdiction in which each of these subsidiaries is incorporated or organized:

Subsidiaries	State or Jurisdiction of Incorporation/Organization
AI Divestitures, Inc.	Delaware
Alent Enthone Chemistry (Shanghai) Co., Ltd.	China
Alent Finance Limited	United Kingdom
Alent Germany GmbH	Germany
Alent Holdings Brazil Limited	United Kingdom
Alent Holdings BV	Netherlands
Alent, Inc.	Rhode Island
Alent Investments, Inc.	Delaware
Alent Investments Limited	United Kingdom
Alent Limited	United Kingdom
Alent New Finance (UK) Limited	United Kingdom
Alent New Mexico Holdings Limited	United Kingdom
Alent USA Holding, Inc.	Delaware
Alpha Assembly Solutions	Singapore
Alpha Assembly Solutions (Shanghai) Trading Co., Ltd.	China
Alpha Assembly Solutions (Shenzhen) Co., Ltd.	China
Alpha Assembly Solutions (Taiwan) Limited	Taiwan
Alpha Assembly Solutions Belgium NV	Belgium
Alpha Assembly Solutions Brasil Soldas Ltda.	Brazil
Alpha Assembly Solutions Germany GmbH	Germany
Alpha Assembly Solutions Inc.	Delaware
Alpha Assembly Solutions Korea Limited	South Korea
Alpha Assembly Solutions Netherlands B.V.	Netherlands
Alpha Metals China Holdings Co. Ltd	Hong Kong
Alpha Metals Limited	Hong Kong
Alpha Metals Mexico, S.A. de C.V.	Mexico
Anion Química Industrial S.A.	Brazil
Aprochim S.r.l.	Italy
Aqua Plus Wasser- und Recyclingsysteme GmbH	Germany
AR Mexican Holdings, Inc.	Delaware
Bayport Chemical Service, Inc.	Texas
Canning Gumm, LLC	Delaware
Compugraphics International Limited	United Kingdom
Compugraphics Jena GmbH	Germany
Compugraphics U.S.A. Inc.	Delaware
Cookson Holding Company	Delaware

Coventya Americas GmbH	Germany
Coventya Beteiligungs GmbH	Germany
Coventya Environmental Plating Technology (JiangSu) Co., Ltd	China
Coventya GmbH	Germany
Coventya Holding SAS	France
Coventya India Private Ltd	India
Coventya International Gmbh	Germany
Coventya Kimya Sanayi ve Ticaret Anonim Sirketi	Turkey
Coventya Korea Co., Limited	Korea
Coventya Malaysia Sdn. Bhd	Malaysia
Coventya Quimíca Ltda	Brazil
Coventya SAS	France
Coventya South East Asia Pte. Ltd	Singapore
Coventya S.r.l.	Italy
Coventya Technologies S.L.	Spain
Dipl.-Ing. W. Schmidt GmbH	Germany
EI Liquidation, Inc.	New York
Enthone-OMI (Hong Kong) Co., Ltd.	Hong Kong
Fernox Limited	United Kingdom
HKW (Suzhou) New Material Co., Ltd	China
H K Wentworth America, Inc.	California
H.K. Wentworth (India) Private Limited	India
H.K. Wentworth Limited	United Kingdom
H.K. Wentworth (NZ) Limited	New Zealand
H.K. Wentworth Pty Limited	Australia
HSO Chemicals Shanghai Ltd	China
HSO Herbert Schmidt GmbH & Co. KG	Germany
HSO Hong Kong Holding Limited	Hong Kong
Kester LLC	Illinois
Kuprion, Inc.	Delaware
Macdermid (Panyu) Speciality Co. Ltd.	China
MacDermid (Suisse) Sàrl	Switzerland
MacDermid (Thailand) Limited	Thailand
MacDermid Actium, Ltd	United Kingdom
MacDermid Acumen, Inc.	Delaware
MacDermid Alpha Electronics Solutions	Singapore
MacDermid Alpha Electronics Solutions India Private Limited	India
MacDermid Alpha France SAS	France
MacDermid Alpha Hungary Kft	Hungary
MacDermid Alpha Italy S.r.l	Italy
MacDermid Anion, Inc.	Delaware
MacDermid Autotype Incorporated	Delaware
MacDermid Autotype Limited	United Kingdom
MacDermid Autotype Pte Ltd	Singapore
MacDermid Brazil, Inc.	Delaware
MacDermid Canning Limited	United Kingdom
MacDermid Chemical Industries Argentina, Inc.	Delaware

