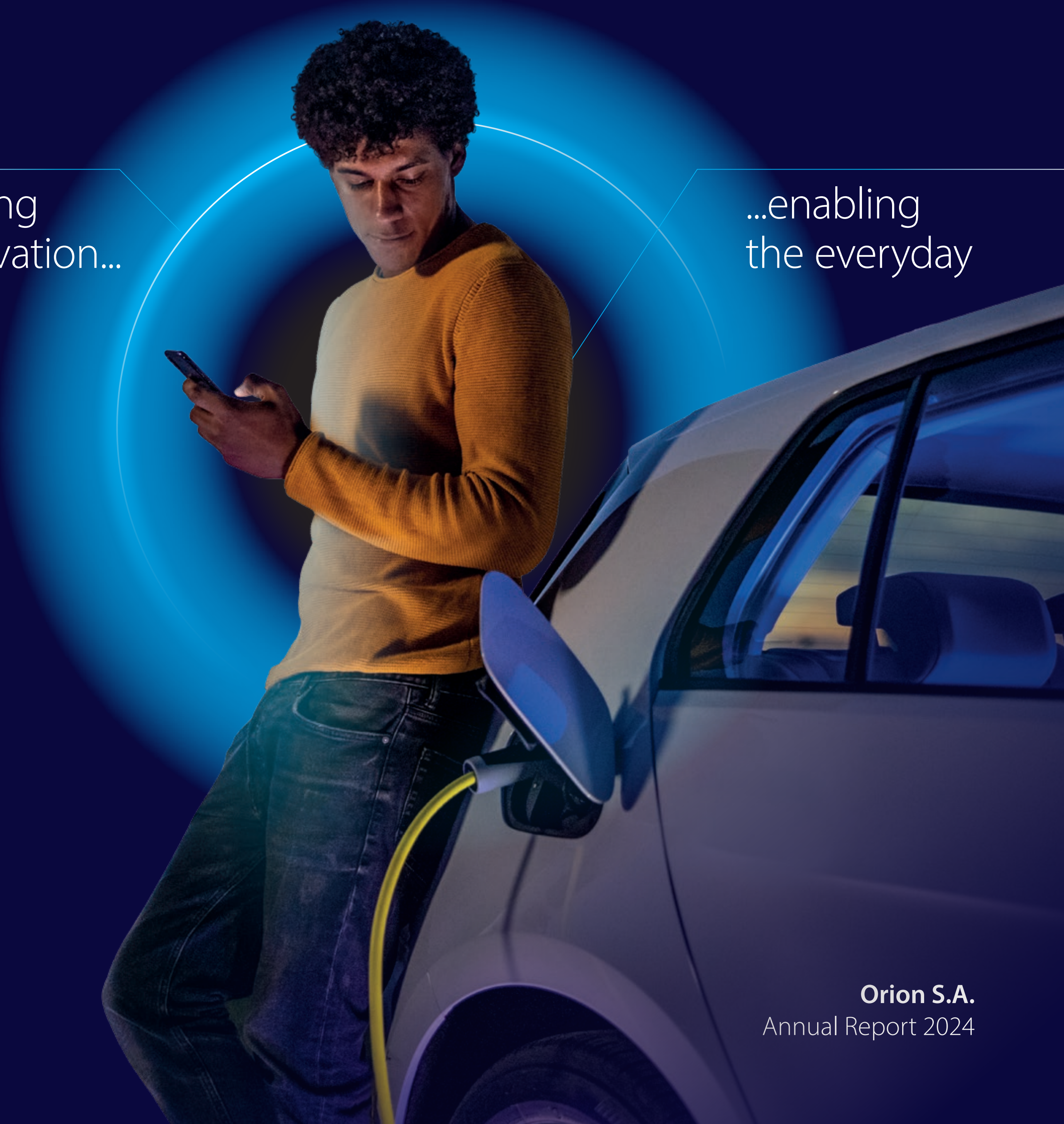
Driving
innovation...

...enabling
the everyday



Orion S.A.
Annual Report 2024

Driving innovation, enabling the everyday

We are Orion

Orion S.A. (NYSE: OEC) is a leading global supplier of carbon black, a solid form of carbon produced as powder or pellets.

The material is made to customers' exacting specifications for tires, coatings, ink, batteries, plastics and numerous other specialty, high-performance applications. Carbon black is used to tint, colorize, provide reinforcement, conduct electricity, increase durability and add UV protection.

Orion has innovation centers on three continents, and we produce at 15 manufacturing plants worldwide, offering the most diverse variety of production processes in the industry. The company's corporate lineage goes back more than 160 years in Germany, where it operates the world's longest-running carbon black plant. Orion is a leading innovator, applying a deep understanding of customers' needs to deliver sustainable solutions.

The company is dedicated to generating long-term benefits for all stakeholders, while remaining committed to responsible business practices with an emphasis on team culture, reliability, innovation and sustainability.

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Our successes as a company are a result of multiple years of focused attention to executing on today's mandates and positioning the company for accelerated and balanced returns for many years to come.

FINANCIAL HIGHLIGHTS

Total sales
($ in billions)

2024

$1.9bn

Year	Total sales
2024	$1.9bn
2023	$1.9bn
2022	$2.0bn
2021	$1.5bn

Adjusted EBITDA[1]
($ in millions)

2024

$302m

Year	Adjusted EBITDA
2024	$302m
2023	$332m
2022	$312m
2021	$268m

Adjusted Diluted EPS[1]
($)

2024

$1.76

Year	Adjusted Diluted EPS
2024	$1.76
2023	$1.92
2022	$1.96
2021	$1.73

1. Reconcilliations of non-GAAP measures to the most directly comparable US-GAAP measures for Adjusted EBITDA and Adjusted EPS can be found on page 7 of this report.

OTHER HIGHLIGHTS

Third consecutive year

Achieved

$300m+

of Adjusted EBITDA. Demonstrated resilience, despite PMI contraction, import-driven headwinds.

Resumed share buyback activity

Repurchased

~2%

of shares outstanding, ahead of anticipated free cash flow inflection 2025–26.

Advanced industry's circularity leadership

Produced from

100%

tire pyrolysis oil (TPO) feedstock. Uniquely positioned to produce scaled volumes of sustainable grades.

Broke ground on Specialty conductives plant

Orion on track for

$500m

of EBITDA capacity. Unique acetylene black capability bolsters Specialty segment capabilities, growth profile.

//

In 2024 we delivered $300+ million of Adjusted EBITDA – for our third consecutive year despite progressively challenging funadamental headwinds, demonstrating the resilience of Orion's business portfolio.

Corning F. Painter
Chief Executive Officer

Dear fellow shareholders

Corning F. Painter
Chief Executive Officer

//
What are potential implications of a new global trade framework? We see a great opportunity for Orion to distinguish itself among chemical industry peers.

We believe the company's EBITDA and our stock's valuation metrics from 2024 neither reflect the substantial positive progress Orion has continued to make, nor do they represent the company's performance potential looking forward. Despite progressively challenging headwinds that emerged, our results in 2024 were a testament to the resilience of our business and organization.

Before reflecting on Orion's 2024 accomplishments, I am certain what is more top of mind for investors is figuring out how to navigate a suddenly less predictable macro backdrop and understanding the implications of the ongoing geopolitical crosscurrents for their portfolio companies or potential investments. Under what could be a new paradigm that shifts trade away from globalization, 2025 appears to be setting up for yet another year for testing Orion's resilience. I see the ongoing disruption and related challenges as a great opportunity for Orion to distinguish itself, particularly in a world where manufacturing relies more on localized production and supply chains.

What are Potential Implications of a New Global Trade Framework?
Our single biggest challenge was softer Rubber segment demand, and the most significant headwind was the impact on our tire customers from an elevated level of tire imports, which undermined demand for their brands. Thus, tariffs targeting the most significant tire exporters, particularly those in Southeast Asia, should relieve pressure on local tire production. Tariffs announced thus far have been both broader and larger than most originally anticipated, and this has created macro uncertainty.

Expectations for a recession have consequently increased, and there may be a variety of implications from the emerging new trade paradigm, both positive and negative. As just one example, the Euro has appreciated year-to-date; thus, FX translation should become a tailwind for Orion. Certain specialty grades exported around the world by us and our competitors may be subjected to tariffs, creating both cost challenges but also opportunity. Overall, we expect Orion's gains from more localized production and related supply chains will help cushion potential adverse impact from a recession, should one materialize.

Challenges Emerged Progressively as 2024 Unfolded.
Reflecting on 2024… no question about it – if judged solely by our earnings progression and share price performance, it was a disappointing year for Orion. While still healthy by historic standards, our EBITDA generation of ~$302 million was down about 9% compared to 2023, and our stock price declined 43% in value. After a relatively strong start to the year, including robust first quarter 2024 results, we expected much better.

At the risk of sounding clichéd, we certainly do not believe these metrics reflect the substantial positive progress Orion has continued to make as an organization, nor do they represent the company's performance potential looking forward.

//
Reflecting conviction about Orion's much higher intrinsic value, we resumed share repurchases under our 5+ million share buyback authorization. In 2024 alone, we bought back ~2% of shares outstanding, deploying about $20 million for repurchases in anticipation of a strong impending inflection in our free cash flow in 2025–2026. Since instituting our buyback program in late 2022, we have reduced our absolute share count by more than 7%.

KEY KPIS IN FOCUS

EBITDA Generation

$300m+

for Third Consecutive Year. Based on initial guidance, Orion anticipates mid single-digit constant currency EBITDA growth in 2025.

Improving free cash flow (FCF) conversion

~50% ▸ 75%

Reduced growth capex needs, coupled with working capital and other initiatives, should help sharply improve FCF conversion metrics.

Continued buyback capacity, appetite

7%

Net reduction in shares outstanding. Without taking leverage risk, we have bought back about 7% of shares outstanding in a little more than two years, and envision capacity for additional return of capital shareholders, considering our stock's valuation and improving free cash flow prospects.

On this point, we understand our stock's valuation serves as a proxy for our company's future prospects, and the market's current assessment of our future is far short of our view – especially with our valuation multiple below the low end of its historic trading averages. Just a few considerations here:

- The carbon black industry is arguably healthier than it's been in decades, including prospectively snug supply/demand fundamentals in our key North American market, looking beyond a potential trade war-induced recession.
- Orion is in an excellent position to take advantage of the ongoing secular shift away from globalization towards "regionalism", where re-shored production will rely more on local supply chains.
- We are concluding several years of elevated capital spending, hence our free cash flow generation is poised to improve sharply.

We believe the confluence of these dynamics should ultimately play to our strengths and enhance returns, translating into a more favorable view of Orion's future than our current valuation implies. In short, we believe Orion's intrinsic value is materially higher than reflected in our current valuation.

We Resumed Share Repurchases in 2024, Reflecting our View on Orion's Higher Intrinsic Value.
Underscoring conviction on this last point, we resumed share repurchase activity in 2024, ahead of the improvement in free cash flow expected in 2025 and beyond. Since August of 2024, including the first quarter of 2025, we have spent about $36 million on repurchases, buying back roughly 4% of our shares outstanding. And in a little over two years now, since our program's authorization in December of 2022, we have repurchased about 5.3 million shares representing 9% of shares outstanding – or about 8% on a net basis, after incentive-based reissuance. While most companies focus on their gross repurchase amounts, we are focused on the true reduction in shares outstanding; we believe our meaningful net reduction will prove beneficial to our shareholders.

Free Cash Flow and Shareholder Friendly Capital Allocation Will be a Key Theme Into Foreseeable Future.
Looking forward, and considering our dramatic reduction in 2025 and 2026 in growth capital, we expect Orion's sharply improving excess free cash flow (FCF) will be allocated predominantly towards debt paydown and/or share repurchases. We can grow by executing on the investments made to date; we do not need significant growth capital once we finish building our La Porte plant. We believe this FCF inflection and shift in capital allocation will be a key catalyst to help unlock greater value.

LOOKING BACKWARD

Burdened with EPA-mandated Capex, Deferred maintenance spending

Reactive plant maintenance, responding to unplanned downtime

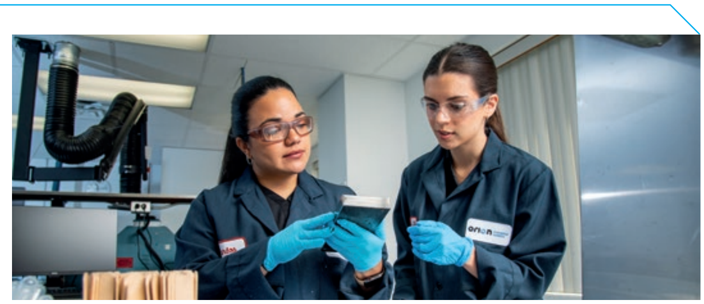
Building toward $500m of Adjusted EBITDA capacity

LOOKING FORWARD

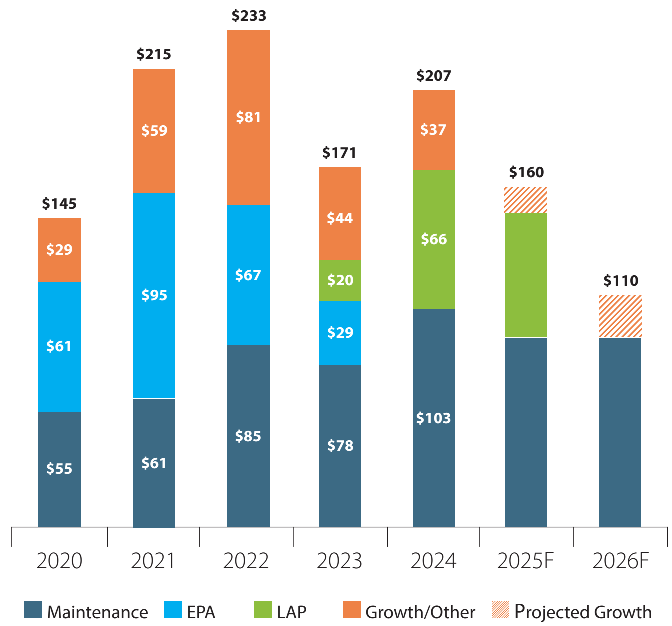
Diminished capital spending needs, greater free cash flow conversion

Shift towards operational excellence; prioritized return-driven projects; preventative maintenance

Value via exploiting leadership position in specialties, circularity



Reduced capital spending outlook portends free cash flow inflection ($ in millions)



Recapping 2024 Results.
Orion achieved over $300 million of EBITDA during 2024 for its third consecutive year. This was despite nearly two and a half years of PMI contraction in key European and North American markets, which comprise roughly two-thirds of company sales. Juxtaposed another way, consider a comparison of 2024 results to the 2016–2018 timeframe. Last year's EBITDA was nearly 14% higher than the average during those pre-pandemic levels, despite ~15% lower volumes on average. A big part of these lower volumes are due to higher tire imports into our key markets. Also notable, the Euro's value was roughly 5% lower last year compared to the average 2016–2018 exchange, and thus a modest headwind. With about 40% of our sales derived in EU countries, we get translation benefit from a stronger Euro.

Let's Take a Look How 2024 Evolved, By Segment.

Rubber Segment Demonstrated Resilience in 2024, Even as Key Customers Were Impacted by Elevated Imports.
After record Rubber segment results in 2023, Rubber demand moderated throughout much of 2024, as customers progressively pared their forecasts as the year elapsed. The primary challenge for our customer base has been the propensity of consumers to trade down to lower-value replacement tires, usually imported, partly because of inflationary pressures on their discretionary spending. Western tire production levels consequently came under pressure because of what our key customers have described as "unprecedented" levels of tire imports, fueling the trade-down dynamic.

These distorted trade flows hurt Orion in particular, because of our strong position in the U.S. and Europe, and an over-indexing to top-tier tire brand customers – those hurt most by the trade-down phenomenon. Our customers effectively lost share downstream in their dealer and retailer channels. Normalization of these trade flows moving forward would benefit Orion.

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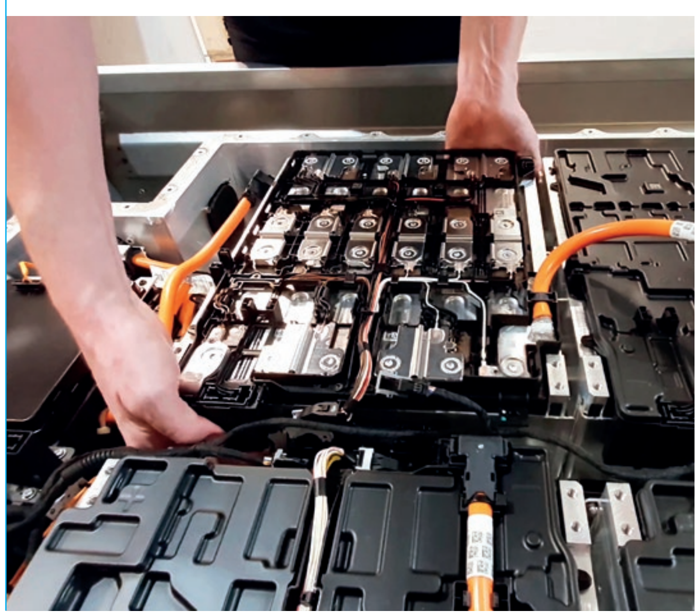
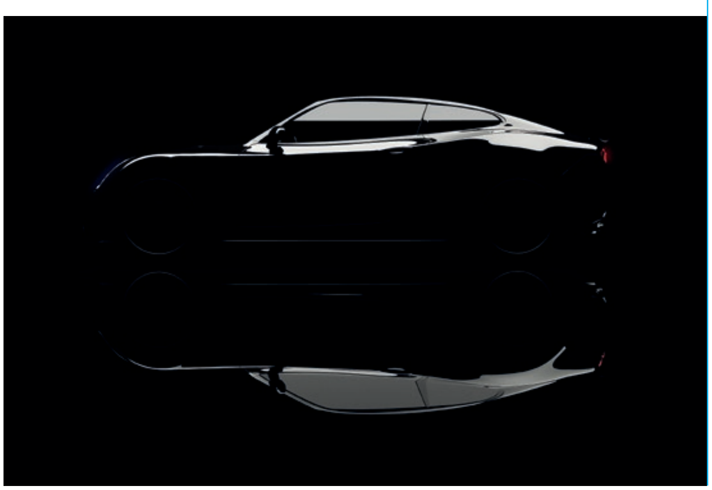
No meaningful additional growth capital is needed near-term to achieve our financial goals. We expect that reduced capital spending will translate into higher Free Cash Flow conversion.



Specialty Segment Volumes Recovered Strongly in 2024, but Earnings Power is Still Much Greater.
After subdued demand conditions in 2023, during which certain key Specialty end markets endured destocking activity, our Specialty segment exhibited broad volume recovery, which were 11% higher in 2024 than prior year levels. Notably, this recovery was most pronounced in higher volume but lower value markets, diminishing overall mix. Adverse mix, the absence of a higher cogeneration contribution (which added to Specialty results in 2023), and other discrete cost headwinds and operational challenges constrained Specialty profit growth. Our strategic plans include the restoration of our Specialty segment's inherently greater earnings power.

We Made Additional Progress Towards Longer-Term Sustainability Goals.
During 2024, we advanced our circularity leadership by establishing formal partnerships including our investment in a European tire recycling company that will facilitate the ramping of commercial scale quantities of tire pyrolysis oil (or TPO) from recycled tires. Orion is uniquely positioned to produce large-scale volumes of circular grades of carbon black for customers focused on these sustainable solutions.

Looking Forward, Uncertainty Abounds… but our Business has Proven Resilient Through More Challenging Times.
Most recently, capital markets have exhibited a great deal of volatility, on concerns associated with a potential end to globalization and related trade wars. Global industrially-oriented sectors, including the chemicals space, have been hit hard and small caps including Orion have been treated even more punitively. While a great deal of uncertainty underpins this volatility, we believe Orion's durability is being underappreciated. Beyond that, we expect our substantial positions in the U.S. and Europe to be advantaged in a shift towards more localized supply chains.



Our company has been tested through a variety of macroeconomic scenarios, and the business has exhibited resilience time and again. Prior to becoming public, the business was managed through economic cycles with higher leverage levels. Volumes declined 15% during 2020 when the Covid-19 pandemic shut down the global economy, but rebounded more than 11% in 2021 despite still subdued economic conditions. Perhaps the most potentially salient example was our performance coming through the 2008–2009 global financial crisis, a.k.a. the "Great Recession". Orion's overall volumes did decline about 14% in 2009, but that was notably following +25% growth in 2008. In 2010, volumes recovered nearly 15% to levels that almost reached those peak 2008 levels, and were about 23% higher than 2007 levels.