Macdermid Continental Investments Limited	United Kingdom
MacDermid de México, S.A. de C.V.	Mexico
MacDermid do Brazil Ltda	Brazil
MacDermid Enthone B.V.	Netherlands
MacDermid Enthone Bermuda B.V.	Netherlands
MacDermid Enthone Electronics Solutions (M) Sdn Bhd	Malaysia
MacDermid Enthone GmbH	Germany
MacDermid Enthone Inc.	Delaware
MacDermid Enthone Produtos Químicos Ltda	Brazil
MacDermid Enthone Romania S.R.L.	Romania
MacDermid Enthone s.r.o.	Czech Republic
MacDermid Enthone Sdn Bhd	Malaysia
MacDermid Enthone Singapore Pte Ltd	Singapore
MacDermid Enthone Slovakia s.r.o.	Slovakia
MacDermid Enthone Sp. z.o.o.	Poland
MacDermid Enthone Spain, S.L.	Spain
MacDermid Enthone Taiwan Co., Ltd.	Taiwan
MacDermid Enthone Technology (Suzhou) Co., Ltd.	China
MacDermid Enthone Trading (Shanghai) Co., Ltd.	China
MacDermid Europe Limited	United Kingdom
MacDermid Europe SAS	France
MacDermid Europe Finance Limited	United Kingdom
MacDermid European Holdings BV	Netherlands
MacDermid Graphics Solution Europe SAS	France
MacDermid Graphics Solutions Ltda	Brazil
MacDermid Graphics Solutions Production UK Limited	United Kingdom
MacDermid Graphics Solutions UK Limited	United Kingdom
MacDermid Graphics Solutions, LLC	Delaware
MacDermid Holdings BV	Netherlands
MacDermid Hong Kong Limited	Hong Kong
MacDermid Houston, Inc.	Delaware
MacDermid, Incorporated	Connecticut
MacDermid India Private Ltd.	India
MacDermid International Corporation	Delaware
MacDermid Netherlands Cooperatief W.A.	Netherlands
MacDermid Offshore Fludios do Brazil Industrial Ltda.	Brazil
MacDermid Offshore Solutions, LLC	Delaware
MacDermid Overseas Asia Limited	Delaware
MacDermid Performance Acquisition Germany GmbH I	Germany
MacDermid Performance Acquisition GmbH II	Germany
MacDermid Performance Acquisitions Ltd	United Kingdom
MacDermid Performance Solutions	Singapore
MacDermid Performance Solutions Canada, Inc	Canada
MacDermid Performance Solutions Company Limited	Vietnam
MacDermid Performance Solutions Espanola SA	Spain
MacDermid Performance Solutions France SAS	France
MacDermid Performance Solutions Hong Kong Limited	Hong Kong

MacDermid Performance Solutions Inc.	Philippines
MacDermid Performance Solutions Italiana S.r.l.	Italy
MacDermid Performance Solutions Japan K.K.	Japan
MacDermid Performance Solutions Kimyasal Sanayi ve Ticaret A.Ş	Turkey
MacDermid Performance Solutions Korea Inc.	South Korea
MacDermid Performance Solutions Scandinavia AB	Sweden
MacDermid Performance Solutions Services Limited	United Kingdom
MacDermid Performance Solutions Singapore Pte Ltd	Singapore
MacDermid Performance Solutions Taiwan Ltd	Taiwan
MacDermid Performance Solutions UK Limited	United Kingdom
MacDermid Printing Solutions Acumen, Inc.	Delaware
MacDermid Singapore Pte Ltd	Singapore
MacDermid Technology (Suzhou) Co. Ltd.	China
MacDermid Texas, Inc.	Delaware
MD Graphics Solutions, LLC	Delaware
MRD Acquisition Corp.	Delaware
Napp Printing Plate Distribution, Inc.	South Dakota
Napp Systems Inc.	Iowa
Oak Barrel Investments Ltd.	United Kingdom
OMI International Corporation	Delaware
Politeknik Metal Sanayi ve Ticaret Anonim Sirketi	Turkey
Rockville Venture, LLC	Delaware
SPC Divestiture, Inc.	Delaware
Specialty Polymers, Inc.	Massachusetts
Surface Treatments Ltd.	United Kingdom
Vernon-Rockville Venture, LLC	Delaware
W. Canning Inc.	Delaware
W. Canning Ltd.	Texas
W. Canning USA, LLC	Delaware
Zhejiang Electrolube New Materials Co., Ltd	China
Zhejiang HKW Technology Co., Ltd	China

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-266349) and Form S-8 (No. 333-194012 and No. 333-196698) of Element Solutions Inc of our report dated February 21, 2024 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Miami, Florida
February 21, 2024

EXHIBIT 24.1

POWER OF ATTORNEY
ANNUAL REPORT ON FORM 10-K FOR FISCAL YEAR 2023

KNOW ALL BY THESE PRESENTS that each person whose signature appears below hereby constitutes and appoints Benjamin Gliklich and John E. Capps, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and revocation, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Element Solutions Inc for the fiscal year ended December 31, 2023, and any amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform such and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

This Power of Attorney may be executed in separate counterparts, each of which shall be deemed an original, but all such counterparts shall together constitute one and the same instrument.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the 21st day of February, 2024.

Signature	Title
/s/ Sir Martin E. Franklin Sir Martin E. Franklin	Executive Chairman of the Board
/s/ Benjamin Gliklich Benjamin Gliklich	Director, President and Chief Executive Officer
/s/ Ian G.H. Ashken Ian G.H. Ashken	Director
/s/ Elyse Napoli Filon Elyse Napoli Filon	Director
/s/ Christopher T. Fraser Christopher T. Fraser	Director
/s/ Michael F. Goss Michael F. Goss	Director
/s/ Nichelle Maynard-Elliott Nichelle Maynard-Elliott	Director
/s/ E. Stanley O’Neal E. Stanley O’Neal	Director

EXHIBIT 31.1

CERTIFICATION

I, Benjamin Gliklich, certify that:

1. I have reviewed this Annual Report on Form 10-K of Element Solutions Inc;

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

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

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

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

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

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

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

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

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

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

Date: February 21, 2024

/s/ Benjamin Gliklich

Benjamin Gliklich
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Carey J. Dorman, certify that:

1. I have reviewed this Annual Report on Form 10-K of Element Solutions Inc;

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

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

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

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

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

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

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

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

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

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

Date: February 21, 2024

/s/ Carey J. Dorman

Carey J. Dorman

Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION
OF
CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Element Solutions Inc (the “Company”) for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Benjamin Gliklich, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Benjamin Gliklich

Benjamin Gliklich
President and Chief Executive Officer

February 21, 2024

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

In connection with the Annual Report on Form 10-K of Element Solutions Inc (the “Company”) for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Carey J. Dorman, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Carey J. Dorman

Carey J. Dorman
Executive Vice President and Chief Financial Officer

February 21, 2024

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 97.1

ELEMENT SOLUTIONS INC
Executive Officer Clawback Policy

Effective October 24, 2023 (the "Effective Date")

I. Purpose

This Executive Officer Clawback Policy describes the circumstances under which Covered Persons of Element Solutions Inc and any of its direct or indirect subsidiaries (collectively, the "Company") will be required to repay or return Erroneously-Awarded Compensation to the Company.

This Policy and any terms used in this Policy shall be construed in accordance with any SEC regulations promulgated to comply with Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the rules adopted by NYSE.

Each Covered Person of the Company shall sign an Acknowledgement and Agreement to the Clawback Policy in the form attached hereto as Exhibit A as a condition to his or her participation in any of the Company's incentive-based compensation programs.

II. Definitions

For purposes of this Policy, the following capitalized terms shall have the meaning set forth below:

(a) "**Accounting Restatement**" shall mean an accounting restatement (i) due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements (a "Big R" restatement), or (ii) that corrects an error that is not material to previously issued financial statements, but would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (a "little r" restatement).

(b) "**Board**" shall mean the Board of Directors of the Company.

(c) "**Clawback-Eligible Incentive Compensation**" shall mean, in connection with an Accounting Restatement, any Incentive-Based Compensation Received by a Covered Person (regardless of whether such Covered Person was serving as an Executive Officer at the time that Erroneously-Awarded Compensation is required to be repaid) (i) on or after the NYSE Effective Date, (ii) after beginning service as a Covered Person, (iii) while the Company has a class of securities listed on a national securities exchange or national securities association and (iv) during the Clawback Period.

(d) "**Clawback Period**" shall mean, with respect to any Accounting Restatement, the three completed fiscal years immediately preceding the Restatement Date and any transition period (that results from a change in the Company's fiscal year) of less than nine months within or immediately following those three completed fiscal years.