Emerging Stronger: Uncertainty Creates Opportunity, and our Tactical Actions Will Help Navigate the Current Backdrop, to Capitalize.
As a smaller and lean company, we believe we can effectively leverage our flexibility and agility to create upside opportunities during uncertain times. For example, slower conditions can allow for greater customer engagement and intimacy, as well as accelerated product qualifications. We will focus relentlessly on executing through these disruptive times, while balancing both short- and long-term objectives. We will look to strategically exploit upside cases, and work hard to mitigate potential negative implications. When all the disruption dust settles, we believe Orion's innate resilience will once again shine. And as we pass this latest proverbial test as an organization, we believe capital markets skepticism will fade, helping unlock the greater value that we and you, as patient shareholders, deserve.

Corning F. Painter
Chief Executive Officer

Reconciliation of Non-GAAP measures
Adj. EPS and Adj. EBITDA
2021 – 2024

EPS to Adjusted EPS (in $ per share)

	Twelve Months Ended December 31,			
	2024	2023	2022	2021
Diluted EPS	**0.76**	**1.73**	**1.73**	**2.22**
Long Term Incentive Plan	0.26	0.26	0.13	0.09
Add back Environmental reserve	–	(0.04)	(0.01)	0.12
Other Adjustments including restructuring	(0.02)	0.01	0.03	0.05
Amortization of Acquired Intangible Assets	0.13	0.12	0.11	0.13
Foreign Exchange Rate Impacts to Financial Results	0.02	0.04	0.03	0.10
Amortization of Transaction Costs	0.13	0.05	0.03	0.07
Reclassification of Actuarial gains from AOCI	–	(0.15)	–	0.08
Misappropriation of assets, net	0.95	–	–	–
Professional fees related to misappropriation of assets	0.06	–	–	–
Tax Effect on Add Back Items	(0.43)	(0.10)	(0.09)	0.19
Adjusted diluted EPS	**1.76**	**1.92**	**1.96**	**1.73**

Net Income to Adjusted EBITDA (in millions)

	Twelve Months Ended December 31,			
	2024	2023	2022	2021
Net Income	**44**	**104**	**106**	**135**
Income tax expense	10	60	52	52
Equity in Earnings of Affiliated companies	(1)	(1)	(1)	(1)
Income before earnings in affiliated companies and income taxes	**53**	**163**	**157**	**186**
Finance costs, net	49	51	40	38
Reclassification of Actuarial (gains)/losses from AOCI	0	(9)	0	5
Income from Operations (EBIT)	**103**	**205**	**197**	**229**
Depreciation and amortization	125	113	106	104
EBITDA	**228**	**318**	**303**	**333**
Loss due to misappropriation of assets, net	59	0	0	0
Other non-operating	15	14	10	(64)
Adjusted EBITDA	**302**	**332**	**312**	**268**

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2024

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 001-36563

ORION S.A.

(Exact name of registrant as specified in its charter)

Grand Duchy of Luxembourg	**00-0000000**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1700 City Plaza Drive, Suite 300 Spring Texas	**77389**
(Address of Principal Executive Offices)	(Zip Code)

(281) 318-2959

Registrant's telephone number, including area code

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stocks, no par value	OEC	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 ☒ No ☐

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

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

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

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

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

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

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

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

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

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

The aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant on June 30, 2024, the last business day of the registrant's most recently completed second fiscal quarter, based on the closing price on that date of $21.92, was approximately $1.28 billion.

The registrant had outstanding 56,654,098 shares of common stock as of February 14, 2025.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's 2025 Proxy Statement, in connection with the Company's 2025 Annual Meeting of Shareholders (in Part III), as indicated herein.

Orion S.A.

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Orion S.A.

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

This report contains and refers to certain forward-looking statements with respect to our financial condition, results of operations and business. These statements constitute forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among others, statements concerning the potential exposure to market risks, statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions and statements that are not limited to statements of historical or present facts or conditions.

Forward-looking statements are typically identified by words such as "anticipate," "assume," "assure," "believe," "confident," "could," "estimate," "expect," "intend," "may," "plan," "objectives," "outlook," "probably," "project," "will," "seek," "target," "to be" and other words of similar meaning. These forward-looking statements include, without limitation, statements about the following matters:

- our strategies for (i) maintaining or strengthening our position in Specialty Carbon Black or Rubber Carbon Black, (ii) maintaining or increasing our Specialty or Rubber Carbon Black margins and (iii) maintaining or strengthening the competitiveness of our operations;
- our profit and cash flow projections;
- the outcome of any in-progress, pending or possible litigation or regulatory proceedings;
- the expectations regarding environmental-related costs and liabilities;
- the expectations regarding the performance of our industry and the global economy, including foreign currency rate fluctuations;
- the sufficiency of our cash on hand, cash provided by operating activities and borrowings to pay our operating expenses, satisfy our debt obligations and fund capital expenditures;
- the ability to pay dividends;
- our anticipated spending on, and the timely completion and anticipated impacts of, capital projects including growth projects, and the construction of new plants;
- our projections and expectations for pricing, financial results and performance in 2024 and beyond;
- the status of contract negotiations with counterparties and the impact of new contracts on our business;
- our expectation that the markets we serve will continue to demand our products;
- our internal controls over financial reporting; and
- loss due to misappropriation of assets and potential recoveries of such loss.

All these forward-looking statements are based on estimates and assumptions that, although believed to be reasonable, are inherently uncertain. Therefore, undue reliance should not be placed upon any forward-looking statements. There are important factors that could cause actual results to differ materially from those contemplated by such forward-looking statements. These factors include, among others:

- possible negative or uncertain worldwide economic conditions and developments;
- the operational risks inherent in chemicals manufacturing, including but not limited to disruptions due to technical difficulties, severe weather conditions or natural disasters;
- our dependence on major customers and suppliers;
- our ability to compete in the industries and markets in which we operate;
- our ability to successfully develop new products and technologies;
- our ability to effectively implement our business strategies;
- the volatility of costs, quality and availability of raw materials and energy;
- our ability to realize benefits from investments, joint ventures, acquisitions or alliances;
- our ability to realize benefits from planned plant capacity expansions and planned and current site development projects;
- any information technology systems failures, network disruptions and breaches of data security;
- our exposure to political or country risks inherent in doing business globally;
- rapidly changing geopolitical environment, conflicts, growing tension between U.S. and other countries, and/or any other escalations may impact energy costs, raw material availability or other economic disruptions;
- our ability to comply with complex environmental, health and safety laws and regulations, and current and any possible future investigations and enforcement actions by governmental, supranational agencies or other organizations;
- environmental, social and governance matters, including regulations requiring a reduction of greenhouse gas emissions or that impose additional taxes or fees on emissions as well as increased awareness and adverse publicity about potential impacts on climate change by us;

- development regulation of carbon black as a nano-scale material;
- our operations as a company in the chemical sector, including the related risks of leaks, fires and toxic releases as well as other accidents;
- any changes in European Union regulations or similar international regulations on chemical carbon that will affect our ability to market and sell our products;
- any market or regulatory changes that may affect our ability to sell or otherwise benefit from co-generated energy;
- any litigation or legal proceedings, including product liability, environmental or asbestos related claims;
- our ability to protect our intellectual property rights and know-how;
- risks associated with our financial leverage;
- restrictive effects of the covenants in our debt instruments;
- any deterioration in our financial position or downgrade of our ratings by credit rating agencies;
- any fluctuations in foreign currency exchange or interest rates;
- the availability and efficiency of hedging;
- any potential impairments or write-offs of certain assets;
- any required increases in our pension fund or retirement-related contributions;
- the adequacy of our insurance coverage;
- any challenges to our decisions and assumptions in assessing and complying with our tax obligations;
- any changes in our jurisdictional earnings mix or in the tax laws or accepted interpretations of tax laws in those jurisdictions;
- the ability to pay dividends on our common stock at historical rates or at all;
- the difference between our stockholders' rights and rights of stockholders of a U.S. corporation;
- the potential difficulty in obtaining or enforcing judgments or bringing legal actions against Orion S.A. (a Luxembourg incorporated entity) in the U.S. or elsewhere outside Luxembourg;
- the difference between Luxembourg & European insolvency and bankruptcy laws from U.S. insolvency laws;
- our relationships with our workforce, including negotiations with labor unions, strikes and work stoppages;
- our ability to recruit or retain key management and personnel;
- any disruptive changes in international and local economic conditions, dislocations in credit and capital markets and inflation or deflation; and
- our ability to generate the funds required to service our debt and finance our operations.

It is not possible for our management to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. For further information regarding factors that could affect our business and financial results and the related forward-looking statements, see "*Item 1A. Risk Factors.*"

Orion S.A

PART I

Item 1. Business

Overview

Orion S.A. (“Orion”, “Company”, “we” or “our”), is a Luxembourg joint stock corporation (*société anonyme* or S.A.), incorporated in 2014 as a Luxembourg limited liability company (*société à responsabilité limitée*). Our registered office is located at 6, Route de Trèves, L-2633 Senningerberg (Municipality of Niederanven), Grand Duchy of Luxembourg. Our principal executive office is located in Spring, Texas, U.S.

We are a leading global manufacturer of carbon black products. Carbon black is a powdered form of carbon that is used to create a variety of desired physical, electrical and optical qualities of various materials. Carbon black products are primarily used as additives for the production of polymers, batteries, printing inks and coatings (“Specialty Carbon Black” or “Specialty”) and in the reinforcement of tires and other rubber applications (“Rubber Carbon Black” or “Rubber”). Our core competencies include the ability to engineer the physical properties of carbon black to meet the functional needs of our customers. The Company is one of the largest global producers of Specialty and Rubber Carbon Black.

We currently operate 14 wholly owned production facilities, excluding the under-construction facility at La Porte, Texas, in Europe, North and South America, South Africa, and Asia, and one jointly-owned production facility at Dortmund, Germany. In addition to our headquarters in Luxembourg, we have our principal executive office in Spring, Texas (U.S.), as well as offices in Frankfurt (Germany), Cologne (Germany), Shanghai (China), Seoul (South Korea), Tokyo (Japan), Sao Paolo (Brazil) and other locations. Our principal research and development (“R&D”) center is located in Cologne (Germany). We also have laboratories to support our customers in Carlstadt, New Jersey (U.S.), Shanghai (China) and Yeosu (South Korea).

We are a premium supplier of carbon black generating long-term benefits for stakeholders while remaining committed to responsible business practices with a focus on team culture, reliability, quality and sustainability.

Our business is organized into two reportable segments: Specialty Carbon Black and Rubber Carbon Black. Our business segments are discussed in more detail later in this section.

Our internet address is www.orioncarbons.com. We make available, free of charge on or through our website, our current Annual Reports in Form 10-K, Quarterly Reports in Form 10-Q, reports in Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after electronically filing such material with, or furnishing it to, the U.S. Securities and Exchange Commission (“SEC”). Information appearing on our website is not a part of, and is not incorporated in, this Annual Report in Form 10-K.

Products and Applications

Carbon black is manufactured in a highly controlled process to produce particles and aggregates of varied structure and surface chemistry, resulting in many different performance characteristics for a wide variety of applications.

Specialty Carbon Black

The Company manufactures Specialty Carbon Black for a broad range of specialized applications such as polymers, batteries, printing and coatings. The various production processes result in a wide range of different Specialty Carbon Black grades with respect to their primary particle size, structure, surface area and surface chemistry. These parameters affect jetness, tinting strength, undertone, dispersibility, electrical conductivity and other characteristics. Carbon black is an additive that enhances the physical, electrical and optical properties of our customer’s end products.

We have several post-treated Specialty Carbon Black grades for coatings and printing applications, as well as several high purity carbon black grades for the fiber industry and conductive carbon black grades for batteries, polymers and coatings. Our specialty grades of carbon black are used to impart color, provide rheology control, enhance conductivity and static charge control, provide UV protection, enhance mechanical properties and provide formulation flexibility through surface treatment. These specialty carbon products are used in a wide variety of applications, such as coatings, inks, plastics, adhesives, toners and batteries.

a. Products

i. ***Carbon Black for Coatings***—We offer a broad range of Specialty Carbon Black products for coatings, which includes products used for pigmentation and protection (e.g., automotive base coats and architectural coatings), for conductivity and for tinting, as well as for paints and for light tinting in transparent coatings (e.g., metallic effects and wood glazing). The diversity of our manufacturing processes allows for the creation of a wide range of Specialty Carbon Black grades with different structures and chemical properties, thereby allowing our products to impart unique characteristics to our customers’ products.

ii. ***Carbon Black for Polymers***—We offer Specialty Carbon Black for polymers in a diverse range of end markets, including pipe (e.g., gas, oil, municipal water, sewage), construction, energy distribution (e.g., power cables), automotive, agriculture and consumer packaging. Certain products within this portfolio provide UV protection against polymer degradation for material such as pipe used for potable water, injection molding, agriculture films and cables. Other products include standard- to high-performance grades designed and modified to provide electrical conductivity, antistatic and reinforcing properties to many different polymer applications, including high-voltage cables, film and high-pressure pipes.

iii. ***Carbon Black for Printing***—We offer Specialty Carbon Black for printing inks used in different printing systems and applications. We apply different process technologies to offer highly specialized products meeting specific requirements, including compliance with food-contact regulations and specially formulated products that require unique attributes such as color undertone, optical density and gloss.

iv. ***Carbon Black for Batteries***—We offer conductive additives for lithium-ion batteries for electric vehicles, energy storage and consumer applications. They can be used both in the cathode and anode. We also offer conductive additives for lead-acid batteries, supercapacitors and dry cell batteries. Our products, which are manufactured in different production processes, are differentiated by high purity, high conductivity, low moisture and easy dispersion, enhancing the performance, lifetime and safety of batteries.

b. <u>Competition</u>

We are one of the largest global producers of Specialty Carbon Black. There are two other large global producers of Specialty Carbon Black. Besides that, there are regional Specialty Carbon Black producers, as well as technology specialists such as acetylene black producers. Orion differentiates by offering the broadest process technology portfolio and Specialty product portfolio to its customers.

Rubber Carbon Black

Our Rubber Carbon Black products are used in tires and mechanical rubber goods (“MRG”). Rubber Carbon Black are used to enhance the physical properties of the systems and applications in which they are incorporated. Rubber Carbon Black have traditionally been used in the tire industry as a rubber reinforcing agent to increase tread durability and are also used as a performance additive to reduce rolling resistance and improve traction. In MRG, such as hoses, belts, extruded profiles and molded goods, Rubber Carbon Black is used to improve the physical performance of the product, including the product’s physical strength, fluid resistance, conductivity and resistivity.

a. <u>Products</u>

i. ***Carbon Black for Tires***—We offer a broad range of carbon black products for tires, which includes high-reinforcing grades and semi-reinforcing grades. Fine particle reinforcing grade carbon black is used mostly in the tread of tires. Other reinforcing grade carbon black is also used in different components of the tire carcass. In addition to standardized grades, we produce advanced grades tailored to meet specific customer performance requirements, such as ECORAX® grades designed to lower rolling resistance and high-performance grades for truck tires and high- and ultra-high-performance passenger car tires.

ii. ***Carbon Black for Mechanical Rubber Goods***—We produce a wide range of carbon black products for a variety of MRG end-uses, including automotive production, construction, as well as certain food, consumer and medical applications. These grades have an exceptionally high purity and high consistency and satisfy special requirements needed for smooth surfaces and electrical resistance. These grades also disperse well in rubber compounds used in parts like window seals, automotive hoses, transmission belts, damping elements and electrically conductive and antistatic rubber goods.

b. <u>Competition</u>

We are one of the leading global producers of Rubber Carbon Black. We compete with two other global companies and multiple regional companies. The smaller regional suppliers mainly participate in standard and MRG applications and are less likely to provide specialized products used in higher-end tire and MRG applications. Competition for our Rubber Carbon Black products is generally based on product quality and performance, supply reliability, technical innovation and customer service.

Drivers of Demand

Besides general global economic conditions, certain specific drivers of demand for carbon black differ among our operating segments. Specialty Carbon Black has a wide variety of end-uses and demand is largely driven by the growth and development of the coatings, polymers, printing and battery industries. Demand for Specialty Carbon Black in the coatings and polymers industries is mainly influenced by the levels of industrialization, automobile original equipment manufacturer (“OEM”) demand, infrastructure development, consumer spending and construction activity. Demand for Specialty Carbon Black in the printing industry is mainly influenced by developments in print media and packaging materials. Demand for Specialty Carbon Black in the batteries industry is driven by electric vehicle penetration, growth of consumer and industrial batteries business and energy storage systems use. Demand for Rubber Carbon Black is largely driven by the growth and development of the automotive tire, commercial tire and MRG industries. Demand for Rubber Carbon Black in tires is mainly influenced by the number of replacement and original equipment tires produced, which in turn is driven by (i) the number of miles driven and truck traffic, (ii) vehicle trends, including the number of vehicles produced and operated, (iii) demand for larger vehicles, such as trucks and buses, (iv) demand for high-performance tires, (v) consumer and industrial spending on replacement tires and on new vehicles, and (vi) changes in regulatory requirements. Demand for Rubber Carbon Black in MRG is mainly influenced by vehicle production and design trends, construction activity and general industrial production.

Customer Contracts

Most of our long-term contracts, 12 months or longer, contain formula-driven price adjustment mechanisms for changes in raw material and/or energy costs. We sell carbon black under the following two main categories of contracts based on price adjustment mechanisms:

- *Contracts with feedstock adjustments (indexed contracts)*—This category includes contracts with monthly or, in some cases, quarterly automatic feedstock and/or energy cost adjustments, which cover approximately 65% of our global volume;
- *Non-indexed contracts*—This category includes short-term contracts (usually shorter than three months) where sales prices of our carbon black products are not linked to carbon black oil market prices.

Many of our indexed contracts allow for periodic price adjustments, while a small portion (by volume sold) allow for quarterly price adjustments. These contracts have enabled us to reduce the impact of fluctuations in oil prices on our margins; however, rapid and significant oil price fluctuations have had and are likely to continue to have significant effects on our earnings and results of operations given (i) not all contracts contain price adjustment mechanisms and (ii) the value of our productivity improvements rises and falls with oil price movements.

See "*Item 1A. Risk Factors—Risks Related to Our Business"—We are subject to volatility in the costs, quality and availability of raw materials and energy, which could decrease our production volumes and margins and adversely affect our business, financial condition, results of operations and cash flows.* Sales prices under non-indexed contracts are reviewed on a regular basis to reflect raw material and energy price fluctuations as well as overall market conditions.

Raw Materials

The principal raw material used in the manufacture of carbon black is carbon black oil composed of residual heavy oils derived from petroleum refining operations, the distillation of coal tars and the production of ethylene throughout the world. The majority of our carbon black oil supply is covered by short and long-term contracts with a wide variety of suppliers. Natural gas is also used in the production of carbon black. These raw material costs generally are influenced by the availability of various types of carbon black feedstock and natural gas, supply and demand of such raw materials and related transportation costs. Some carbon black grades are also produced from acetylene gas, an off-gas received from other chemical producers. Changes in our raw material supplier's operating conditions and demand for their products could reduce the availability of such specialized feedstocks.

Seasonality

Our business is generally not seasonal in nature, although our results of operations are generally weaker in the last three months of the calendar year.

Innovation

We enjoy a long-standing reputation within the industry for carbon black product and process technology, applications knowledge and innovation. Carbon black products are highly versatile and meet specific performance requirements across many industries. This creates significant opportunities for product and process innovation. Further product innovations are a key competitive factor in the industry, even after decades of R&D in this field.

We maintain product applications and process development centers in Europe, Asia and the Americas. Our Innovation Group is divided into applications technology and process development teams, which cover both Specialty Carbon Black and Rubber Carbon Black. The applications technology team works closely with our major clients to develop innovative products and expand the applications range for carbon black products. The process development team works closely with our manufacturing and procurement teams to improve production processes, product quality and cost structure and advance the use of bio-circular feedstocks.

Our Innovation function's leading center of excellence is located in Cologne (Germany) to support and enhance our global innovation function as well as R&D activities. This center includes applications technology laboratories and process development staff, co-located with our pilot process development facilities. Staffing in our Cologne technical center includes physicists, chemists and engineers who collaborate to create and analyze various carbon black properties with a goal to identify existing products or develop new products to meet customer requirements. Common processes and information technology tools further enhance coordination and communication with our regional technical centers located in China, South Korea and the U.S.

- ***Applications Technology***—Our goal is to remain at the forefront of the industry in terms of product development by having dedicated applications technology facilities. Success relies on close collaboration with customers, often through long-term R&D alliances, which create superior technical interfaces. These interactions enable us to develop tailored solutions and meet unique customer requirements.

Our applications technology team brings together a deep knowledge of carbon black technology with an understanding of the key applications practiced by our customers. This team has access to extensive laboratory and testing facilities using similar formulations, processing and test methods employed by our customers. Customer collaborations often include cooperative testing with customers' staff in our facilities. Applications technology provides a key customer and market interface and translates specific customer needs into carbon black product attributes.