(e) "**Committee**" shall mean the Compensation Committee of the Board or with respect to the Chief Executive Officer, the majority of the independent directors of the Board.

(f) "**Covered Person**" shall mean any person who is, or was at any time, during the Clawback Period, an Executive Officer of the Company. For the avoidance of doubt, Covered Person may include a former

Executive Officer that left the Company, retired or transitioned to an employee role (including after serving as an Executive Officer in an interim capacity) during the Clawback Period.

(g) "**Erroneously-Awarded Compensation**" shall mean the amount of Clawback-Eligible Incentive Compensation that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received had it been determined based on the restated amounts. This amount must be computed without regard to any taxes paid.

(h) "**Executive Officer**" shall mean the Company's president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice-president in charge of a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person (including an officer of the Company's parent(s) or subsidiaries) who performs similar policy-making functions for the Company. For the sake of clarity, at a minimum, all persons who would be executive officers pursuant to Rule 401(b) under Regulation S-K shall be deemed "Executive Officers".

(i) "**Financial Reporting Measures**" shall mean measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and all other measures that are derived wholly or in part from such measures. For purposes of this Policy, Financial Reporting Measures shall include stock price and total shareholder return (and any measures that are derived wholly or in part from stock price or total shareholder return). For the avoidance of doubt, a Financial Reporting Measure need not be presented in the Company's financial statements or included in a filing with the SEC.

(j) "**Incentive-Based Compensation**" shall have the meaning set forth in Section III below.

(k) "**NYSE**" shall mean the New York Stock Exchange.

(l) "**NYSE Effective Date**" shall mean October 2, 2023.

(m) "**Policy**" shall mean this Executive Officer Clawback Policy, as the same may be amended and/or restated from time to time.

(n) "**Received**" shall mean Incentive-Based Compensation received, or deemed to be received, in the Company's fiscal period during which the Financial Reporting Measure specified in the Incentive-Based Compensation is attained, even if the payment or grant occurs after the fiscal period.

(o) "**Repayment Agreement**" shall have the meaning set forth in Section V below.

(p) "**Restatement Date**" shall mean the earlier of (i) the date the Board, a committee of the Board or the officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement, or (ii) the date that a court, regulator or other legally authorized body directs the Company to prepare an Accounting Restatement.

(q) "**SARs**" shall mean stock appreciation rights.

(r) "**SEC**" shall mean the U.S. Securities and Exchange Commission.

III. Incentive-Based Compensation

“Incentive-Based Compensation” shall mean any compensation that is granted, earned or vested wholly or in part upon the attainment of a Financial Reporting Measure.

For purposes of this Policy, specific examples of Incentive-Based Compensation include, but are not limited to:

- Non-equity incentive plan awards that are earned based, wholly or in part, on satisfaction of a Financial Reporting Measure performance goal;
- Bonuses paid from a “bonus pool,” the size of which is determined, wholly or in part, based on satisfaction of a Financial Reporting Measure performance goal;
- Other cash awards based on satisfaction of a Financial Reporting Measure performance goal;
- Restricted stock, restricted stock units, performance share units, stock options and SARs that are granted or become vested, wholly or in part, on satisfaction of a Financial Reporting Measure performance goal; and
- Proceeds received upon the sale of shares acquired through an incentive plan that were granted or vested based, wholly or in part, on satisfaction of a Financial Reporting Measure performance goal.

For purposes of this Policy, Incentive-Based Compensation excludes (without limitation):

- Any base salaries (except with respect to any salary increases earned, wholly or in part, based on satisfaction of a Financial Reporting Measure performance goal);
- Bonuses paid solely at the discretion of the Committee or Board that are not paid from a “bonus pool” that is determined by satisfying a Financial Reporting Measure performance goal;
- Bonuses paid solely upon satisfying one or more subjective standards and/or completion of a specified employment period; and
- Equity awards that vest solely based on the passage of time and/or satisfaction of one or more non-Financial Reporting Measures.

IV. <u>Determination and Calculation of Erroneously-Awarded Compensation</u>

In the event of an Accounting Restatement, the Committee shall promptly determine the amount of any Erroneously-Awarded Compensation for each Executive Officer in connection with such Accounting Restatement and shall promptly thereafter provide each Executive Officer with a written notice containing the amount of Erroneously-Awarded Compensation and a demand for repayment or return, as applicable.