Applications technology plays a supporting role in the process of new product launches by providing technical data and presentations, training and support, and establishing and monitoring quality targets. Our team works closely with customers to provide support during the qualification cycle, which can be long and may last over several years. Our close cooperation decreases the likelihood of customers switching suppliers once a product has been approved.

Product quality test methods and applications testing are defined within the applications technology team. Methods are developed centrally and deployed worldwide to relevant production and applications laboratories to assure consistency in measurements and reporting.

- ***Intellectual Property—***We consider intellectual property development and management as a strategic competitive advantage. We initiate and maintain patents and trademarks, with varying expiration dates, on a number of our products and processes. We sell our products under a variety of patents and trademarks we own, and we take reasonable measures to protect them.

  In connection with the separation of our business from *Evonik Industries AG, Germany* ("Evonik") more than ten years ago, Evonik assigned to us its intellectual property that was exclusively used in its carbon black business and granted certain intellectual property rights that are still also in use in Evonik's retained business in turn for us granting certain intellectual property rights to Evonik for fields outside of carbon black. Consequently, we may be restricted in leveraging intellectual property that we use on the basis of a license from Evonik or the intellectual property that is subject to grant-back licenses when expanding our business into fields outside of carbon black. For additional information, see "*Item 1A. Risk Factors—Legal and Regulatory Risks—We may not be able to protect our intellectual property rights successfully.*"

Human Capital

We are a group of individuals who share one common passion: carbon black. Our success depends on attracting, recruiting, training and developing a talented global workforce. We believe people are at the heart of our business and work to advance a positive work culture. We strive to be an optimal employer for our employees, as well as a valued partner to our communities. We engage with our employees to provide a challenging, and dynamic work environment that supports each individual professional development, positive work environment, and long-term health and wellness. We are committed to promoting a workplace of belonging where our employees are informed, engaged and enabled to do their best work and be their best selves. We are also committed to providing our employees with opportunities for learning and personal growth in an environment where creativity and innovation are encouraged.

Aligning employee engagement and enablement remains a key component for the continued success of Orion. We have built a value system around a foundation of appreciating our employees through trust, respect and development. To ensure our employees are both motivated to do their work and equipped with the right tools and training to be successful, we start with listening. We regularly use employee surveys and feedback sessions to help ensure all the voices of our employees are heard. We continue to use the feedback to prioritize our human capital strategy and continue to upgrade our talent management programs, focusing on specific actions to improve learning and to promote employee development and career growth. Our talent programs are made up of several components:

- formal learning programs to equip employees with the leadership, technical and functional skills required for their current and future roles;
- on-the-job training through assignments that provide new roles and projects;
- formal and informal mentoring programs;
- succession planning;
- empowerment groups;
- formal and informal performance reviews with line managers and others; and
- individual development plans.

Orion is made up of approximately 1,658 employees with four innovation centers and 14 wholly owned plants excluding the under-construction facility at La Porte, Texas. The company's corporate lineage goes back more than 160 years to Germany, where it operates the world's longest-running carbon black plant. Orion is a leading innovator, applying a deep understanding of customers' needs to deliver sustainable solutions, offering the most diverse variety of production processes in the industry.

We strive to create a welcoming environment where everyone can belong, grow and thrive. We place a premium on the freedom for our employees to be their authentic selves and offer an equal chance to bring different skills, backgrounds and experiences to work. To realize our commitments, we strive to:

a. Enable a trusting environment so employees are free to share individual experiences to increase understanding.

b. Promote an environment where each Orion employee owns the responsibility to exemplify inclusive behavior and treat others with respect, dignity and empathy.

c. Require our leaders to drive a culture that enhances inclusiveness, fairness, the ability to hire people talent whatever their background may be and ensure accountability within the company.

A focus on promoting from within has led to continued increases in internal fill rates for open positions and the involvement of business leaders across the organization in talent and succession planning reviews to assess employees on performance and future potential. These talent reviews continue to identify high potential employees, build bench strength, increase retention and help us identify our future leaders and innovators. These reviews also allow us to identify gaps in our organization and the actions needed to fill those gaps.

We uphold the freedom of association and fully recognize the right of collective bargaining. Certain of our employees are represented through unions and works councils. We value exchanging information and views with the local unions and works councils with the view to finding solutions to our common issues and ensuring success for both our employees and the Company.

Labor Relations

Our employees are represented by labor unions, industry groups and works councils in accordance with local law and practices. Membership in employee labor unions varies in accordance with the business area, local practice and country. We have entered into collective bargaining agreements with employee labor unions either directly or as members of industry-wide unions or employer organizations. Approximately 66% of our employees are covered by such agreements. These agreements typically govern, among other things, terms and conditions of employment and reflect the prevailing practices in each country. We believe we have stable relations with our employees, and voluntary turnover is low.

Environmental, Health and Safety Matters

Protection of people and the environment, fair treatment of our partners and a clear alignment to our customers' needs are essential components of our activities. We strive not only to comply with all applicable laws and voluntary obligations, but to continuously improve our performance and management systems. Our integrated global management system with established standards and processes is based on the principles of the Responsible Care 14001 for Environmental, Health, Safety and Security Management System, International Organization for Standardization's ("ISO") 9001 Quality Management System, ISO 14001 Environmental Management Systems and ISO 45001 Safety Management Systems. All of our operating sites are third-party certified to ISO 14001 and ISO 9001 standards. Our global management system outlines our processes and procedures practiced in relation to environmental protection, occupational safety, industrial hygiene, security and quality management as well as sustainable compliance and product stewardship.

Our annual sustainability report is accessible on our webpage: www.orioncarbons.com. Our sustainability report is not incorporated by reference into this Annual Report in Form 10-K.

Our operations involve the use, processing, handling, storage and transportation of materials that are subject to international, national and local environmental and safety laws and regulations. All our production facilities require operating permits. We believe that our operations are currently in substantial compliance with all applicable environmental, health, safety and security laws and regulations. Our management systems and practices are designed to ensure compliance with laws and regulations, and increasingly stringent regulation may require us to make additional unforeseen environmental, health and safety expenditures.

Environmental

Air Quality—One of the main environmental challenges of a carbon black plant is the management of exhaust gas from production processes. This exhaust gas contains a number of regulated pollutants, including carbon monoxide, nitrogen oxides and sulfur compounds. The most common method for controlling these gases is through combustion, which produces useable energy as a by-product. Currently, eleven manufacturing sites, including one jointly owned production facility, have the capability to beneficially utilize these gases through some form of energy co-generation, such as the sale or reuse of steam, gas or electricity.

The primary air pollutants of concern include sulfur dioxide ("SO_2"), nitrogen oxides ("NOx") and particulates. In order to maintain compliance with emission requirements in certain jurisdictions, we utilize various de-NOx and desulfurization processes, as well as controlling sulfur levels in our feedstocks as needed. We control the particulate matter by using bag filter technology and following best management practices.

In the European Union ("EU"), we are subject to the EU Directive No. 2010/75/EU amended by 2024/1785 Directive on industrial emissions ("IED Directive"), which regulates pollution from industrial activities and includes rules aiming to reduce emissions into air, water and land and to prevent the generation of waste. In addition to the IED Directive and its implementation, European jurisdictions in which we operate may provide for further regulations regarding emission reduction and safety technology standards that apply to our facilities (for example, the German Emissions Control Act). In 2024, the EU Commission revised the EU measures addressing pollution from large industrial installations, as it was announced in the European Green Deal. The aims of the revision were to progress towards the

EU's zero pollution ambition for a toxic-free environment and to support climate, energy and circular economy policies. This included the revision of the IED Directive that was issued and implemented in 2024.

In the U.S., we are subject to emissions limitations on prevention of significant deterioration ("PSD") permits issued under the federal Clean Air Act ("CAA"), as well as analogous state and local laws, which regulate the emission of air pollutants from our facilities and impose significant monitoring, record keeping and reporting requirements. In addition, these laws and regulations require us to obtain pre-approval for the construction or modification of facilities expected to produce or significantly increase air emissions and to obtain and comply with air permits that include stringent conditions on air emissions and operations. In certain cases, we may need to incur capital and operating expenditures for specific equipment or technologies to control emissions. We have incurred, and expect to continue to incur, substantial administrative and capital expenditures to maintain compliance with CAA requirements.

Pursuant to the CAA, the U.S. Environmental Protection Agency ("EPA") has developed industry-specific National Emission Standards for Hazardous Air Pollutants ("NESHAPs") for stationary sources classified as "major" on the basis of their hazardous air pollutant emissions. Under these, we are required to comply with Maximum Achievable Control Technology ("MACT") standards. Our U.S. facilities are subject to MACT standards applicable to carbon black facilities, as well as MACT standards applicable to industrial boilers. The EPA amended existing carbon black MACT standards, which increased stack testing frequency and imposed more stringent startup and operating requirements for our U.S. plants. The U.S. plants are generally in compliance with MACT standards.

In China and South Korea, our operations have been subject to increasingly strict air quality regulations in recent years. We believe we are in substantial compliance with these regulatory changes in China and South Korea. We expect that future regulations may require additional capital and operating expenditures for specific equipment or technologies to control emissions that are being developed as needed to meet these new requirements.

Greenhouse Gas Regulation and Emissions Trading—Our facilities emit significant volumes of CO_2. In the EU, all of our production facilities (except for our manufacturing site in France) are subject to the European Emission Trading System ("EU ETS") for CO_2 emissions. Industrial sites to which the EU ETS applies receive a certain volume of allowances in metric tons to emit greenhouse gases ("GHG") and must surrender allowances in equivalent volume for each metric ton of greenhouse gas ("GHG") emitted. Carbon black production is currently listed on the carbon leakage list, which allows receiving a certain quantity of needed emission allowances free of charge. From January 1, 2021, the EU ETS has stepped into its Phase 4 period running until 2030. However, as part of the EU Green Deal the EU has adopted a climate law enshrining its new climate targets of at least a 55% reduction in GHG emissions by 2030 compared to 1990 levels and net zero by 2050. The European Commission published its first part of the "Fit for 55" package in July 2021 to enable the EU to meet those targets. The actual EU ETS is expected to be subject to regular reviews and possible changes in order to ensure the way to achieve those climate reduction targets. These regular reviews are resulting in reduction of free emission certificates allocated to industrial installations in order to engage them meeting the reduction targets and being carbon neutral.

The design concept of the South Korean Emission Trading System is similar to the EU ETS. We may need to purchase emission rights for our South Korean plant to cover the shortfall where emissions exceed the quantity of free allowances, incurring additional costs.

In the United States, the EPA regulates GHG emissions under the CAA and has adopted rules that require reporting of GHG emissions by owners and operators of facilities in certain source categories, which include our facilities. At the state level, some states have already taken legal measures to reduce emissions of GHG, primarily through the planned development of GHG emission inventories and/or regional GHG cap-and-trade programs. Currently none of our plants are located in states that have implemented GHG cap-and-trade programs, but there is no assurance that future changes will not materially affect our operations or require material capital expenditures. The adoption of legislation or regulations that require reporting of GHG, establish permitting thresholds based on GHG emissions or otherwise limit or impose compliance obligations for emissions of GHG from our equipment and operations could require us to incur costs to obtain and comply with permits, reduce emissions of GHG associated with our operations or purchase carbon offsets or allowances.

There are also ongoing discussions and regulatory initiatives in other countries in which we have production facilities, regarding GHG emission reduction programs. For instance, South Africa has adopted a CO_2 tax regime.

Water Quality—Our plants are net consumers of water and are generally subject to laws and regulations related to water management. Most of our plants recycle a substantial amount of the water used in the manufacturing process, which is re-used as "quench water" in the cooling process.

Contamination—As we handle chemicals that could cause water or soil contamination, we may be subject to remediation obligations under national laws. Additionally, third parties have in the past and may in the future be able to file claims for personal injury and property damage allegedly caused by the release of hazardous substances or other pollutants into the environment.

In particular, the German Federal Act on Soil Protection requires the prevention of soil contamination by taking adequate precautions. In the United States, our facilities are subject to the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), the Resource Conservation and Recovery Act ("RCRA") and similar state laws. CERCLA establishes liability for parties, including current and former site owners and operators, generators, and transporters, in connection with releases of hazardous substances. Under CERCLA, we may be subject to liability without regard to fault or the lawfulness of the disposal or other activity. RCRA is the principal federal statute regulating the generation, treatment, storage and disposal of hazardous and other wastes. RCRA and state-level hazardous waste regulations impose detailed operating, inspection, training and response standards and requirements for permitting, closure, remediation, financial responsibility, record keeping and reporting. Our sites have areas currently and formerly used as landfills that are subject to regulation under RCRA, and certain of our facilities have been investigated and remediated under RCRA. These laws and regulations may also expose us to liability for acts that were in compliance with applicable laws at the time we performed those acts. We could incur significant costs in connection with investigation and remediation activities or claims asserted at current or former facilities or third-party sites.

Non-hazardous and Hazardous Waste—In some jurisdictions in which we operate, we are subject to provisions regarding waste management and the handling and storage of hazardous substances. We generate both hazardous and non-hazardous wastes at our facilities that we manage in accordance with applicable laws and regulations. Waste streams generated at our facilities include but are not limited to office trash, carbon black, solvents, refractory materials, catalyst materials, and non-saleable sulfuric acid. Certain facilities have on-site landfills permitted for the disposal of non-hazardous solid waste, but we are not currently using these landfills to dispose of waste. Any waste that is not recycled or reused is managed off site in compliance with local laws and regulations.

Chemical Regulations—Some jurisdictions we operate in have established regimes to regulate or control chemical products to ensure the safe manufacture, use and disposal of chemicals.

In the EU, the Regulation on Registration, Evaluation, Authorization of Chemicals ("REACH") requires chemical manufacturers and importers in the European Union to register all chemicals manufactured in or imported into the EU in quantities of more than one metric ton annually. Registration has to be made with the European Chemicals Agency ("ECHA"), and the use of certain "highly hazardous chemicals" must be authorized by ECHA. Furthermore, REACH contains rules on bringing substances to the market that have been identified as substances of very high concern. In the United States, we are subject to federal and state chemical regulations. Under the Toxic Substances Control Act ("TSCA"), the EPA is required to maintain a list of each chemical substance that is manufactured or processed, including imports. This inventory plays a central role in the regulation of most industrial chemicals in the United States. Carbon black is listed and maintained as an active substance in the TSCA Chemical Substance Inventory, and all our facilities are subject to chemical data reporting rules ("CDR"). Under CDR, we are required to submit basic exposure information to EPA every five years. In California, we are subject to the California Safe Drinking Water and Toxic Enforcement Act, which imposes labeling and record keeping requirements. In South Korea, under its Chemical Control Act, coal-based feedstock oils such as crude coal tar ("CCT"), coal tar distillate ("CTD") and soft pitch oil ("SPO") containing more than 0.1% quinoline are treated as hazardous chemicals requiring production sites to be duly licensed.

We are a member of the International Carbon Black Association (the "ICBA"). The ICBA seeks to address common environmental, health and safety issues, undertakes research on health implications of carbon black, and serves as the leading advocate for the industry in the regulatory and public-interest arenas. The ICBA funds research on international environmental, health, product safety and workplace safety matters concerning carbon black.

We are also a member of the European consortium for carbon black ("CB4REACH Consortium") which has pre-registered and registered carbon black with ECHA as required by the REACH Regulation. Besides the Company, the following companies are members of the CB4REACH Consortium: Cabot Corporation, Cancarb Limited, Birla Carbon, Continental Carbon Company, Tokai Carbon CB Ltd. and Imerys Graphite & Carbon.

In addition, we are a member of the European Chemical Industry Council ("CEFIC"), a European trade association for the EU chemical industry. CEFIC offers services and expertise to its members on regulatory, scientific, and technical matters. It engages, advocates, and represents the industry to create the right support and policy frameworks in the EU and beyond. CEFIC flags new EU legislative initiatives and provides information to its members to timely prepare and mitigate impact on their business and operations.

Health, Safety and Security—The health, safety and security of our employees and customers is one of our highest priorities. We strive to continually improve and attain the top performance on occupational injury and illness rates as compared to the chemical industry. New employees and contractors working and visitors on site are given environmental, health, safety and security ("EHSS") training, and we keep track of EHSS concerns and issues from our employees. Employees are required to report incidents including "near misses" into our electronic EHSS management system. Our sites are required to implement and report EHSS leading and lagging indicators for EHSS performance. Plant managers are required to track and monitor these leading and lagging indicators and take action as appropriate. Leading and lagging indicator data and incidents are reviewed by senior management on a monthly basis.

Product Stewardship—Carbon black is produced under controlled conditions and has high purity levels. It therefore differs from other combustion products that may contain high concentrations of hazardous compounds. Due to its high purity, certain carbon black grades are permitted for use in cosmetics or in products in contact with food.

The International Agency for Research on Cancer ("IARC") classifies carbon black as a Group 2B substance (possible human carcinogen). We have communicated IARC's classification of carbon black to our customers and employees in accordance with applicable regulatory requirements. Based on IARC's classification some regulatory jurisdictions now classify carbon black as a possible carcinogen. The Permanent Senate Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (the "MAK Commission") of the German Research Foundation (*Deutsche Forschungsgemeinschaft*), which uses a different rating system, classifies carbon black as a suspect carcinogen (Category 3). Any risk reclassification of our raw materials, intermediates or finished product could result in increased operating costs or affect product lines or sales.

The Community Rolling Action Plan ("CoRAP") indicates substances for evaluation by the member states of the EU. The evaluation aims to clarify the initial concern that manufacturing and/or use of shortlisted substances could pose a risk to human health or the environment. With ECHA's update of the CoRAP list in March 2016, carbon black was included in CoRAP for substance evaluation in 2018, though such evaluation has been postponed several times. With ECHA's most recent December 2024 update, the carbon black substance evaluation is proposed to be further delayed to 2027. The substance evaluation for carbon black was proposed by France. The initial reasons of concern raised by the French Agency for Food, Environmental and Occupational Health & Safety ("ANSES") relate to carbon black being an alleged carcinogenic substance and a suspected reproduction toxicant. Orion is working as a member of the CB4REACH Consortium and ICBA to address the reasons for nomination. The conclusion of the evaluation may have significant business impact should ANSES conclude that carbon black poses a risk to human health. A potential outcome could be a harmonized classification and labeling of carbon black for carcinogenicity and toxicity to reproduction. These developments may significantly affect our business, including increasing costs of doing business.

According to the recommendation of October 18, 2011 (EU COM 2011/696/EU), the majority of carbon black grades are defined as a nanomaterial in Europe. This status for carbon black has not changed with the most recent update of the recommendation of June 10, 2022 (2022/C 229/01). The ISO developed the ISO TC 229 "Nanotechnologies," which considers carbon black as a "nano-structured material." Other countries (such as, the U.S., Canada, France, Belgium, Sweden, Switzerland, etc.) have implemented notification schemes related to nanomaterials. In Europe, Commission Regulation (EU) 2018/1881 as of December 3, 2018 amending REACH introduced new information requirements for substances with forms meeting the definition criteria of EU COM 2011/696/EU. The notification of carbon black under the different notification schemes as well as meeting the new nano-related information requirements under REACH requires capital and resource commitments to compile and file dossiers. Furthermore, more and more specific requirements for substances regarded as nanomaterials are emerging within Europe. For example, Germany has introduced a more stringent "Occupational Exposure Limit" for nanomaterials. These developments may significantly affect our business, including increasing costs of doing business.

Further Regulatory Matters

We are subject to further governmental regulation from state, national, EU and other international regulatory authorities concerning, among other things: product safety, export and import control regulations and other customs regulations, data protection, supply chain compliance as well as our competitive and marketplace conduct. We believe that we are in compliance in all material respects with these regulations. We cannot guarantee, however, that any future changes in the requirements or mode of enforcement of these laws and regulations will not have a material adverse effect on our business, financial condition, results of operations or cash flows.

Item 1A. Risk Factors

The following risks may have material adverse effects on our business, financial condition and results of operations. Additional risks and uncertainties of which we are not presently aware or that we currently deem immaterial could also materially affect our business operations and financial condition.

Risks Related to Our Business

Negative or uncertain worldwide economic conditions may result in business volatility and may adversely impact our business, financial condition, results of operations and cash flows.

Our operations and performance are materially connected to worldwide economic conditions. Because carbon black is used in a diverse array of end products, demand for carbon black has historically been related to real gross domestic product ("GDP") and general global economic conditions. In particular, a large part of our sales has direct exposure to the cyclical automotive industry and, to a lesser extent, the construction industry. As a result, certain parts of our business experience a level of cyclicality. The nature of our business and our large fixed asset base make it difficult to rapidly adjust our fixed costs downward when demand for our products declines, which could materially affect our profitability. Global and regional economic downturns have in the past, and may in the future, reduced demand for our products, which have decreased and would decrease our revenue, and could have a material adverse effect on our business, financial condition, results of operations and cash flows. In periods with significant market turmoil or tightened credit availability, we could experience difficulties in accounts receivable collections, pricing pressures and reduced global or local business activity.

Our customers may terminate or attempt to amend their agreements for the purchase of our products due to decline in their demand and production, bankruptcy, lack of liquidity, lack of funding, operational failures, force majeure, hardship or other reasons. The current energy, financial, economic and capital markets environment, and future developments in these and other areas, present material uncertainty and risk with respect to our performance, financial condition, volume of business, results of operations and cash flows.

Our operations in the EU are material to our business and important to our customers. If the competitiveness of manufacturing in the EU continues to decrease in light of factors such as increased environmental compliance costs, inconsistent economic policies and rigid labor practices, our customers may have difficulty maintaining the competitiveness of their operations in this region or lose meaningful market share to lower cost imports from other regions, particularly Asia. For example, a shift in tire production from a higher cost region (such as the EU) to a lower cost region (such as Asia) could increase the export of tires made in Asia for sales into Europe and could result in a reduction in tire production in the EU and reduce our profitability.

In addition, changes in, or tensions relating to, U.S. or other countries' trade relations with countries where we do business or from which we source necessary supplies may adversely impact our business. The imposition of additional restrictive policies by individual countries could lead to unexpected operating difficulties in countries we operate or do business with. Actual or threatened tariff measures have, and may continue to have, impacts on global markets and foreign exchange rates. Any of these could increase our costs and negatively impact our financial condition, results of operations and cash flows.

Our business is subject to operational risks, which could adversely affect our business, financial condition, results of operations and cash flows.

Our operations are subject to hazards inherent in chemicals manufacturing and the related use, storage, transportation and disposal of feedstocks, products and wastes, including, but not limited to, fires and explosions, accidents, accidental oil or product releases, severe weather and natural disasters (including hurricanes, tornadoes, ice storms, droughts, floods and earthquakes, some of which are significantly increasing in likelihood because of climate change), pandemics (e.g. COVID-19) or epidemics, mechanical failures, unscheduled downtime at our production facilities or at facilities that supply raw materials to us, transportation interruptions, disruption to harbor-, road-, pipeline- or storage tank-access, pipeline, tank and silos leaks and ruptures, quality problems, technical difficulties, energy grid shutdowns, discharges or releases of toxic or hazardous substances or gases, other environmental risks, sabotage, acts of terrorism or other acts of violence as well as potential boycotts, strikes, sanctions or blockades.

Such events have in the past disrupted, and could in the future disrupt, our supply of raw materials or otherwise affect sales, production, transportation and delivery of our products or affect demand for our products. We could incur significant expenditures in connection with such operational risks. These may be caused both by external and internal factors noted above, as well as war, military operations, strikes, official orders, technical interruptions, material defects, accidents or mistakes. In all of these cases, our property, third-party property or the environment may sustain damage, or there may be human exposure to hazardous substances, personal injuries or fatalities. Such events could result in material financial liabilities, civil or criminal law consequences, the temporary or permanent closure or loss of control over the relevant production or administrative sites or power plants and a negative impact on our financial condition, results of operations and cash flows.

We are dependent on major customers for a significant portion of our sales, and a significant adverse change in a customer relationship could negatively affect our business, financial condition, results of operations and cash flows.

Customer concentration is driven by the consolidated nature of the industries we serve. In 2024, our top ten customers accounted for approximately 47% of our volume measured in thousand metric tons ("kmt"). Our success in continuing to strengthen relationships and grow our business with our largest customers and in retaining their business over extended time periods could affect our future results. The loss of any of our major customers (including due to industry consolidation) or a reduction in volume sold to them, could adversely affect our results of operations. Any deterioration in the financial condition of any of our customers or the industries they operate in or serve that impairs our customers' ability to place orders or make payments to us could decrease our sales or increase our uncollectible receivables and could adversely affect our business, financial condition, results of operations and cash flows.

We may not be able to compete successfully in the industries and markets in which we operate.

The industries in which we operate are highly competitive based on price, product innovation, product quality, distribution capability, and industry and customer knowledge. We face competition from global and regional suppliers, both in developed and in emerging regions. While we aim to operate at low cost and are focused on reducing our fixed and variable cost bases across our production chain, there may be improvements in the cost competitiveness of other manufacturers relative to us or in the performance properties of substitutable products and raw materials, which could result in advantages for our competitors that adversely affect our business. Furthermore, some of our competitors may have greater financial and other resources, enhanced access to governmental funding or a larger capitalization than we have. Additionally, our business is sensitive to industry capacity utilization, and pricing tends to fluctuate when capacity utilization changes occur, which could affect our financial performance. If we are unable to respond successfully to changing competitive conditions, the demand for our products could be adversely affected which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may not successfully develop new products and technologies that address our customers' changing requirements or competitive challenges, and our customers may substitute our products by using other products we do not offer.

The industries into which we sell our products are subject to periodic technological changes, ongoing product improvements, product substitution and changes in customer requirements. Increased competition from existing or newly developed products offered by our competitors or companies whose products offer a similar or better functionality to our products may negatively affect demand for our products. We work to identify, develop and market innovative products on a timely basis to meet our customers' changing requirements and competitive challenges. Should we not be able to substantially maintain or further develop our product portfolio, customers may elect to source comparable or other products from competitors, which could adversely affect our business, financial condition, results of operations and cash flows.

Although carbon black continues to offer opportunities for product and process innovation, we cannot be certain that the investments we make in our innovations will result in proportional increases in revenue or profits. In addition, the timely commercialization of products that we are developing may be disrupted or delayed by manufacturing or other technical difficulties, industry acceptance or insufficient industry size to support a new product, competitors' new products, or difficulties in moving from the experimental stage to the production stage. These disruptions or delays could adversely affect our business, financial condition, results of operations and cash flows.

As a reinforcing agent in certain rubber applications, carbon black competes primarily with precipitated silica in combination with silane, neither of which are part of our product portfolio. Historically, silica has offered some performance benefits over carbon black in the area of rolling resistance. To date, silica-based tire applications have gained position in passenger car tire treads. Although substitution has not been significant due to carbon black's cost advantage, technological advances and changing customer requirements may lead to increased demand for silica-based tires, especially in developed regions. Increased substitution and competition from precipitated silica producers could adversely affect our business, financial condition, results of operations and cash flows. If we should decide to include precipitated silica in combination with silane in our product portfolio in the future, we may be restricted in our ability to do so under our intellectual property sharing arrangements with Evonik Industries AG ("Evonik") and its affiliates, one of our previous owners.

Alternative materials, procedures or technologies may be developed, or existing ones may be improved and may replace those currently offered in the carbon black industry. If such newly developed or improved products are being offered at lower prices, have preferable features or other advantages, in particular from a regulatory perspective, and we are not able to offer similar new or improved products, we may lose substantial sales volume or customers, which could have an adverse effect on our business, financial condition, results of operations and cash flows.

We may be unable to implement our business strategies in an effective manner.

Our future financial performance and success largely depend on our ability to maintain and improve our current competitive position and to implement our business strategies for growth successfully. We cannot guarantee that we will successfully implement our business strategies or that implementing these strategies will sustain or improve and not harm our results of operations. We may not be able to increase or sustain our manufacturing efficiency or asset utilization, enhance our current portfolio of products or achieve other fixed or variable cost savings. In addition, the costs involved in implementing our strategies may be significantly higher than we currently anticipate. Our ability to complete capacity expansions may be delayed or interrupted by the need to obtain environmental and other regulatory approvals, the availability of labor and materials, unforeseen hazards, such as weather conditions, adverse political or market developments, and other risks associated with construction or expansion projects. Moreover, the cost of expanding capacity could have a negative impact on our financial results until capacity utilization is sufficient to absorb the incremental costs associated with the expansion. Further, labor or governmental restrictions could impede or delay our ability to reduce headcount in the event headcount reduction is deemed to be sensible in our opinion.

Our business strategies are based on our assumptions about future demand for our existing products, the new products and applications we are developing, and on our continuing ability to produce our products profitably. Each of these factors depends on, among other things, our ability to realign our product portfolio, divest businesses on favorable terms and with minimal disruptions, discontinue product lines with minimal disruption, finance our operations and product development activities, negotiate favorable terms, maintain high-quality and efficient manufacturing operations, relocate and close certain manufacturing facilities with minimal disruption to our operations, respond to competitive and regulatory changes, access quality raw materials in a cost-effective and timely manner, and retain and attract highly skilled technical, managerial, marketing and finance personnel. Any failure to develop, revise or implement appropriate business strategies in a timely and effective manner may adversely affect our business, financial condition, results of operations and cash flows.

We are subject to volatility in the costs, quality and availability of raw materials and energy, which could decrease our production volumes and margins and adversely affect our business, financial condition, results of operations and cash flows.

Our manufacturing processes consume significant amounts of raw materials and energy, the costs of which are subject to fluctuations in local and worldwide supply and demand as well as other factors beyond our control. The preponderance of raw material cost used in the production of carbon black is related to petroleum-based or coal-based feedstock known as carbon black oil, with some additional use of other raw materials, such as acetylene, hydrogen and natural gas. We obtain a considerable portion of our raw materials and energy from selected key suppliers. Although we maintain certain raw material reserves, if any of these suppliers is unable to meet its obligations under supply agreements with us on a timely basis or at all, or if we cannot source sufficient supply, we may be forced to incur higher costs to obtain the necessary raw materials and energy elsewhere. Additionally, raw material sourcing and related infrastructure (e.g., harbor access, cargo or ship availability, pipeline, tank, rail, waterway or road-access), may be subject to local developments or regulations in certain jurisdictions where we operate that may reduce, delay or halt the physical supply of raw materials. Our inability to source energy or quality raw materials like carbon black oil, including due to the Russia-Ukraine war, Hamas-Israel conflict and China's relations with the U.S. and with the EU, or otherwise, in a timely fashion and at costs that we anticipate or that are acceptable to us, or an inability to pass-through any cost increases to our customers, could have an adverse impact on our business, financial condition, results of operations and cash flows.

Most of our Rubber Carbon Black supply contracts contain provisions that adjust prices to account for changes in a relevant feedstock price index. However, we are exposed to oil price and gas price fluctuations, and there can be no assurance that we will be able to shift the price risks to our customers. Success in offsetting increased raw material, energy and tax or tariff costs with related price increases is also influenced by competitive and economic conditions, as well as the speed and severity of such changes, and could vary significantly, depending on the segment served. Such increases may not be accepted by our customers, may not be fully reflected in the indices used in our pricing formulas, may not be sufficient to compensate for increased raw material and energy costs or may decrease demand for our products and our volume of sales. Oil and energy price fluctuations have had, and are likely to continue to have, significant and varying effects on our earnings and results of operations, partly because oil price changes affect our sales prices and our cost of raw materials and energy at different times and amounts, and partly due to other factors, such as differentials affecting the ultimate carbon black oil price paid by us (versus a particular reference price index), carbon black oil usage amounts and ongoing efficiency initiatives, the value of which fluctuates with oil prices. Failure to fully offset the effects of fluctuating raw material or energy costs could have a material adverse effect on our business, financial condition, results of operations and cash flows. Further, volatility in costs and pricing could result in commercial disputes with suppliers and customers regarding the interpretations of complex contractual pricing arrangements, which could adversely affect our business.

Significant movements in the market price for crude oil tend to create volatility in our carbon black feedstock costs, which have in the past affected and may in the future affect our Net Working Capital, cash requirements and operating results. Changes in raw material and energy prices have a direct impact on our Net Working Capital levels. Increases in the cost of raw materials lead to an increase in our Net Working Capital. Due to the quantity of carbon black oil and finished goods that we typically keep in stock together with the levels of receivables and payables maintained, increases occur gradually over a two to three-month period but can vary depending on inventory levels and working capital levels, generally. Net Working Capital swings are particularly significant in an environment of high price volatility.

We may also be subject to volatility in the cost, quality and availability of raw materials and energy due to factors beyond our control, such as geopolitical conflict. See "*Negative or uncertain worldwide economic conditions may result in business volatility and may adversely impact our business, financial condition, results of operations and cash flow*s" and "*Our business, financial condition and results of operations could in the future be adversely affected by disruptions in the carbon black oil and natural gas supplies, including disruptions caused by the ongoing war between Russia in Ukraine, the Hamas-Israel conflict and the growing geopolitical tensions between China and Taiwan*." This could have an adverse impact on our business, financial condition, results of operations and cash flows.

Any failure to realize benefits from investments, joint ventures, acquisitions or alliances could adversely affect our business, financial condition, results of operations and cash flows.

We have made, and may continue to make, investments and acquisitions and enter into joint ventures and collaborations. The success of acquisitions of existing facilities, new technologies, companies and products, or arrangements with third parties is not always predictable, and we may not achieve our anticipated objectives. Failure to achieve our respective goals could have an adverse impact on our business, financial condition, results of operations and cash flows.

Plant capacity expansions and site development projects may be delayed, cost more than anticipated and/or may not achieve the expected benefits.

Our ability to complete capacity expansions and consolidations as planned, including capacity conversions from Rubber Carbon Black to Specialty Carbon Black and vice versa, and other site development projects, including those associated with yield efficiency improvements or emission controls, may be delayed, interrupted, or otherwise limited by the need to obtain environmental and other regulatory approvals, unexpected cost increases, availability of labor and materials, unforeseen hazards such as weather or health conditions, and other risks associated with construction projects. In addition, lower oil prices may impact our yield efficiency improvements. Moreover, the costs of these activities could have a negative impact on our results of operations and capacity utilization at any particular facility. We may not be able to absorb the incremental costs associated with capacity expansion projects. In addition, our ability to expand capacity depends in part on economic and political conditions in the regions we focus on and, in some cases, on our ability to establish operations, construct additional manufacturing capacity or form strategic business alliances.

We may be subject to information technology systems failures, network disruptions, cybersecurity attacks and breaches of data security.

We rely on information technology systems to manage and operate our production facilities, to process transactions, and to summarize our operating results. Our information technology systems are an important element for effectively operating our business. Information technology systems failures, particularly in connection with running SAP, including risks associated with upgrading or timely updating our systems, network disruptions, misuse, cybercrime and breaches of data security, have occurred in the past, and if they occur in the future, could disrupt our production as well as our operations by impeding our processing of transactions, our ability to protect customer or company information and our financial reporting, and lead to increased costs. It is possible that future technological developments could adversely affect the functionality of our computer systems and require further action and substantial funds to prevent or repair computer malfunctions. Our information technology systems, including our back-up systems, are subject to damage or interruption from power outages, computer and telecommunications failures, computer viruses, cybercrime, internal or external security breaches, catastrophic events such as fires, earthquakes, floods, tornadoes, hurricanes, acts of war or terrorism, and usage errors by our employees or third-party providers. These risks may be exacerbated as we continue to develop our information technology systems, including through the implementation of certain artificial intelligence tools, which tools may also expose us to additional risks. Although we have taken extensive steps to address these concerns by implementing sophisticated network security, back-up systems and internal control measures, there can be no assurance that a system failure or data security breach will not have a material adverse effect on our business, financial condition, results of operations and cash flows. If our information technology systems are damaged or cease to function properly, we may have to make a significant investment to fix or replace them, and we may suffer loss of critical data and interruptions or delays in our production and operations. Any material disruption in our information technology systems, or delays or difficulties in implementing or integrating new systems or enhancing current systems, could have an adverse effect on our business, financial condition or results of operations. We have experienced non-material cybersecurity attacks in the past and may experience additional cybersecurity attacks in the future, potentially with more frequency or sophistication.

While we continually work to safeguard our systems, train our employees and mitigate potential risks, there is no assurance that such actions will be sufficient to prevent cybersecurity attacks or security breaches that manipulate or improperly use our systems or networks, compromise or lose confidential or otherwise protected information, destroy or corrupt data, or otherwise disrupt our operations and safety tools. The occurrence of such events could negatively impact our reputation and our competitive position and could result in litigation with third parties, regulatory action, loss of business, potential liability and increased remediation costs, any of which could have a material adverse effect on our financial condition and results of operations. In addition, such attacks or breaches could require significant management attention and resources, and result in the diminution of the value of the Company’s intellectual property and other assets. A breakdown in existing controls and procedures around the Company’s cybersecurity and security prevention environment may prevent us from detecting, reporting or responding to cybersecurity incidents in a timely manner and could have a material adverse effect on our financial condition or the market price of our securities.

In addition to supporting our operations, we use our systems to collect and store confidential and sensitive data, including information about our know-how, technology and business, as well as about our customers and our employees. As our technology continues to evolve, we anticipate that we will collect and store even more data in the future, and that our systems will increasingly use remote cloud-based solutions and communication features that are sensitive to both willful and unintentional security breaches. Much of our value is derived from our confidential business information, including customer data, proprietary technology and trade secrets. To the extent the confidentiality of such information is compromised, we may lose our competitive advantage, and our business, financial condition, results of operations and cash flows may suffer. We also collect, retain and use personal information, including data we gather from customers for product development and marketing purposes, and data we obtain from employees. In the event of a breach in security that allows third parties access to this information, we are subject to a variety of laws on a global basis that require us to provide notification to the data owner, and that may expose us to lawsuits, fines and other means of regulatory enforcement. Our reputation could suffer in the event of such a data breach, which could cause customers to purchase from our competitors. Ultimately, any compromise of our data security could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are exposed to political or country risk inherent in doing business in some countries.

We operate a global network of production plants located in Europe, the U.S., South Korea, China, South Africa and Brazil. Accordingly, our business is subject to risks related to the different legal, political, social and regulatory requirements and economic conditions of many jurisdictions. Risks inherent in international operations include the following: disruption of supply chains and shipping routes, changes in the rate of economic growth; unsettled political or economic conditions; expropriation or other governmental actions; social unrest, war, terrorist activities or other armed conflict; national and regional labor strikes; confiscatory taxation or other adverse tax policies, trade and or tariff disputes between countries; deprivation of contract rights; trade regulations affecting production, pricing and marketing of products; reduced protection of intellectual property rights; restrictions on the repatriation of income or capital; exchange controls; inflation, deflation, and currency fluctuations and devaluation; the effect of global environmental, health and safety issues; pandemics or epidemics, respective lock-downs, changes to economic conditions, market opportunities and operating restrictions; changes in foreign laws and tax rates; changes in trade sanctions or embargoes that result in losing access to customers and suppliers in those countries; costs associated with compliance with anti-bribery and anti-corruption laws; nationalization of private enterprises by foreign governments; and changes in financial policy, free funds flow and availability of credit or financing sources. These factors could adversely affect our business, financial condition, results of operations and cash flows. Furthermore, there continues to be uncertainty about the future relationship between the U.S. and certain countries, and our reliance upon production in such countries exposes us to risks due to changes in these relationships, including with respect to trade policies, treaties, government regulations and tariffs, among others.

Our business, financial condition and results of operations have in the past and could in the future be adversely affected by disruptions in the carbon black oil and natural gas supplies, including disruptions caused by the ongoing Russia-Ukraine war, Hamas-Israel conflict and the growing geopolitical tension between China and Taiwan.

The impacts of war and other geopolitical events, including but not limited to the war in Ukraine and the Hamas-Israel conflict, the growing geopolitical tensions between China and Taiwan, are difficult to predict. For example, the conflict in Ukraine has previously caused, and may continue to cause, volatility in crude oil and natural gas prices. The responses of countries and political bodies to Russia’s actions in Ukraine, the larger overarching tensions, and Ukraine’s military defenses and the potential for wider conflict may generally increase energy market volatility, have severe adverse effects on regional and global economic markets and cause volatility in energy and other product prices. The sanctions, shipping disruptions, collateral war damage, and the potential continuation or expansion of the conflict between Russia and Ukraine, or the conflict between Hamas and Israel, could further disrupt the availability of crude oil and natural gas supplies.

The extent or length of any adverse effects of the war in Ukraine or the Hamas-Israel conflict on the supply of oil and natural gas and the quality and availability of carbon black oil is difficult to quantify.

The continuation or escalation of events like the war in Russia-Ukraine war or the Hamas-Israel conflict could decrease our production volumes and margins and may adversely impact our business operations, financial condition and results of operations and are difficult to predict. The war in Ukraine has caused and may continue to cause curtailed or delayed spending by our customers' customers, particularly in the automotive industry, and increases the risk of customer defaults or delays in payments. The Hamas-Israel conflict or any escalation thereof could adversely impact our margins.

These and other conflicts may also lead to increased physical terrorist or cyberattacks, damage to global supply chains, and have other consequences that impact our business, financial condition and results of operations.