(a) **<u>Cash Awards</u>**. With respect to cash awards, the Erroneously-Awarded Compensation is the difference between the amount of the cash award (whether payable as a lump sum or over time) that was Received and the amount that should have been received applying the restated Financial Reporting Measure.

(b) **<u>Cash Awards Paid From Bonus Pools</u>**. With respect to cash awards paid from bonus pools, the Erroneously-Awarded Compensation is the pro rata portion of any deficiency that results from the aggregate bonus pool that is reduced based on applying the restated Financial Reporting Measure.

(c) **<u>Equity Awards</u>**. With respect to equity awards, if the shares, options or SARs are still held at the time of recovery, the Erroneously-Awarded Compensation is the number of such securities Received in excess of the number that should have been received applying the restated Financial Reporting Measure (or the value in excess of that number). If the options or SARs have been exercised, but the underlying shares have not been sold, the Erroneously-Awarded Compensation is the number of shares underlying the excess options or SARs (or the value thereof). If the underlying shares have already been sold, then the Committee shall determine the amount which most reasonably estimates the Erroneously-Awarded Compensation.

(d) **Compensation Based on Stock Price or Total Shareholder Return**. For Incentive-Based Compensation based on (or derived from) stock price or total shareholder return, where the amount of Erroneously-Awarded Compensation is not subject to mathematical recalculation directly from the information in the applicable Accounting Restatement, the amount shall be determined by the Committee based on a reasonable estimate of the effect of the Accounting Restatement on the stock price or total shareholder return upon which the Incentive-Based Compensation was Received (in which case, the Committee shall maintain documentation of such determination of that reasonable estimate and provide such documentation to the NYSE in accordance with applicable listing standards).

V. Recovery of Erroneously-Awarded Compensation

Once the Committee has determined the amount of Erroneously-Awarded Compensation recoverable from the applicable Covered Person, the Committee shall take reasonable actions necessary to recover the Erroneously-Awarded Compensation. Unless otherwise determined by the Committee, the Committee shall pursue the recovery of Erroneously-Awarded Compensation in accordance with the below:

(a) **Cash Awards**. With respect to cash awards, the Committee shall either (i) require the Covered Person to repay the Erroneously-Awarded Compensation in a lump sum in cash (or such property as the Committee agrees to accept with a value equal to such Erroneously-Awarded Compensation) reasonably promptly following the Restatement Date or (ii) if approved by the Committee, offer to enter into a Repayment Agreement. If the Covered Person accepts such offer and signs the Repayment Agreement within a reasonable time as determined by the Committee, the Company shall countersign such Repayment Agreement.

(b) **Unvested Equity Awards**. With respect to those equity awards that have not yet vested, the Committee shall take all necessary action to cancel, or otherwise cause to be forfeited, the awards in the amount of the Erroneously-Awarded Compensation.

(c) **Vested Equity Awards**. With respect to those equity awards that have vested and the underlying shares have not been sold, the Committee shall take all necessary action to cause the Covered Person to deliver and surrender the underlying shares in the amount of the Erroneously-Awarded Compensation.

In the event that the Covered Person has sold the underlying shares, the Committee shall either (i) require the Covered Person to repay the Erroneously-Awarded Compensation in a lump sum in cash (or such property as the Committee agrees to accept with a value equal to such Erroneously-Awarded Compensation) reasonably promptly following the Restatement Date or (ii) if approved by the Committee, offer to enter into a Repayment Agreement. If the Covered Person accepts such offer and signs the Repayment Agreement within a reasonable time as determined by the Committee, the Company shall countersign such Repayment Agreement.

(d) **Repayment Agreement**. “Repayment Agreement” shall mean an agreement (in a form reasonably acceptable to the Committee) with the Covered Person for the repayment of the Erroneously-Awarded Compensation as promptly as possible without unreasonable economic hardship to the Covered Person.

(e) **Effect of Non-Repayment**. To the extent that a Covered Person fails to repay all Erroneously-Awarded Compensation to the Company when due (as determined in accordance with this Policy), the Company shall, or shall cause one or more other members of the Company to, take all actions reasonable and appropriate to recover such Erroneously-Awarded Compensation from the applicable Covered Person.

The Committee shall have broad discretion to determine the appropriate means of recovery of Erroneously-Awarded Compensation based on all applicable facts and circumstances and taking into account the time value of money and the cost to shareholders of delaying recovery. However, in no event may the Company accept an amount that is less than the amount of Erroneously-Awarded Compensation in satisfaction of a Covered Person's obligations hereunder.