Legal and Regulatory Risks

Our operations are subject to environmental, health and safety laws and regulations. We have been and may in the future be subject to investigations by regulatory authorities in respect of alleged violations and may incur significant costs to maintain compliance with, and to address liabilities under, these laws and regulations and respective litigation and proceedings.

We are subject to extensive supranational, domestic, foreign, federal, state and local laws and regulations governing environmental protection and occupational health and safety, all of which may be subject to change in the future. The raw material procurement, as well as the production and processing of carbon black and its byproducts involve the handling, transportation, manufacture, use and disposal of substances or components that may pose environmental risks or be considered toxic, hazardous or carcinogenic under applicable laws. We are also required to obtain permits or other approvals from various regulatory authorities for our operations, which may be required for matters including air emissions as well as wastewater and storm water discharge, storage, handling and disposal of hazardous substances, remediation of soil, tanks, pipelines or buildings and the operation, maintenance and closure of landfills. If we contaminate the environment, violate or are found to have violated or otherwise fail to comply with laws, regulations or permits or other approvals, or fail to receive the timely renewal of and due application for required permits, we may have to limit production, incur fines and civil or criminal sanctions, be required to undertake significant capital expenditures to achieve compliance, or be subject to other obligations by one or more regulatory authorities. Certain environmental laws and regulations could also impose strict liability, meaning the Company could be forced to assume liability for environmental damage caused by a party other than the Company, even in circumstances where the Company's actions were lawful.

If environmental harm to soil, groundwater, surface water or natural resources is found to have occurred as a result of our current or historical (prior to the existence of the Company) operations, we may be required to incur significant remediation costs at our current or former production facilities, or at third-party sites and for storage facilities. Many of the facilities and third-party storage facilities we utilize have a long history of operation, which might in the future incur environmental compliance and remediation costs due to past spills, contamination, chemical storage, wastewater treatment and waste disposal practices and other activities depending on present and developing laws. For instance, some of our facilities have onsite landfills that have been open for a number of years; we may incur significant costs when these landfills are closed in accordance with applicable laws and regulations. Under certain laws and regulations, the obligations to investigate and remediate contamination at a facility or site may be imposed on current and former owners or operators who disposed of waste on–site. Liability under such laws and regulations may be without regard to fault or to the legality of the activities giving rise to the contamination. As a result, we may incur liabilities for contamination or wastes, including hazardous wastes, generated by our operations and disposed of onsite or at offsite locations, even if we were not responsible at the time the waste was disposed or the contamination occurred. Further, we may also incur additional closure and cleanup costs in connection with the closure of plants or separate feedstock storage sites, including costs relating to decommissioning of equipment, decontamination and clean-up, asbestos removal and relocation or closure of operating equipment such as storage tanks, pipelines, wastewater treatment systems, ponds and landfills.

Our operations inherently create significant hazards when storing carbon black oil, converting carbon black oil to carbon black and packaging and storing of carbon black and shipping the products to our customers. These hazards and risks include fires, explosions, spills, discharges and other releases or exposures, any of which could impact the environment, neighboring community and our employees, which could result in, environmental pollution, personal injury or wrongful death claims, damage to our and neighboring properties and reputational harm. In these cases, authorities could impose fines, and the Company could be required to rectify any damage which occurs in or outside of our fence lines.

Environmental and safety regulations are subject to frequent change, as are the priorities of those who enforce them, and we could incur substantial costs to comply with current or future laws and regulations. The global trend in environmental regulation is to impose increasingly stringent restrictions on activities that may affect the environment. Such regulations have in the past included, and may in the future include, laws and rules designed to reduce emissions of GHG, SO_2, NOx, particulate matter and other air pollutants. For instance, the EU has enacted GHG legislation and continues to expand the scope of such legislation. The EPA has promulgated regulations applicable to operations involving GHG above certain thresholds, and the United States and certain states within the United States have enacted, or are considering, limitations on GHG emissions. Any new or amended environmental laws and regulations may result in costly measures for matters subject to regulation, including but not limited to more stringent limits or control requirements for our air emissions; new or increased compliance obligations relating to emission of GHG, SO_2, NOx, and particulate matter; any impact our operations could have on the environment or surrounding community; which, in each case, could have a material adverse effect on our operations and financial condition and cash flows. We may be unable to offset these impacts or costs with price increases, productivity improvements, or cost-reduction efforts. Any success we do have in offsetting these impacts or costs will depend on competitive and economic conditions that are inherently variable.

Compliance with future more stringent environmental laws and regulations may result in significantly increased capital expenditures related to prevention and remediation. Our business and financial conditions may be impacted if we are unable to finance these increasing compliance costs. Regardless, we may be required to incur non-capital expenditure costs to satisfy climate change and other environmental obligations imposed on us by the various regulations.

Certain national and international health organizations have classified carbon black as a possible or suspect human carcinogen. To the extent that, in the future, (i) these organizations re-classify carbon black as a known or confirmed carcinogen, (ii) other organizations or government authorities in other jurisdictions classify carbon black or any of our other finished products, raw materials or intermediates as suspected or known carcinogens or (iii) there is discovery of adverse health effects attributable to the production or use of carbon black or any of our other finished products, raw materials or intermediates, we could be required to incur significantly higher costs to comply with environmental, health and safety laws, or to comply with restrictions on sales of our products, our reputation and business could be adversely affected, and we could become the subject of liability, litigation or enforcement actions. In addition, chemicals that are currently classified as harmless may be classified as dangerous in the future, and our products may have characteristics that are not recognized today but may be found in the future to be carcinogenic or otherwise impair human health. See "*Item 1. Business, Environmental, Health and Safety Matters*."

Environmental, social and governance matters, including regulations requiring a reduction of or that impose additional taxes or fees on greenhouse gas emissions, could adversely affect our business, financial condition, results of operations and cash flows, and an increased awareness as well as adverse publicity about potential impacts on climate change by us or other companies in our industry could harm our reputation.

U.S., EU and international regulators, investors and other stakeholders are increasingly focused on environmental, social and governance (ESG) matters. For example, the changing U.S., EU and international laws, regulations and investor expectations relating to ESG matters, including environmental sustainability and climate change and human capital management, are under consideration or being adopted, which may include specific, target-driven disclosure requirements or expectations. Our response will require increased costs to comply, including the implementation of new reporting processes, entailing additional compliance risk, enhanced workforce skills, and other incremental investments, and our action or inaction in response to these expectations could harm our reputation and relationship with stakeholders.

Given the industry we operate in, regulations requiring a reduction of or that impose additional taxes or fees on greenhouse gas emissions may have a significant impact on our business, financial conditions, results of operations and cash flows as further explained below. Despite our efforts to control, significant volumes of CO_2, a GHG, are emitted in our carbon black manufacturing processes. Over the past few decades, the relationship between GHGs and global climate change have resulted in increased levels of scrutiny from regulators, investors and the public alike, and have led to proposed and enacted laws and regulations on both national and supranational levels, to monitor, regulate, control and tax emissions of CO_2 and other GHGs. These could adversely affect our business, financial condition, results of operations and cash flows. Investors and other financial institutions are also focused on sustainability and climate change as it relates to their investment and financing decisions. Increased awareness in the investment community and any adverse publicity in the global marketplace about potential impacts on climate change by us or other companies in our industry could also harm our reputation.

The international community continues to negotiate a binding treaty that would require reductions in GHG emissions by developed countries. In addition, a number of further measures addressing GHG emissions may be implemented, such as a successor international agreement, if any, to the Kyoto Protocol and the EU's proposal to consider raising its commitment to reduce carbon emissions to at least 55% below 1990 levels by 2030. The United Nations Conference on Climate Change in December 2015 led to the creation of the Paris Agreement and encourages countries to continuously review and improve their GHG emission reduction goals. While signing the Paris Agreement does not legally bind countries to reduce GHG emissions, countries that participate may respond by enacting legislation or regulations in order to progress in lowering GHG emissions. In the United States, Congress has from time to time considered legislation to reduce emissions of GHGs, but no comprehensive legislation has been enacted to date, and significant uncertainty currently exists as to how any such GHG legislation or regulations would impact large stationary sources, such as our facilities in Belpre (Ohio), Borger (Texas), Orange (Texas) or Ivanhoe (Louisiana), and what costs or operational changes these regulations may require in the future. Some U.S. states have taken legal measures to reduce emissions of GHGs, primarily through the development of GHG emission inventories and/or regional or state GHG cap-and-trade programs. South Africa, where we have an operating plant, has adopted a CO_2 tax regime. There are also ongoing discussions and regulatory initiatives in other countries, including in Brazil where we have production facilities, regarding GHG emission reduction programs, but those programs have not yet been defined. There is no assurance that, in the future, the current level of regulation will continue in the jurisdictions where we operate. In addition, several countries, spanning across Europe, the Middle East, Africa, South America and the Asia-Pacific region, are currently evaluating further and more restrictive regulations to reduce GHG emissions and to implement stricter environmental regulations generally.

Compliance with current or future GHG regulations governing our operations may result in significantly increased capital and operating expenditures for measures such as the installation of more environmentally efficient technology or the purchase of allowances to emit GHGs. We may need to purchase emission rights to cover the shortfall where emissions exceed the quantity of allowances (EU and South Korean ETS), which may cause a material financial impact. Examples of such expenditures may include, but are not limited to, becoming subject to carbon and GHG emission trading requirements under which we may be required to purchase carbon credits and other offsets aimed at reducing our ecological footprint if our emission levels exceed our allocations. Costs of complying with regulations could increase, as concerns related to greenhouse gases and climate change continue to emerge. The enactment of new environmental laws and regulations and/or the more aggressive interpretation of existing requirements could require us to incur significant costs for compliance or capital improvements or limit our current or planned operations, any of which could have a material adverse effect on our earnings or cash flow. We attempt to offset the effects of these compliance costs through price increases, productivity improvements and cost reduction efforts. Such price increases may not be accepted by our customers, may not be sufficient to compensate for increased regulatory costs or may decrease demand for our products and our volume of sales. While their potential effect on our manufacturing operations or financial results cannot be estimated, they could be substantial. We cannot reliably predict the form that future regulations may take or to estimate any costs that we may be required to incur with respect to these or any other future requirements. In addition to the increased expenditures outlined above, such requirements could also adversely affect our energy supply, or the costs (and types) of raw materials we use, and ultimately may directly or indirectly restrict our operations or reduce demand for our products. The realization of any or all of these consequences could have a material adverse effect on our business, financial condition, results of operations and cash flows. See "*Item 1. Business, Environmental, Health and Safety Matters.*"

Developing regulation of carbon black as a nano-scale material could require us to comply with costly new requirements.

Carbon black consists of aggregates of primary nano-scale particles. The EPA and other governmental agencies have developed regulatory schemes under which they collect further data on nano-scale materials, including carbon black. In addition, the EPA and other nations' environmental regulatory authorities, including the European Commission, are also conducting extensive environmental health and safety investigations of nano-scale materials. If carbon black is found to be harmful to humans and/or to the environment, it could be subject to more stringent regulatory control, which could require us to incur significantly higher costs to comply with new environmental, health and safety laws and could adversely affect our reputation and business. See "*Item 1. Business, Environmental, Health and Safety Matters*."

In the EU, in 2022 the European Commission finalized the process on the revision of the nanomaterial definition. With its updated recommendation on June 10, 2022 of the definition of nanomaterial (2022/C 220/01), the status for carbon black remains unchanged in comparison to the previous version (2011/696/EU). The majority of carbon black grades are defined as nanomaterials. Furthermore, the International Organization for Standardization ("ISO") developed the ISO TC 229 "Nanotechnologies," which considers carbon black a "nano-structured material." The industry is not yet generally affected by these definitions. However, certain regulations regarding cosmetics applications or articles which are intended for food contact have already implemented nano-specific provisions. Similar nano-specific provisions are also being discussed for other regulations which may additionally affect the use of carbon black in the future. This development may significantly affect our business in a manner we cannot predict, including by increasing the costs of doing business or decreasing the marketability of our products. This could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our operations have the potential to cause environmental and other damage as well as personal injury.

The operation of a chemical manufacturing business as well as the sale and distribution of chemical products involve safety, health and environmental risks. For example, the production and processing of carbon black and other chemicals involves the storage, handling, transportation, manufacture or use of certain substances or components that may be considered toxic or hazardous. Our manufacturing processes and the storage and transportation of chemical products entail risks such as leaks, fires, explosions, toxic releases or mechanical failures. If operational risks materialize, they could result in injury or loss of life, damage to the environment or damage to property. In addition, the occurrence of material operating problems at our facilities due to any of these hazards may result in loss of production, which in turn, may make it difficult for us to meet customer needs. Accordingly, these hazards and their consequences could have a material adverse effect on our business, financial condition, results of operations and cash flows, both during and after the period of operational difficulties, and could harm our reputation.

The European Union REACH legislation or similar legislation in other countries may affect our ability to manufacture and sell certain products.

The REACH legislation as described under "Chemical Regulation" above or similar legislation in other countries or jurisdictions may limit the ability to market or sell our products, in particular if the relevant authorities may change or amend the registration prerequisites for our products or may narrow their interpretation of such legislation in relation to our products.

Additionally, other organizations and countries, including South Korea and China, have adopted or may in the future adopt comparable or even more restrictive regulations than REACH, which could affect our ability to manufacture and sell certain products in the future.

In certain jurisdictions, carbon black has been added to lists of hazardous products that are subject to labeling and other requirements. Compliance with these requirements is required to sell our products in these jurisdictions, and noncompliance may result in material fines or penalties or other enforcement actions, including injunctions, recalls or seizures, which could have an adverse effect on our business, financial condition, results of operations and cash flows. Changes in the classification of carbon black on these lists or to the applicable regulations could result in more stringent or new requirements and adversely affect our compliance costs. See "*Item 1. Business, Environmental, Health and Safety Matters*."

Market and regulatory changes may affect our ability to sell or otherwise benefit from co-generated energy, which may adversely affect our business, results of operations and cash flows.

Currently, approximately half of our manufacturing sites, including one jointly owned production facility, have some form of co-generation transforming waste heat from combusting exhaust gas, the main by-product of the carbon black production process, into electricity, steam or hot water. Some of this co-generated energy is self-consumed, and the excess may be sold to third parties. Our ability to benefit from co-generation, and in particular our ability to sell it to third parties, may be limited due to general market conditions or regulatory changes, which may adversely affect our business, results of operations and cash flows.

Litigation or legal proceedings could expose us to significant liabilities and thus adversely affect our business, financial condition, results of operations and cash flows.

From time to time, we may be involved in various claims and lawsuits arising in the ordinary course of our business. In particular, certain asbestos related claims have been filed with respect to time periods when previous owners were in control of our business. Some matters involve claims for damage payments as well as other relief. Additional claims by (former) employees or contractors based on alleged past exposure to asbestos or other substances with negative health effects may be received in the future.

We may also be subject to litigation based on environmental matters such has pollution, remediation, contamination, or exposure to hazardous substances either in the workplace or resulting from the use of our products. This litigation could result in substantial liability for us, which could have a material adverse effect on our business, financial condition and/or profitability. Certain environmental groups could also initiate litigation against us, which could cause reputational as well as financial harm.

The outcome of legal proceedings is extremely difficult to predict, and we offer no assurances in this regard. Adverse rulings, judgments or settlements in pending or future litigation or administrative proceedings, including employment-related disputes and litigation, contract disputes and litigation, intellectual property disputes and litigation, product liability claims, tort claims and other personal injury claims, claims based on alleged exposure to asbestos, chemicals or to carbon black, environmental permitting disputes or in connection with environmental remediation activities or contamination, could have an adverse effect on our business, financial condition, results of operations and cash flows.

Because many of our products provide critical performance attributes to our customers' applications and products, the sale of these products involves a risk of product liability claims against us, including claims arising in connection with the use of, or exposure to, our products. Our products have widespread end-uses in a variety of consumer industries. A successful product liability claim, or series of claims, arising out of these various uses that results in liabilities in excess of our insurance coverage or for which we are not indemnified by a third party or have not otherwise provided for could have a material adverse effect on our business, financial condition, results of operations and cash flows. In particular, we could be required to increase our debt or divert resources from other investments in our business in order to discharge any such liabilities.

We may not be able to protect our intellectual property rights successfully.

Our intellectual property rights are important to our success and competitive position. We own various patents and other intellectual property rights and have licenses to use intellectual property rights covering some of our products as well as certain processes and product uses. We often choose not to seek to patent a production method or product in order to avoid disclosure of business specific know-how. In addition to patents, a significant part of our intellectual property are our trade secrets, general know-how and experience regarding manufacturing technology, plant operation and quality management, which third parties, including our competitors, may develop independently without violating our trade secret rights. We make careful assessments with respect to production process improvements and decide whether to apply for patents or retain and protect them as trade secrets. In some of the countries in which we operate or sell products, such as China, the laws protecting patent holders are scoped or interpreted differently than in the U.S., the EU or certain other regions. When we file a patent application, it is usually filed for all countries with active competition where we have existing customers. Nonetheless, because the laws and enforcement mechanisms in some countries may not be as effective as in others, and because our intellectual property rights may, if asserted, ultimately be found to be invalid or unenforceable, we may not be able to protect all of our intellectual property rights successfully. Insufficient protection of intellectual property may limit our ability to make use of technological advantages or result in a reduction of future profits. This may cause competitive restrictions and may have an adverse effect on our business, financial condition, results of operations and cash flows.

We may also be subject to claims that our products, processes or product uses infringe or misappropriate the intellectual property rights of others. These claims, even if without merit, can be expensive and time consuming to defend or litigate. If we were to suffer an adverse ruling, we could be subject to injunctions, obligated to pay damages or enter into licensing agreements requiring royalty payments and use restrictions, all of which could adversely affect our business, financial condition, results of operations and cash flows. In addition, licensing agreements may not be available to us, and, if available, may not be available to us on acceptable terms.

In connection with the separation of our business from Evonik, completed on July 29, 2011 (the "Acquisition"), Evonik assigned to us intellectual property that was exclusively used in its carbon black business as well as certain intellectual property rights that are still in use in Evonik's retained business. Also, Evonik retained ownership of certain intellectual property that is not material to us. Evonik has granted us a non-exclusive license to use such retained intellectual property in the field of carbon black. In addition, we have granted back to Evonik licenses relating to some of our intellectual property rights to use such intellectual property in all fields outside the field of carbon black, which licenses are exclusive, subject to certain exceptions in areas adjacent to carbon black. Accordingly, we may be restricted in leveraging the intellectual property that we use on the basis of a license from Evonik or the intellectual property that is subject to the grant-back licenses to expand our business into certain fields outside of carbon black.

Risks Related to Indebtedness, Currency Exposure and Other Financial Matters

Our financial leverage may make it difficult for us to service that debt and operate our businesses.

We are leveraged with recurring debt service obligations and expect to continue to have leverage for the foreseeable future. We may also incur more debt in the future. This may have negative consequences for our business and investors, including requiring that a substantial portion of the cash flows from our operations be dedicated to debt service obligations; reducing the availability of cash flows to fund internal growth through working capital, capital expenditures, to fund other general corporate purposes, to pay dividends and to finance stock buy-backs; increasing our vulnerability to economic downturns generally or in our industry; exposing us to interest rate increases on our existing indebtedness and indebtedness that we may incur in the future; placing us at a competitive disadvantage compared to our competitors that have less debt in relation to cash flows; limiting our flexibility in planning for or reacting to changes in our business and our industry; restricting us from pursuing strategic acquisitions or exploiting certain business opportunities; and limiting, among other things, our ability to borrow additional funds or raise equity capital in the future and increasing the costs of such additional financings.

If our future cash flows from operations and other capital resources are insufficient to pay our obligations as they mature or to fund our liquidity needs, we may be forced to reduce or delay our business activities and capital expenditures, sell assets, obtain additional debt or equity financing, restructure or refinance all or a portion of our debt on or before maturity or reduce or cease paying our dividend. In the worst-case scenario, an actual or impending inability to pay debts as they become due and payable could result in our insolvency or an insolvency of one or more of our subsidiaries.

Restrictive covenants in our debt instruments may limit our ability to operate our business. Our failure to comply with these covenants, including as a result of events beyond our control, could result in an event of default that may adversely affect our business, financial condition, results of operations and cash flows.

Our current debt instruments impose some operating and financial restrictions on us. These restrictions include limitations on our ability to, among other things, merge or consolidate with other companies; sell, lease, transfer or dispose of assets; pay dividends, redeem stock capital or redeem or reduce subordinated indebtedness; and make acquisitions or investments. Our debt instruments contain covenants that may adversely affect our ability to finance our future operations and capital needs or to pursue available business opportunities. Our ability to comply with these provisions may be affected by changes in economic or business conditions or other events beyond our control. In addition, our debt instruments contain cross-default provisions such that a default under one particular financing arrangement could automatically trigger defaults under other financing arrangements and cause such indebtedness to become due and payable, together with accrued and unpaid interest. As a result, any default under an indebtedness to which we are party could result in a substantial loss to us and could adversely affect our business, financial condition, results of operations and cash flows.

A deterioration in our financial position or a downgrade of our ratings by a credit rating agency could adversely affect our ability to find new financing and maintain existing financing sources, ensure the continued access to receivables factoring programs, increase our borrowing costs, and our business relationships could be adversely affected.

A deterioration of our financial position or a downgrade of our credit ratings for any reason could adversely affect our ability to find new financing and maintain existing financing sources, maintain or expand our receivables programs, increase our borrowing costs and have an adverse effect on our business relationships as well as on the payments and other terms agreeable with customers, suppliers and hedging counterparties. We currently do and may in the future enter into various forms of hedging arrangements against currency exchange, interest rate, raw material and energy and oil price fluctuations. Financial strength and credit ratings are important to the availability and pricing of these hedging activities. As a result, any downgrade of our credit ratings may make it more costly for us to engage in these activities, and changes to our level of indebtedness may make it more difficult or costly for us to engage in these activities in the future.

In addition, a downgrade could adversely affect our existing financing, limit access to the capital or credit markets, or otherwise adversely affect the availability of other new financing on favorable terms, if at all, result in more restrictive covenants in agreements governing the terms of any future indebtedness that we incur, increase our borrowing costs, or otherwise adversely affect our business, financial condition, results of operations and cash flows.

Fluctuations in foreign currency exchange and interest rates could adversely affect our business, financial condition, results of operations and cash flows.

We are exposed to market risks relating to fluctuations in foreign currency exchange and interest rates. Our results of operations have in the past been affected and may in the future be affected by both the transaction and translation effects of foreign currency exchange rate fluctuations. We are exposed to currency fluctuation when we convert currencies that we may receive for our products into currencies required to pay our debt, or into currencies in which we purchase raw materials, meet our fixed costs or pay for services, any of which could result in a gain or loss depending on fluctuations in exchange rates. Fluctuations in currency exchange rates could require us to reduce our prices to remain competitive in foreign markets. In each case, the relevant income or expense is reported in the relevant local currency and is translated into the U.S. dollar at the applicable currency exchange rate for inclusion in our consolidated financial statements. Therefore, our financial results in any given period are materially affected by fluctuations in the value of the U.S. dollar relative to other currencies, in particular the euros, the Korean won and Chinese renminbi. In addition, certain of our outstanding debt obligations are denominated, pay interest and must be repaid in euros (and certain of our future debt obligations may be denominated in euros), and therefore expose us to additional exchange rate risks. An appreciation of the euro would make our financing under euro-denominated instruments more expensive. We are also exposed to adverse changes in interest rates. We manage our foreign exchange risk through normal operating and financing activities and, when deemed appropriate, through the selective use of derivative transactions, the effectiveness of which is dependent, in part, upon the counterparties to these contracts honoring their financial obligations to us. We cannot be certain that we will be successful in reducing the risks inherent in exposures to foreign currency and interest rate fluctuations, and our financial results could be adversely affected.

From time to time, it may be necessary for us to enter into hedging arrangements to reduce the impact of price and exchange rate volatility. Unavailability or ineffectiveness of hedging could adversely affect our business, financial condition, results of operations and cash flows.

In the past, we have entered into certain hedging arrangements to reduce the impact of raw material and energy price volatility as well as interest rate and currency exchange rate fluctuations. It may be necessary for us to enter into hedging arrangements in the future to reduce the impact of raw material or energy price volatility or currency and exchange rate fluctuation, which may or may not be effective. The use of derivative hedging instruments is generally dependent on the availability of adequate credit lines with appropriate financial institutions. As a result, we could be unable to use derivative financial instruments in the future, to the extent necessary or on commercially reasonable terms, and any hedging strategy we employ could therefore be adversely affected. The effectiveness of our derivative hedging instruments will also depend on the relevant hedging counterparties honoring their financial obligations. Any failure by a hedging counterparty to perform its obligations could adversely affect our business, financial condition, results of operations and cash flows.

We may be required to impair or write off certain assets if our assumptions about future sales and profitability prove incorrect.

In analyzing the value of our inventory, property, plant and equipment, investments and intangible assets, we have made assumptions about future sales (prices and volume), costs and cash generation. These assumptions are based on management's best estimates, and if the actual results differ significantly from these assumptions, we may not be able to realize the value of the assets recorded, which could lead to an impairment or write-off of certain of these assets which could have a material adverse effect on our business, financial condition and results of operations.

We may be required to increase our pension fund contributions.

We have made pension commitments to our existing and some of our former employees. These commitments are partially covered by pension schemes, pension and benevolent funds and insurance policies some of which are maintained by previous employers. The amount of obligations is based on certain actuarial assumptions, including discount factors, life expectancy, pension trends and future salary development as well as expected interest rates applicable to the plan assets. Actual results deviating from these assumptions could result in a considerable increase of our pension commitments and liabilities and higher allocations to the pension reserves in future years, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our insurance coverage may not be adequate to cover all the risks we may face, and it may be difficult to obtain replacement insurance on acceptable terms or at all.

Our plants, equipment and other assets are insured for property damage and business interruption risks, and our business as a whole is insured for public and products liability risks with reputable insurance companies. We believe these insurance policies are generally in accordance with customary industry practices, including deductibles and coverage limits. However, we cannot be fully insured against all potential hazards incident to our business, including losses resulting from war risks or terrorist acts, or all potential losses, including damage to our reputation. If we were to incur a significant liability for which we were not fully insured, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

As a result of market conditions, premiums and deductibles for certain insurance policies can increase substantially, and in some instances, certain insurance may become unavailable at a reasonable cost or may be available only for certain risks. We can provide no assurances that we would be able to obtain replacement insurance on acceptable terms or at all.

We could experience a material adverse effect on our financial condition if the tax authorities were to successfully challenge decisions and assumptions we have made in assessing and complying with our tax obligations.

We are subject to tax in Luxembourg, Germany and in other jurisdictions, and significant judgment is required in determining our provision for income taxes. We make, and have in the past made, numerous decisions and assumptions in assessing and complying with our tax obligations, including assumptions regarding the tax deductibility of certain interest expenses, the upholding and recognition of our German tax group, the applicability of the regulations to our business as a group headquartered as a Luxembourg company and the prices applied between our subsidiaries for intercompany transactions, known as transfer pricing. Many of the tax laws that apply to us are complex and often require judgments to be made when the law is unclear or the facts are uncertain. While we believe the decisions we have made and the assumptions and practices we have applied are reasonable and accurate, we cannot guarantee that these decisions, assumptions and practices will not be questioned or rejected by the tax authorities. In particular, we are subject to tax audits in various jurisdictions, and could be subject to additional tax audits, and in many cases, these audits have not yet begun or have not been completed and could give rise to issues of this kind. If these tax authorities successfully challenge our decisions or assumptions, we could be required to pay additional amounts to such authorities to satisfy our tax obligations, which could have a material adverse effect on our business, financial condition, results of operations and cash flows. Further, though most of the jurisdictions in which we operate have double tax treaties with other foreign jurisdictions providing a framework for mitigating the impact of double taxation, such mechanisms for resolving such conflicting claims can be expected to be very lengthy. If such conflicting claims are not resolved in our favor, or if the resolution thereof is more extensive than we expect, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Significant changes in our jurisdictional earnings mix or in the tax laws of those jurisdictions, as well as changes in their interpretation, could adversely affect our business, financial condition, results of operations and cash flows.

Our future tax rates may be adversely affected by a number of factors, including the enactment of new tax legislation, other changes in tax laws or the interpretation of such tax laws, changes in the estimated realization of our net deferred tax assets, the jurisdictions in which profits are determined to be earned and taxed, adjustments to estimated taxes upon finalization of various tax returns, increases in expenses that are not deductible for tax purposes, including write-offs of acquired in process R&D and impairment of goodwill in connection with acquisitions, changes in available tax credits and additional tax or interest payments resulting from tax audits with various tax authorities. Losses for which no tax benefits can be recorded could materially impact our tax rate and its volatility from period to period. Any significant change in our jurisdictional earnings mix or in the tax laws in those jurisdictions, as well as changes in their interpretation, could increase our tax rates and adversely affect our financial results in those periods.

Other international tax measures, such as the Organization for Economic Cooperation and Development's ("OECD's") base erosion and profit shifting ("BEPS") project and the global minimum taxation regime ("Pillar Two") contribute to increased uncertainty and may adversely affect our tax provision. The BEPS project contemplates changes to numerous international tax principles, as well as national tax incentives, and these changes, when adopted by individual countries, could adversely affect our provision for income taxes. The rules are fairly new and certain aspects of Pillar Two are not yet finalized. We continuously monitor the development of these rules and if and to which extent they may affect us. Changes in these and other international tax measures, as well as our interpretation of them and their impacts on our business, could adversely impact our tax rates and have a material adverse effect on our business, financial condition, results of operations and cash flows.

Additionally, during periods of high profitability in certain industries, there are often calls for increased taxes or surcharges on incremental revenues or profits, often called "*windfall profit*" taxes. Governments in various jurisdictions may impose or increase such taxes for certain companies operating in the energy and oil and gas sector. The imposition of, or increase to, such windfall profit taxes could adversely affect our financial results.

Risks Related to Ownership of our Common Stock

We cannot assure investors that we will pay dividends on our common stock.

Our ability to pay dividends on our common stock is generally dependent on a proposal by our Board of Directors subject to approval by our stockholders and will depend on a number of factors, including, among others, our financial condition and results of future operations, growth opportunities and restrictive covenants in our debt instruments.

The rights of our stockholders may differ from the rights they would have as stockholders of a U.S. corporation, which could adversely affect trading in our common stock and our ability to conduct equity financings.

Our corporate affairs are governed by our Articles of Association and the laws of Luxembourg, including the Luxembourg Company Law. The rights of our stockholders and the responsibilities of our directors and officers under Luxembourg law are different from those applicable to a corporation incorporated in the U.S. Luxembourg laws may not be as extensive as those in effect in the U.S., and Luxembourg law and regulations in respect of corporate governance matters might not be as protective of minority stockholders as state corporation laws in the U.S. As a result, our stockholders may have more difficulty in protecting their interests in connection with actions taken by our directors and officers than they would as stockholders of a corporation incorporated in the U.S.

We are organized under the laws of Luxembourg and it may be difficult to obtain or enforce judgments or bring original actions against us or the members of our Board of Directors in the United States.

We are organized under the laws of Luxembourg, and the majority of our assets are located outside the U.S. Furthermore, some of the members of our Board of Directors and officers reside outside the U.S., and a substantial portion of their assets are located outside the U.S. Investors may not be able to effect service of process within the U.S. upon us or these persons or to enforce judgments obtained against us or these persons in U.S. courts. Likewise, it may also be difficult for an investor to enforce in U.S. courts judgments obtained against us or these persons in courts located in jurisdictions outside the U.S., including judgments predicated upon the civil liability provisions of the U.S. federal securities laws. Awards of punitive damages in actions brought in the U.S. or elsewhere are generally not enforceable in Luxembourg.

As there is no direct treaty in force on the reciprocal recognition and enforcement of judgments in civil and commercial matters between the U.S. and Luxembourg, courts in Luxembourg will not automatically recognize and enforce a final judgment rendered by a U.S. court.

The enforceability in Luxembourg courts of judgments rendered by U.S. courts will be subject to the procedure and the conditions set forth in the Luxembourg procedural code.

Litigation in Luxembourg is also subject to rules of procedure that differ from the U.S. rules, including with respect to the taking and admissibility of evidence, the conduct of the proceedings and the allocation of costs. For these reasons, it may be difficult for a U.S. investor to bring an original action in a Luxembourg court predicated upon the civil liability provisions of the U.S. federal securities laws against us, the members of our Board of Directors or our officers. In addition, even if a judgment is obtained against our Company, the non-U.S. members of our Board of Directors or our officers based on the civil liability provisions of the U.S. federal securities laws, a U.S. investor may not be able to enforce it in U.S. or Luxembourg courts.

Under our Articles of Association, we may indemnify our directors for and hold them harmless against all claims, actions, suits or proceedings brought against them, subject to limited exceptions. The right to indemnification does not exist in the case of gross negligence, fraud or wrongful misconduct. The rights and obligations among or between us and any of our current or former directors and officers are generally governed by the laws of Luxembourg and are subject to the jurisdiction of the Luxembourg courts, unless such rights or obligations do not relate to or arise out of such persons' capacities listed above. Although there is doubt as to whether U.S. courts would enforce this indemnification provision in an action brought in the U.S. under U.S. federal or state securities laws, this provision could make judgments obtained outside Luxembourg more difficult to enforce against our assets in Luxembourg or in jurisdictions that would apply Luxembourg law.

Luxembourg and European insolvency and bankruptcy laws are substantially different from U.S. insolvency laws and may offer our stockholders less protection than they would have under U.S. insolvency and bankruptcy laws.

We are subject to Luxembourg insolvency and bankruptcy laws. Should courts in another European country determine that the insolvency and bankruptcy laws of that country apply to us in accordance with and subject to such EU regulations, the courts in that country could have jurisdiction over any insolvency proceedings initiated against us. Insolvency and bankruptcy laws in Luxembourg or the relevant other European country, if any, may offer our stockholders less protection than they would have under U.S. insolvency and bankruptcy laws and make it more difficult for them to recover the amount they could expect to recover in a liquidation under U.S. insolvency and bankruptcy laws.

General Risk Factors

If we are unable to successfully negotiate with the representatives of our employees, including labor unions and works councils, we may experience strikes and work stoppages.

We are party to collective bargaining agreements. We also are required to consult with our employee representatives, such as works councils, on certain matters such as restructuring, acquisitions and divestitures. Although we believe that our relations with our employees are good, there can be no assurance that current agreements will not be terminated, new agreements will be reached or consultations completed without union or works council actions or on terms satisfactory to us. Current and future negotiations and consultations with employee representatives could have a material adverse effect on our business. In addition, a material work stoppage or union dispute could adversely affect our business, financial condition, results of operations and cash flows.

We may not be able to recruit or retain key management and personnel.

Our success is dependent on the management and leadership skills of our key management and personnel. The loss of any member of our key leadership team, and personnel or an inability to attract, retain, develop and maintain additional personnel could prevent us from implementing our business strategy. The loss of one or more members of our key management or operating personnel, or the failure to attract, retain and develop additional key personnel, could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Disruptions in credit and capital markets may make it more difficult for us and our suppliers and customers to borrow money or raise capital.

Disruptions in the credit markets may result in less credit being made available by banks and other lending institutions. As a result, we may not be able to obtain financing to pursue other business plans or make necessary investments, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Furthermore, the inability of our customers to obtain credit facilities or capital market financing may adversely affect our business by reducing our sales and increasing our exposure to bad debt, while the inability of our suppliers to access adequate financing may adversely affect our business by increasing prices for raw materials, energy and transportation.

Item 1B. Unresolved Staff Comments

None

Item 1C. Cybersecurity

We are fully committed to protecting our assets and ensuring security across our Information Technology (“IT”) and Operational Technology (“OT”) environments. Our approach to cybersecurity involves implementing technology standards, processes and an organizational design according to industry practices to strengthen our defenses against cyberattacks. We utilize security technologies, like firewalls, intrusion detection systems and encryption tools to establish defenses against cyber threats. We are committed to updating and patching our systems to ensure that vulnerabilities are promptly addressed. Our processes are aligned to identify weaknesses and areas for improvement by conducting cybersecurity audits and assessments. In the event of a cybersecurity incident, we have a defined incident response plan in place. The plan provides guidance on how to effectively respond. Our employees also undergo regular training programs on identified cybersecurity threats, and their role in maintaining a secure environment.

We continually develop solutions to mitigate the impact of cyber risks from external actors cyber activity, including via portals for potential and current partners with capability to report suspected phishing. Furthermore, we have a risk assessment procedure that identifies and examines cyber risks by taking into account their impact and the likelihood of them being exploited. We evaluate risk as part of our cybersecurity management program to validate capabilities and limitations. Together with our third-party IT service providers, we conduct vulnerability and security assessments, penetration testing and scenario-based evaluations to assess the effectiveness of our security measures against cyber threats. This allows us to make informed decisions regarding the prioritization and mitigation of risks in the IT and OT space. In addition, we also benchmark our measures to marketplace security standards such as the U.S. National Institute of Standards and Technology’s (“NIST”) and other cyber security standards. Regular table-top exercises are conducted, and we have a continuous security improvement process in place.

These processes also take into account risks that arise from our external partnerships and we understand that collaborating with external parties introduces vulnerabilities, such as supply chain risks, possibility of third-party data breach and reliance on partner security measures.

Our approach to managing cybersecurity is designed to ensure oversight and strategic leadership. Leading our cybersecurity risk management efforts is our Chief Information Security Officer (“CISO”).

In the case of cybersecurity incidents, our CISO leads our Cyber Emergency Response Team disclosure process, which is a collaborative process by which our CISO is advised of cyber incidents and communicates and collaborates with relevant departments across the organization to develop and execute an appropriate response.

The Board has delegated cybersecurity monitoring responsibility to the Audit Committee. Regular updates on cybersecurity status, material cyber incidents, and cyber risk management from either the Chief Information Officer (“CIO”) or CISO are provided to both the Board and Audit Committee. The Audit Committee regularly discusses identified security risks with senior management and reviews management proposed mitigation measures, key cyber initiatives and programs. The Board also considers cybersecurity topics including risk mitigation on a regular basis.

We believe that risks from prior cybersecurity threats, including as a result of any previous cybersecurity incidents, have not materially affected our business to date.

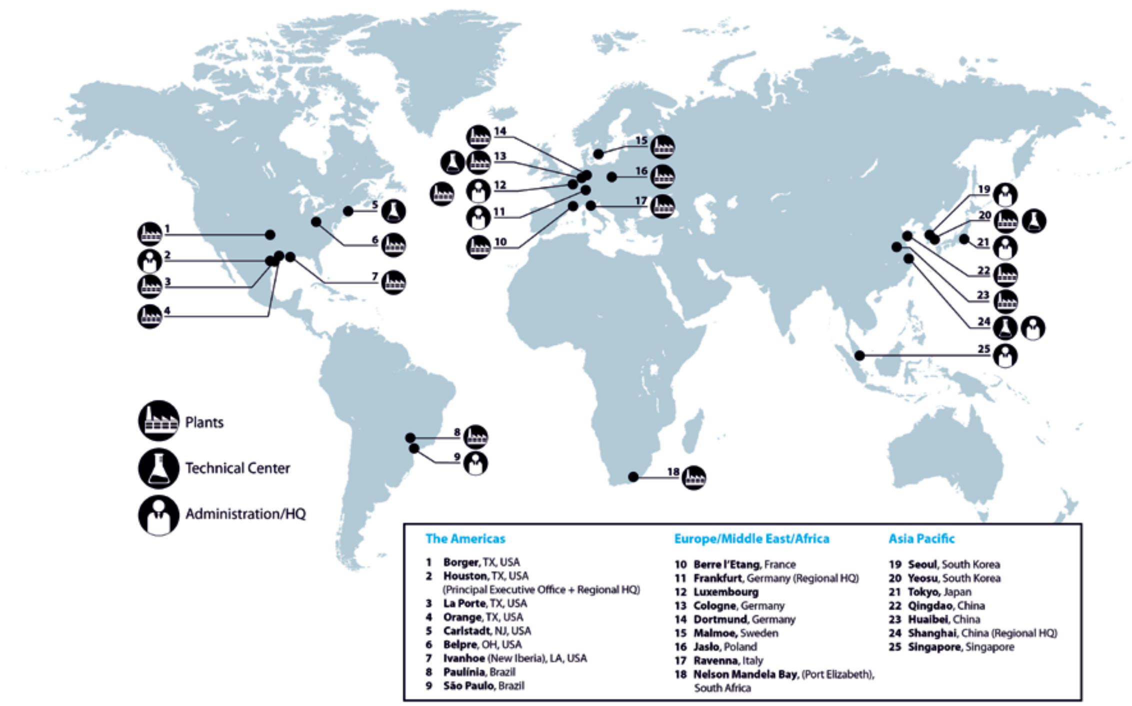
Our Risk Factors include further details about the material cybersecurity risks we face. See Item 1A., *Risk Factors,* above.

Item 2. Properties

Production Facilities

We currently operate 14 wholly owned production facilities, excluding the under-construction facility at La Porte, Texas, in Europe, North and South America, South Africa and Asia and one jointly owned production facility at Dortmund, Germany. Most of our production facilities are ISO 9001, *Quality Management* and ISO 14001, *Environmental Management* certified.