VI. Discretionary Recovery

Notwithstanding anything herein to the contrary, the Company shall not be required to take action to recover Erroneously-Awarded Compensation if any one of the following conditions are met and the Committee determines that recovery would be impracticable:

(a) The direct expenses paid to a third party to assist in enforcing this Policy against a Covered Person would exceed the amount to be recovered, after the Company has made a reasonable attempt to recover the applicable Erroneously-Awarded Compensation, documented such attempts and provided such documentation to NYSE;

(b) Recovery would violate home country law where that law was adopted prior to November 28, 2022, provided that, before determining that it would be impracticable to recover any amount of Erroneously-Awarded Compensation based on violation of home country law, the Company has obtained an opinion of home country counsel, acceptable to NYSE, that recovery would result in such a violation and a copy of the opinion is provided to NYSE; or

(c) Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

VII. Reporting and Disclosure Requirements

The Company shall file all disclosures with respect to this Policy in accordance with the requirements of the federal securities laws, including the disclosure required by the applicable filings required to be made with the SEC.

VIII. Effective Date

This Policy shall apply to any Incentive-Based Compensation Received on or after the NYSE Effective Date.

IX. No Indemnification

The Company shall not indemnify any Covered Person against the loss of Erroneously-Awarded Compensation and shall not pay, or reimburse any Covered Persons for premiums, for any insurance policy to fund such Covered Person's potential recovery obligations.

X. Administration

The Committee has the sole discretion to administer this Policy and ensure compliance with NYSE Rules and any other applicable law, regulation, rule or interpretation of the SEC or NYSE promulgated or issued in connection therewith. Actions of the Committee pursuant to this Policy shall be taken by the vote of a majority of its members. The Committee shall, subject to the provisions of this Policy, make such determinations and interpretations and take such actions as it deems necessary, appropriate or advisable. All determinations and interpretations made by the Committee shall be final, binding and conclusive.

XI. Amendment; Termination

The Committee may amend this Policy from time to time in its discretion and shall amend this Policy as it deems necessary, including as and when it determines that it is legally required by any federal securities laws, SEC rule or the rules of any national securities exchange or national securities association on which the Company's securities are then listed. The Committee may terminate this Policy at any time. Notwithstanding anything in this Section XI to the contrary, no amendment or termination of this Policy shall be effective if such amendment or termination would (after taking into account any actions taken by the Company contemporaneously with such amendment or termination) cause the Company to violate any federal securities laws, SEC rule, or the rules of any national securities exchange or national securities association on which the Company's securities are then listed.

XII. Other Recoupment Rights; No Additional Payments

The Committee intends that this Policy will be applied to the fullest extent of the law. The Committee may require that any employment agreement, equity award agreement or any other agreement entered into on or after the Effective Date shall, as a condition to the grant of any benefit thereunder, require a Covered Person to agree to abide by the terms of this Policy. Any right of recoupment under this Policy is in addition to, and not in lieu of, any other rights under applicable law, regulation or rule or any similar policy in any employment agreement, equity plan, equity award agreement or similar arrangement and any other legal remedies available to the Company. However, this Policy shall not provide for recovery of Incentive-Based Compensation that the Company has already recovered pursuant to Section 304 of the Sarbanes-Oxley Act or other recovery obligations.

XIII. Successors

This Policy shall be binding and enforceable against all Covered Persons and their beneficiaries, heirs, executors, administrators or other legal representatives.

Exhibit A

ACKNOWLEDGEMENT AND AGREEMENT
TO THE
EXECUTIVE OFFICER CLAWBACK POLICY
OF
ELEMENT SOLUTIONS INC

By signing below, the undersigned acknowledges and confirms that the undersigned has received and reviewed a copy of Element Solutions Inc's Executive Officer Clawback Policy (the "Policy"). Capitalized terms used but not otherwise defined in this Acknowledgement Form (this "Acknowledgement Form") shall have the meanings ascribed to such terms in the Policy.

By signing this Acknowledgement Form, the undersigned acknowledges and agrees that the undersigned is and will continue to be subject to the Policy and that the Policy will apply both during and after the undersigned's employment with the Company. Further, by signing below, the undersigned agrees to abide by the terms of the Policy, including, without limitation, by returning any Erroneously-Awarded Compensation (as defined in the Policy) to the Company to the extent required by, and in a manner permitted by, the Policy.

____
Signature

____
Name

____
Date