The map provides an overview of the geographical footprint of our production network as of December 31, 2024:



Item 3. Legal Proceedings

We have been and expect to become involved from time to time in various claims and lawsuits arising in the ordinary course of our business, such as product related claims, liability claims, employment related claims and asbestos litigation. Some matters involve claims for large amounts of damages as well as other relief. We believe, based on currently available information, that the results of the proceedings, in the aggregate, will not have a material adverse effect on our financial condition, but may be material to our operating results and cash flow for any particular period when the relevant costs are incurred. We note that the outcome of legal proceedings is inherently uncertain, and we offer no assurances as to the outcome of any of these current or future matters or their effect on the Company. For information regarding our material legal proceedings and regulatory matters, see *Item 8. Financial Statements and Supplemental Data, Note Q. Commitments and Contingencies*.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our common stock is listed on the New York Stock Exchange ("NYSE") under the symbol "OEC".

As of February 14, 2025, there were approximately 11 record holders of our common stock, i.e., shareholders directly registered under their name in the Company's physical stock ledger in Luxembourg, including Cede & Co. as nominee of the Depository Trust Company. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares are held by banks, brokers and other financial institutions.

During the fiscal year ended December 31, 2024, we did not sell any equity securities that were not registered under the Securities Act.

From time to time, we may repurchase our common stock in the open market pursuant to programs approved by our Board. See "Stock Repurchase Program" below.

The information required by Item 201(d) of Regulation S-K is incorporated by reference to the Proxy Statement (as defined in Item 10) under the heading "*Equity Compensation Plan Information at December 31, 2024*", elsewhere in this Annual Report.

Dividend Policy

In accordance with the Luxembourg Company Law, the general meeting of stockholders has the power to make a resolution on the payment of dividends upon the recommendation of the Board of Directors. In deciding whether to recommend any future dividend, the Board of Directors would take into account any legal or contractual limitation, our actual and anticipated future earnings, cash flows, debt service and capital requirements, our business plans and such other matters as the Board of Directors believes appropriate, in its discretion. Generally, any dividend approved by a general meeting of stockholders would be paid out shortly after the meeting.

Luxembourg withholding tax at a rate of 15% is deducted from dividend payments, subject to certain exemptions and reductions in certain circumstances.

Stock Repurchase Program

In accordance with the authority granted by the Orion stockholders to the Board of Directors through stockholder resolution, on May 5, 2023, our Board of Directors approved a new stock repurchase program with authorization to management to purchase up to approximately 6.9 million stock of our outstanding common stock from time to time through open market purchases or public tender offers, including through the use of trading plans intended to qualify under Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, in accordance with applicable securities laws and other restrictions, at any time through June 2027 ("Stock Repurchase Program").

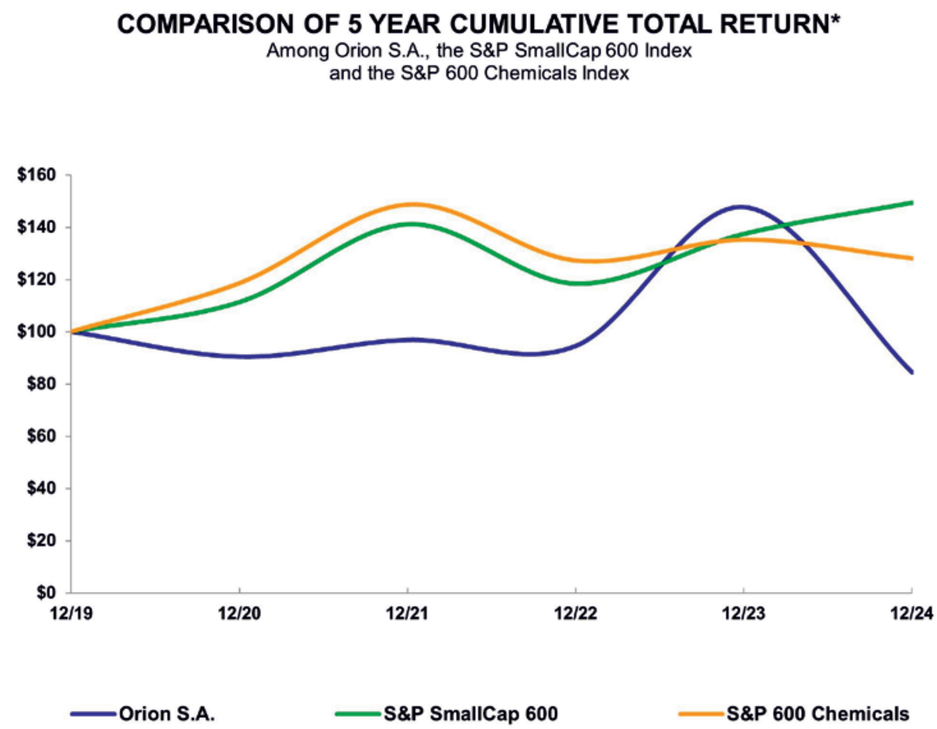
The maximum number of shares of our Common stock that may yet be purchased is not necessarily an indication of the number of stocks that will ultimately be purchased. Each authorization may be suspended or discontinued at any time and does not obligate us to acquire any specific amount of common stock.

Period	Total number of Common stocks purchased	Average price paid per share	Total number of Common stocks purchased as part of publicly announced plans	Maximum number of Common stocks yet be purchased as part of publicly announced plans
Stock Repurchase Program				
October 1 — 31, 2024	—	$ —	—	5,384,875
November 1 — 30, 2024	164,912	18.00	164,912	5,219,963
December 1 — 31, 2024	331,971	16.86	331,971	4,887,992
Common stock Repurchased in 2024 fourth quarter	**496,883**		**496,883**	**4,887,992**

Performance Graph

The performance graph and the information contained in this section is not "soliciting material," is being furnished, not filed, with the SEC and is not to be incorporated by reference into any of our filings under the Securities Act or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing.

The graph below shows the relative investment performance of Orion S.A.'s common stock, the S&P Smallcap 600 Index and S&P Small Cap Chemicals Index since December 31, 2019. The graph assumes that $100 was invested on December 31, 2019 and any dividends paid were reinvested at the date of payment. The graph is presented pursuant to SEC rules and is not meant to be an indication of our future performance.



	2019	2020	2021	2022	2023	2024
Orion S.A.	$ 100.00	$ 90.40	$ 96.83	$ 94.52	$ 147.67	$ 84.42
S&P Smallcap 600	100.00	111.29	141.13	118.41	137.42	149.37
S&P Small Cap Chemicals Index	100.00	118.61	148.68	127.25	135.24	128.11

Item 6. Reserved

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

The following discussion and analysis summarizes the significant factors affecting our results of operations and financial condition during the years ended December 31, 2024 and 2023, and should be read in conjunction with the information included under *Item 1. Business* and *Item 8. Financial Statements and Supplementary Data* included elsewhere in this Annual Report. We prepare our financial statements in accordance with accounting principles generally accepted in the United States (“GAAP” or “U.S. GAAP”) and in U.S. dollars.

This section discusses year-to-year comparisons between 2024 and 2023. For discussions on year-to-year comparison between 2023 and 2022 refer to Part II, Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations* in our 2023 Annual Report in Form 10-K filed with the United States Securities and Exchange Commission (“SEC”) on February 15, 2024 (the “*Prior Annual Report*”).

Overview

In 2024, our net sales were $1,877.5 million, sales volume was 934.8 kmt, net income was $44.2 million, and Adjusted EBITDA was $302.2 million.

- *Specialty Carbon Black Segment*—Adjusted EBITDA was $108.1 million. This segment accounted for 34.4% of our total revenue, 35.8% of total Adjusted EBITDA and 26.3% of our total volume in kmt in 2024.
- *Rubber Carbon Black Segment*—Adjusted EBITDA was $194.1 million. This segment accounted for 65.6% of our total revenue, 64.2% of total Adjusted EBITDA and 73.7% of our total volume in kmt in 2024.

Key Factors Affecting Our Results of Operations

We believe certain factors had, and will continue to have, a material effect on our results of operations and financial condition. As many of these factors are beyond our control, and certain of these factors have historically been volatile, past performance will not necessarily be indicative of future performance, and it is difficult to predict future performance with any degree of certainty. In addition, important factors that could cause our actual results of operations or financial conditions to differ materially from those expressed or implied below, include, but are not limited to, factors indicated under “*Item 1A. Risk Factors*” and “*Cautionary Statement for the Purposes of the “Safe Harbor” Provisions of the Private Securities Litigation Reform Act of 1995*” elsewhere in this Annual Report.

Recent Developments and Certain Known Trends

General Economic Conditions, Cyclicality and Seasonality

Throughout 2024, Rubber Carbon Black markets faced headwinds from soft global demand, capacity additions and economic uncertainty. Higher tire imports in the U.S. and Europe also adversely impacted our Rubber Carbon Black segment. In contrast, Specialty Carbon Black segment benefited from demand recovery.

In 2024, our Net income was $44.2 million. A criminal scheme that resulted in multiple fraudulently-induced outbound wire transfers to accounts controlled by unknown third parties aggregating to $42.9 million, net of $16.4 million of tax benefit, also adversely impacted our net income.

Adjusted EBITDA of $302.2 million was lower compared to 2023, primarily due to demand softening in the Rubber Carbon Black segment, higher fixed costs and lower cogeneration. However, improved demand for Specialty Carbon Black products, across all regions, positively impacted our Adjusted EBITDA.

Availability of, and volatility in the prices for various carbon black feedstocks including those that are oil based, can be influenced by a variety of geopolitical considerations, for example, government policy on climate change, the ongoing Russian-Ukraine war, the Middle-East conflicts, and the incoming U.S. administration’s energy policy in the United States, among others. While it is reasonable to expect continued volatility in the global energy-related commodity markets, we have worked to mitigate risks associated with such volatility by incorporating the aforementioned raw material cost pass-through provisions in our supply agreements when possible, and by qualifying multiple sources of feedstocks and energy sources for our manufacturing operations. Depending upon how the tariff measures unfold as discussed in *Item 1A. Risk Factors,* increased imports may impact our future operating and financial results.

Reconciliation of Non-GAAP Financial Measures

We present certain financial measures that are not prepared in accordance with GAAP or the accounting standards of any other jurisdiction and may not be comparable to other similarly titled measures of other companies. For a reconciliation of these non-GAAP financial measures to their nearest comparable GAAP measures, see section *Reconciliation of Non-GAAP Financial Measures* below.

These non-GAAP measures include, but are not limited to, Adjusted EBITDA, Net Working Capital and Capital Expenditures.

We define:

- *Adjusted EBITDA*—Income from operations before depreciation and amortization, stock-based compensation, and non-recurring items (such as, restructuring expenses, Loss due to misappropriation of assets, net, etc.) plus Earnings in affiliated companies, net of tax.
- *Net Working Capital*—Inventories, net plus Accounts receivable, net minus Accounts payable.
- *Capital Expenditures*—Cash paid for the acquisition of property, plant and equipment.

Our operations are managed by senior executives who report to our Chief Executive Officer ("CEO"), the *chief operating decision maker* ("CODM"). Adjusted EBITDA is used by CODM to evaluate our operating performance and to make decisions regarding allocation of capital, because it excludes the effects of items that have less bearing on the performance of our underlying core business. We use this measure, together with other measures of performance under GAAP, to compare the relative performance of operations in planning, budgeting and reviewing our business. We believe these measures are useful measures of financial performance in addition to Net income, Income from operations and other profitability measures under GAAP, because they facilitate operating performance comparisons from period to period. By eliminating potential differences in results of operations between periods caused by factors such as depreciation and amortization, historic cost and age of assets, financing and capital structures and taxation positions or regimes, we believe that Adjusted EBITDA provides a useful additional basis for evaluating and comparing the current performance of the underlying operations. In addition, we believe these non-GAAP measures aid investors by providing additional insight into our operational performance and help clarify trends affecting our business.

However, other companies and analysts may calculate non-GAAP financial measures differently, so making comparisons among companies on this basis should be done carefully. Non-GAAP measures are not performance measures under GAAP and should not be considered in isolation or construed as substitutes for Net sales, Net income, Income from operations, Gross profit and other GAAP measures as an indicator of our operations in accordance with GAAP.

Operating Results

2024 Compared to 2023

Operating results for the periods discussed are as follows:

	Year Ended December 31,		Year-Over-Year	
	2024	2023	Delta	
	(In millions, except volume)			%
Volume (in kmt)	**934.8**	**932.1**	**2.7**	**0.3%**
Net sales	**$ 1,877.5**	**$ 1,893.9**	**$ (16.4)**	(0.9)%
Cost of sales	**1,448.7**	**1,442.9**	**5.8**	0.4%
Gross profit	**428.8**	**451.0**	**(22.2)**	(4.9)%
Selling, general and administrative expenses	237.8	221.9	15.9	7.2%
Research and development costs	27.1	24.5	2.6	10.6%
Loss due to misappropriation of assets, net	59.3	—	59.3	—%
Other expense (income), net	1.9	(0.7)	2.6	(371.4)%
Income from operations	**102.7**	**205.3**	**(102.6)**	(50.0)%
Interest and other financial expense, net	49.4	50.9	(1.5)	(2.9)%
Reclassification of actuarial gains from AOCI	—	(8.9)	8.9	(100.0)%
Income before earnings in affiliated companies and income taxes	**53.3**	**163.3**	**(110.0)**	(67.4)%
Income tax expense	9.7	60.3	(50.6)	(83.9)%
Earnings in affiliated companies, net of tax	0.6	0.5	0.1	20.0%
Net income	**$ 44.2**	**$ 103.5**	**$ (59.3)**	(57.3)%
Other comprehensive income (loss), net of tax				
Foreign currency translation adjustments	(24.3)	(7.6)	(16.7)	219.7%
Net gains (losses) on derivatives	(5.3)	(8.3)	3.0	(36.1)%
Defined benefit plans, net	(0.4)	(11.5)	11.1	(96.5)%
Other comprehensive income (loss)	**(30.0)**	**(27.4)**	**(2.6)**	**9.5%**
Comprehensive income	**$ 14.2**	**$ 76.1**	**$ (61.9)**	**(81.3)%**

Reconciliation of Non-GAAP Financial Measures

The following tables present a reconciliation of each Non-GAAP measure to the most directly comparable GAAP measure:

Reconciliation of Net income to Adjusted EBITDA (A Non-GAAP financial Measure)

	Year Ended December 31,		Year-Over-Year	
	2024	2023	Delta	
		(In millions)		%
Net income	**$ 44.2**	**$ 103.5**	**$ (59.3)**	**(57.3)%**
Add back Income tax (benefit) expense	9.7	60.3	(50.6)	(83.9)%
Add back Equity in earnings of affiliated companies, net of tax	(0.6)	(0.5)	(0.1)	20.0 %
Income before earnings in affiliated companies and income taxes	**53.3**	**163.3**	**(110.0)**	**(67.4)%**
Add back Interest and other financial expense, net	49.4	50.9	(1.5)	(2.9)%
Add back Reclassification of actuarial gain from AOCI	—	(8.9)	8.9	— %
Income from operations	**102.7**	**205.3**	**(102.6)**	**(50.0)%**
Add back Depreciation of property, plant and equipment and amortization of intangible assets and right of use assets	125.3	113.0	12.3	10.9 %
EBITDA	**228.0**	**318.3**	**(90.3)**	**(28.4)%**
Equity in earnings of affiliated companies, net of tax	0.6	0.5	0.1	20.0 %
Loss due to misappropriation of assets, net				
Misappropriation of assets, net	55.7	—	55.7	— %
Professional fees related to misappropriation of assets	3.6	—	3.6	— %
Long term incentive plan	15.3	15.4	(0.1)	(0.6)%
Environmental reserves	—	(2.2)	2.2	(100.0)%
Other adjustments	(1.0)	0.3	(1.3)	(433.3)%
Adjusted EBITDA	**$ 302.2**	**$ 332.3**	**$ (30.1)**	**(9.1)%**
Specialty Carbon Black Adjusted EBITDA	$ 108.1	$ 110.7	$ (2.6)	(2.3)%
Rubber Carbon Black Adjusted EBITDA	$ 194.1	$ 221.6	$ (27.5)	(12.4)%

Net sales

Volume increased marginally by 2.7 kmt, or 0.3%, to 934.8 kmt, year-over-year, primarily due to higher Specialty Carbon Black segment volume, partially offset by lower Rubber Carbon Black segment volume.

Net sales decreased marginally by $16.4 million, or 0.9%, from $1,893.9 million in 2023 to $1,877.5 million in 2024, driven primarily by pass-through effect of lower oil prices, lower Rubber Carbon Black segment volume and unfavorable foreign currency translation impact, partially offset by broad-based recovery in the Specialty Carbon Black segment across all regions.

Cost of sales

Cost of sales increased marginally by $5.8 million, or 0.4%, from $1,442.9 million in 2023 to $1,448.7 million in 2024, primarily to associated costs of higher Specialty Carbon Black segment volume and higher fixed costs.

Gross profit

Gross profit decreased by $22.2 million or 4.9%, from $451.0 million in 2023 to $428.8 million in 2024.

The decrease was primarily driven by higher fixed costs, unfavorable impact from pass-through of raw material costs and lower cogeneration.

Selling, general and administrative expenses

Selling, general and administrative expenses increased by $15.9 million, or 7.2%, from $221.9 million in 2023 to $237.8 million in 2024 driven primarily by higher freight and personnel costs.

Loss due to misappropriation of assets, net

During the third quarter of 2024, we were the target of a criminal scheme that resulted in multiple fraudulently induced outbound wire transfers to accounts controlled by unknown third parties aggregating to $55.7 million, net of recoveries. In addition, we incurred $3.6

million of professional fees in connection with our investigations. For more information, refer to *Note Q. Commitments and Contingencies* to the Condensed Consolidated Financial Statements.

Income tax expense

Income tax expense was $9.7 million and $60.3 million in 2024 and 2023, respectively.

The 2024 effective income tax rate was 18.0% compared with 36.9% in 2023. The decrease in the effective tax rate was mainly due to the release of uncertain tax positions and impacts from changes in U.S. international tax laws. Those were partially offset by the effects of valuation allowances on tax losses and nondeductible expenses.

We recognized $16.4 million of tax benefit related to Loss due to misappropriation of assets, net. For further discussion refer to Note Q. *Commitments and Contingencies* to the Condensed Consolidated Financial Statements.

The 2024 effective tax rate was particularly impacted by:

- the release of uncertain tax positions of $13.3 million and associated interest, and
- benefits from the changes in U.S. international laws of $9.6 million.

For further details, see *Note P. Income Taxes* in *Item 8. Financial Statements and Supplementary Data,* to the audited Consolidated Financial Statements.

Adjusted EBITDA (A Non-GAAP Financial Measure)

Adjusted EBITDA decreased by $30.1 million, or 9.1%, from $332.3 million in 2023 to $302.2 million in 2024. The decrease was primarily due to higher selling, general and administrative expenses, lower Rubber Carbon Black segment volume and lower cogeneration. Those were partially offset by higher volume in the Specialty Carbon Black segment.

Comprehensive Income

2024 vs 2023—Comprehensive income decreased by $61.9 million, from $76.1 million to $14.2 million, primarily due to a decrease in net income. The activities from the remaining components of Comprehensive income are discussed below.

- $16.7 million unfavorable foreign currency translation adjustments due to U.S. dollar versus euro.

Those decreases were partially offset by:

- $11.1 million related to net favorable changes in defined pension and other post-retirement benefits, and
- $3.0 million related to net favorable impacts related to financial derivative instruments primarily driven by net periodic changes in cross currency swaps.

Segment Discussion

Our business operations are divided into two operating segments—Specialty Carbon Black and Rubber Carbon Black. We use Segment Adjusted EBITDA as a measure of segment performance and profitability. The table below presents our segment results for 2024 and 2023.

	Year Ended December 31,		Year-Over-Year	
	2024	2023	Delta	
	(In millions, unless otherwise indicated)			%
Specialty Carbon Black				
Volume (kmt)	245.8	221.4	24.4	11.0 %
Net sales	$ 646.3	$ 610.6	$ 35.7	5.8 %
Cost of sales	494.4	450.3	44.1	9.8 %
Gross profit	**$ 151.9**	**$ 160.3**	**$ (8.4)**	**(5.2)%**
Adjusted EBITDA	$ 108.1	$ 110.7	$ (2.6)	(2.3)%
Rubber Carbon Black				
Volume (kmt)	689.0	710.7	(21.7)	(3.1)%
Net sales	$ 1,231.2	$ 1,283.3	$ (52.1)	(4.1)%
Cost of sales	954.3	992.6	(38.3)	(3.9)%
Gross profit	**$ 276.9**	**$ 290.7**	**$ (13.8)**	**(4.7)%**
Adjusted EBITDA	$ 194.1	$ 221.6	$ (27.5)	(12.4)%

Specialty Carbon Black

2024 Compared to 2023

Specialty Carbon Black segment volume increased by 24.4 kmt, or 11.0%, from 221.4 kmt in 2023 to 245.8 kmt in 2024, primarily due to demand recovery across all regions and end markets.

Net sales of the Specialty Carbon Black segment increased by $35.7 million, or 5.8%, from $610.6 million in 2023 to $646.3 million in 2024. The net sales increase in 2024 was primarily due to higher volume across all regions, partially offset by unfavorable product mix and unfavorable foreign currency translation impact.

Gross profit of the Specialty Carbon Black segment decreased by $8.4 million, or 5.2%, from $160.3 million in 2023 to $151.9 million in 2024, primarily driven by higher fixed costs and lower cogeneration, partially offset by higher volume.

Adjusted EBITDA of the Specialty Carbon Black segment decreased by $2.6 million, or 2.3%, from $110.7 million in 2023 to $108.1 million in 2024. The decrease was primarily due to higher fixed costs and lower cogeneration. Those were partially offset by higher volume.

Rubber Carbon Black

2024 Compared to 2023

Volume of the Rubber Carbon Black segment decreased by 21.7 kmt, or 3.1%, from 710.7 kmt in 2023 to 689.0 kmt in 2024. The decrease was primarily due to lower demand in the Americas region.

Net sales of the Rubber Carbon Black segment decreased by $52.1 million, or 4.1%, from $1,283.3 million in 2023 to $1,231.2 million in 2024. The decrease was primarily due to lower volume and the pass-through effect of lower oil prices, partially offset by favorable price.

Gross profit of the Rubber Carbon Black segment decreased by $13.8 million, or 4.7%, from $290.7 million in 2023 to $276.9 million in 2024. The decrease in the period was primarily driven by lower volume and lower cogeneration, partially offset by favorable price.

Adjusted EBITDA of the Rubber Carbon Black segment decreased by $27.5 million, or 12.4%, from $221.6 million in 2023 to $194.1 million in 2024. The decrease was primarily due to lower volume in Americas region, lower cogeneration and higher fixed costs. Those were partially offset by favorable price.

Liquidity and Capital Resources

Historical Cash Flows

The table below presents cash flows derived from our Consolidated Financial Statements.

	Year Ended December 31,	
	2024	**2023**
	(In millions)	
Net cash provided by operating activities	$ 125.3	$ 345.9
Net cash used in investing activities	(206.7)	(172.8)
Net cash provided by (used in) financing activities	89.3	(197.1)

2024

Operating Activities—Cash provided by operating activities primarily reflected our Net income, adjusted for non-cash items and changes in working capital. The $55.7 million Loss due to misappropriation of assets, net of recoveries, $3.6 million of related professional fees and $16.4 million associated tax benefit are also included in cash provided by operating activities.

Investing Activities—Cash used by investing activities amounted to $206.7 million. The expenditures were primarily related to maintenance and growth investments, including $66.4 million related to construction of the facility in La Porte, Texas.

Financing Activities—Net cash provided by financing activities was $89.3 million. These inflows primarily consisted of $68.2 million, net borrowings under our ancillary credit facilities and $48.0 million related to other short-term debt borrowings. Those were partially offset by scheduled debt repayments, dividend distributions and repurchase of shares of Common stock. See *Note J. Debt and Other Obligations* to the accompanying Consolidated Financial Statements for further information regarding the Company's indebtedness.

Sources of Liquidity

Our principal sources of liquidity are the net cash generated (i) from operating activities, primarily driven by our operating results and changes in working capital requirements and (ii) from financing activities, primarily driven by borrowing amounts available under our committed multicurrency, senior secured Revolving credit facility and related ancillary facilities, uncommitted local credit lines and, from time to time, term loan borrowings and Accounts receivable factoring.

We believe our anticipated future operating cash flow, the capacity under our existing credit facilities and uncommitted bilateral lines of credit, along with access to surety bonds, will be sufficient to finance our planned capital expenditures, settle our commitments and contingencies and address our normal anticipated working capital needs for the foreseeable future.

As of December 31, 2024, the Company had liquidity of $201.6 million, including cash and equivalents of $44.2 million, $127.5 million in availability remaining under our revolving credit facility, including ancillary lines and $29.9 million under other available credit lines.

Net Working Capital (A Non-GAAP Financial Measure)

We define Net Working Capital as the total of Inventories, net and Accounts receivable, net, less Accounts payable. Net Working Capital is a non-GAAP financial measure, and other companies may use a similarly titled financial measure that is calculated differently from the way we calculate Net Working Capital. The components of Net Working Capital at December 31, are as follows:

	2024	2023
	(In millions)	
Inventories, net	$ 290.4	$ 287.1
Accounts receivable, net	211.9	241.0
Accounts payable	(156.2)	(183.7)
	$ 346.1	**$ 344.4**

Our Net Working Capital position can vary significantly due to fluctuations in oil prices and receipts of carbon black oil shipments. In general, increases in the cost of raw materials lead to an increase in our Net Working Capital requirements. Due to the quantity of carbon black oil that we typically keep in stock, such increases in Net Working Capital occur gradually over a period of two to three months. Conversely, decreases in the cost of raw materials lead to a decrease in our Net Working Capital requirements over the same period of time.

Our Net Working Capital increased to $346.1 million as of December 31, 2024 compared to $344.4 million as of December 31, 2023. The primary working capital change drivers, year over year, were as follows:

- *Accounts receivable, net*—Improved payment terms and the factoring of certain Accounts receivable reduced this balance. See *Note C. Accounts Receivable* to the accompanying Consolidated Financial Statements for further information on the factoring agreement.

This was partially offset by:

- *Accounts payable*—Decrease in accounts payable was primarily due to timing of payments and lower production.

Capital Requirements

Capital Expenditures—We define Capital Expenditures as cash paid for the acquisition of property, plant and equipment. We plan to finance our capital expenditures with cash generated by our operating activities and or utilizing existing debt capacity. We currently do not have material commitments to make capital expenditures except for the under-construction facility at La Porte, Texas. We do not plan to make any other capital expenditures outside the ordinary course of our business.

Debt and Other Obligations—Our gross debt balance as of December 31, 2024 was $908.7 million, an increase of $90.5 million compared to December 31, 2023. In 2025, we will repay $8.7 million of long-term debt from cash in hand and cash generated by operating activities. For more information on Debt, refer to *Note J. Debt and Other Obligations* to the accompanying Consolidated Financial Statements.

Contractual Obligations—We believe our contractual obligations will be met with cash generated by operating activities and/or utilizing existing debt capacity. For more information on contractual obligations, refer to "*Note Q. Commitments and Contingencies*" to the accompanying Consolidated Financial Statements.

Leases—We do not have material short-term lease obligations. We believe lease obligations would be met with cash generated by our operating activities and/or utilizing existing debt capacity. For operating and finance leases, refer to *Note G. Leases* to the accompanying Consolidated Financial Statements.

Critical Accounting Policies and Estimates

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingent assets and liabilities. The policies and estimates discussed below are considered by our management to be critical to an understanding of the Consolidated Financial Statements, because their application requires the most significant judgments from management in estimating matters for financial reporting that are inherently uncertain. This discussion should be read in conjunction with our Consolidated Financial Statements and related notes included in this Annual Report in Form 10-K.

Inventories—We account for our raw materials, work-in-progress and finished goods inventories using average cost method of accounting. The cost of raw materials, which represents a substantial portion of our operating expenses and energy costs, generally follow price trends for crude oil and/or natural gas.

We periodically review inventory for both potential obsolescence and potential declines in anticipated selling prices. Due to natural inventory composition changes, variation in pricing from period to period does not necessarily result in a linear lower of cost or market ("LCM") impact. Fluctuation in the prices from period to period may result in the recognition of charges to adjust the value of inventory to the lower of cost or market in periods of falling prices and the reversal of those charges in subsequent interim periods as market prices recover. We write down the value of our inventories by an amount equal to the difference between the cost of the inventory and its estimated net realizable value. Historically, such write-downs have not been material. However, if actual market conditions are less favorable than those projected by management at the time of the assessment, additional inventory write-downs may be required, which could reduce our gross profit and our earnings.

Loss Contingencies—We record liabilities for loss contingencies when it is probable that a liability has been incurred and the amount of loss is reasonably estimable. We provide disclosure when there is a reasonable possibility that the ultimate loss will exceed the recorded provision by a material amount or if the loss is not reasonably estimable but is expected to be material to our financial results. We are currently involved in litigation and other proceedings, as discussed in *Note Q. Commitments and Contingencies* to the accompanying Consolidated Financial Statements. We have accrued our estimates of the probable losses associated with these matters and associated legal costs are generally recognized as incurred. However, our losses are typically resolved over long periods of time and are often difficult to estimate due to various factors including the possibility of multiple actions by third parties. Therefore, it is possible future earnings could be affected by changes in our estimates related to these matters.

Accruals for Taxes Based on Income—The determination of our provision for income taxes and the calculation of our tax benefits and liabilities is subject to management's estimates and judgments due to the complexity of the tax laws and regulations in the tax jurisdictions in which we operate. Uncertainties exist with respect to interpretation of these complex laws and regulations.

Deferred tax assets and liabilities are determined based on temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to reverse.

We recognize future tax benefits to the extent that the realization of these benefits is more likely than not. Our current provision for income taxes is impacted by the recognition and release of valuation allowances related to net deferred tax assets in certain jurisdictions. Further changes to these valuation allowances may impact our future provision for income taxes, which will include no tax benefit with respect to losses incurred and no tax expense with respect to income generated in these countries until the respective valuation allowance is eliminated.

We recognize the financial statement benefits with respect to an uncertain income tax position that we have taken or may take on an income tax return when we believe it is more likely than not that the position will be sustained with the tax authorities.

ACCOUNTING AND REPORTING CHANGES

For a discussion of the potential impact of new accounting pronouncements on our Consolidated Financial Statements, see *Note B. Recent Accounting Pronouncements* to the accompanying Consolidated Financial Statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Our activities expose us to a variety of market risks. Our primary market risk exposures relate to foreign exchange, interest rate and commodity risks. To manage these risks and our exposure to the unpredictability of financial markets, we seek to mitigate their impact on our financial performance and capital. Where appropriate, we use derivative financial instruments solely for the purpose of hedging the foreign exchange, interest and commodity risks arising from our operations and sources of finance. For this purpose, a systematic financial and risk management system has been established. We do not enter into derivative financial instruments for speculative purposes.

The following discussion and analysis only addresses our market risk and does not address other financial risks that we face in the normal course of business, including credit risk and liquidity risk.

Interest Rate Risk

Interest rate risk management aims to protect consolidated Net income from negative effects due to market interest rate fluctuations. Orion is exposed to interest rate risk, which might arise from incurring new liabilities due to higher interest rates. We also have term loans which are variable interest rate instruments, that expose us to market risk arising from changes in the yield curve. Appropriate hedging instruments are in place to mitigate the exposure arising from increasing interest rates.

The table below shows the sensitivity of our interest expense to changes in the interest rate, after the impact of hedge accounting. It shows the change resulting from a hypothetical fluctuation of 50 basis points (0.50%) in the three-month LIBOR and the USD Term SOFR 3M + CAS (Credit Adjustment Spread) as of December 31, 2024, assuming that all other variables remain unchanged. For example, changes in U.S. dollar (“USD”)/EUR currency rate would have an impact on our interest exposure and vice versa. Changes in interest rates would also have a related impact on our foreign currency (USD) exposure. The sensitivity analysis assumes that the hypothetical interest rate was valid and that our Revolving credit facility was utilized in the full amount over the course of the entire year.

The effect of this hypothetical change in the interest rate of the variable rate loan to our Consolidated Statements of Operations, *Income before earnings in affiliated companies and income taxes* ("income before taxes" in this section) is as follows:

	December 31, 2024	
	Increase by 0.50%	Decrease by 0.50%
	In millions	
(Increase) decrease in interest expense	$ (2.3)	$ 3.0
(Increase) decrease in total comprehensive income before taxes	2.3	(3.0)

Foreign Currency Risk

A significant portion of our reporting entities use the euro as their functional currency. Our reporting currency is the U.S. dollar. The translation gains or losses that result from the process of translating the euro denominated financial statements to U.S. dollar are deferred in Accumulated other comprehensive income until such time as those entities may be substantially liquidated or sold. Changes in the value of the U.S. dollar relative to the euro can therefore have a significant impact on Comprehensive income.

The table below shows the sensitivity with regard to the effect of a change in the euro/U.S. dollar exchange rate using the outstanding amount and the interest for the U.S. dollar-denominated Term Loan issued by a 100% wholly owned subsidiary whose functional currency is the euro. A fluctuation of the euro/U.S. dollar exchange rate of 10% as of December 31, 2024, with other conditions remaining unchanged, would have the following effect on our Income before earnings in affiliated companies and income taxes:

	December 31, 2024	
	Value of the U.S. Dollar in relation to the Euro (1)	
	Increase by 10%	Decrease by 10%
	In millions	
FX gain (loss) in financial result	$ 8.5	$ (10.4)

(1) As of December 31, 2024: €1 = $1.0389 (U.S.).

Some of our operations enter into transactions that are not denominated in their functional currency. This results in an exposure to foreign currency risk, including, but not limited to, third party and intercompany receivables and payables and intercompany loans.

Our policy is to maintain a balanced position in foreign currencies to minimize exchange gains and losses arising from changes in exchange rates. To minimize the effects of our net currency exchange exposures, we enter into foreign exchange contracts and cross-currency swaps. Our net position in foreign currencies is monitored daily.

We maintain risk management control practices to monitor foreign currency risk attributable to our intercompany and third party outstanding foreign currency balances. These practices involve the centralization of our exposure to underlying currencies that are not subject to central bank and/or country specific restrictions. By centralizing most of our foreign currency exposure into one subsidiary, we are able to take advantage of any natural offsets, thereby reducing the overall impact of changes in foreign currency rates on our earnings. At December 31, 2024, 2023, and 2022, a 10% fluctuation compared to the U.S. dollar in the underlying currencies that have no central bank or other currency restrictions related to non-hedged monetary assets, net would have resulted in an additional impact to earnings of approximately $5.2 million, $2.8 million, and $11.0 million, respectively.

Interest and other financial expense, net, in the Consolidated Statements of Operations reflected net exchange rate foreign currency losses of $1.6 million, $4.0 million and $3.5 million in 2024, 2023, and 2022, respectively.

Commodity Risk

Commodity risk results from changes in market prices for raw materials, mainly carbon black oil. Raw materials are primarily purchased to meet our production requirements. Costs for raw materials and energy have fluctuated significantly in past years and may continue to fluctuate in the future. We endeavor to reduce purchasing risks on the procurement markets through worldwide purchasing activities and optimized processes for the purchase of additional raw materials. Raw materials are purchased exclusively to cover our own requirements.

A significant portion of our volume, approximately 65%, is sold based on formula-driven price adjustment mechanisms for changes in costs of raw materials. Sales prices under non-indexed contracts are reviewed on a quarterly basis to reflect raw material and market fluctuation. We believe that our contracts enable us to generally maintain our Segment margins.

Item 8. Financial Statements and Supplementary Data

Table of Contents—Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Orion S.A.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Orion S.A. (the Company) as of December 31, 2024 and 2023, the related consolidated statements of operations, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 19, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter 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.

	Valuation of Cross-Currency Swaps
Description of the Matter	As discussed in notes A and K to the consolidated financial statements, the Company’s financial instruments held a fair value of $38.9 million as of December 31, 2024, of which financial instruments related to cross-currency swaps totaled $38.9 million. The fair value of the cross-currency swaps are calculated using the present value of future cash flows discounted using observable inputs (level 2) including notional value amounts, yield curves, basis curves, and various spot and forward foreign exchange rates on the valuation date. We identified the valuation of the cross-currency swaps as a critical audit matter. The nature of the arrangement is such that there are multiple legs, with multiple payments, in several periods that creates complexity in the fair value model and requires the use of valuation specialists.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design, and tested the operating effectiveness of internal controls over the Company’s derivatives process. This included key controls related to the authorization of transactions and management's independent assessment of fair values. Our substantive audit procedures to test the Company’s cross-currency swaps included, among others, confirmation of existence and key terms with the counterparty. Testing the valuation of cross currency swaps, including, an evaluation of the methodologies and significant inputs used by the Company. With the assistance of our valuation specialists, we performed an independent valuation of the cross-currency swaps to assess the appropriateness of the model used by the Company and its specialist to estimate the fair value, which involved independently obtaining significant inputs from external sources. We also assessed the adequacy of the disclosures related to the fair value measurement.

/s/ Ernst & Young LLP
We have served as the Company’s auditor since 2021.
Houston, TX
February 19, 2025

Orion S.A
Consolidated Statements of Operations

	Years Ended December 31,		
	2024	2023	2022
	(In millions, except share and per share data)		
Net sales	$ 1,877.5	$ 1,893.9	$ 2,030.9
Cost of sales	1,448.7	1,442.9	1,582.1
Gross profit	**428.8**	**451.0**	**448.8**
Selling, general and administrative expenses	237.8	221.9	227.1
Research and development costs	27.1	24.5	21.7
Loss due to misappropriation of assets, net	59.3	—	—
Other expense (income), net	1.9	(0.7)	2.9
Income from operations	**102.7**	**205.3**	**197.1**
Interest and other financial expense, net	49.4	50.9	39.9
Reclassification of actuarial gains from AOCI	—	(8.9)	—
Income before earnings in affiliated companies and income taxes	**53.3**	**163.3**	**157.2**
Income tax expense	9.7	60.3	51.5
Earnings in affiliated companies, net of tax	0.6	0.5	0.5
Net income	**$ 44.2**	**$ 103.5**	**$ 106.2**
Weighted-average shares outstanding (in thousands):			
Basic	58,223	58,995	60,902
Diluted	58,373	59,980	61,378
Earnings per share			
Basic	$ 0.76	$ 1.75	$ 1.74
Diluted	$ 0.76	$ 1.73	$ 1.73

The accompanying notes are an integral part of these Consolidated Financial Statements.

Orion S.A

Consolidated Statements of Comprehensive Income

	Years Ended December 31,		
	2024	2023	2022
		(In millions)	
Net income	**$ 44.2**	**$ 103.5**	**$ 106.2**
Other comprehensive income (loss), net of tax			
Foreign currency translation adjustments	(24.3)	(7.6)	(13.4)
Net gains (losses) on derivatives	(5.3)	(8.3)	35.2
Defined benefit plans, net	(0.4)	(11.5)	14.2
Other comprehensive income (loss)	**(30.0)**	**(27.4)**	**36.0**
Comprehensive income	**$ 14.2**	**$ 76.1**	**$ 142.2**

The accompanying notes are an integral part of these Consolidated Financial Statements.

Orion S.A
Consolidated Balance Sheets

	December 31	
	2024	2023
	(In millions, except share data)	
ASSETS		
Current assets		
Cash and cash equivalents	$ 44.2	$ 37.5
Accounts receivable, net	211.9	241.0
Inventories, net	290.4	287.1
Income tax receivables	12.6	6.1
Prepaid expenses and other current assets	54.2	74.4
Total current assets	**613.3**	**646.1**
Property, plant and equipment, net	965.0	900.1
Right-of-use assets	117.9	110.6
Goodwill	71.5	76.1
Intangible assets, net	18.5	25.5
Investment in equity method affiliates	8.0	5.1
Deferred income tax assets	21.6	30.0
Other assets	41.5	39.9
Total non-current assets	**1,244.0**	**1,187.3**
Total assets	**$ 1,857.3**	**$ 1,833.4**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 156.2	$ 183.7
Current portion of long term-debt and other financial liabilities	258.8	137.0
Accrued liabilities	39.5	41.7
Income taxes payable	4.8	34.2
Other current liabilities	57.4	43.7
Total current liabilities	**516.7**	**440.3**
Long-term debt, net	647.0	677.3
Employee benefit plan obligation	58.5	60.4
Deferred income tax liabilities	36.5	66.3
Other liabilities	123.7	110.6
Total non-current liabilities	**865.7**	**914.6**
Stockholders' equity		
Common stock		
Authorized: 65,992,259 and 65,035,579 shares with no par value		
Issued – 60,992,259 and 60,992,259 shares with no par value		
Outstanding – 57,242,372 and 57,898,772 shares	85.3	85.3
Treasury stock, at cost, 3,749,887 and 3,093,487	(82.2)	(70.1)
Additional paid-in capital	84.7	85.6
Retained earnings	457.0	417.6
Accumulated other comprehensive loss	(69.9)	(39.9)
Total stockholders' equity	**474.9**	**478.5**
Total liabilities and stockholders' equity	**$ 1,857.3**	**$ 1,833.4**

The accompanying notes are an integral part of these Consolidated Financial Statements.

Orion S.A
Consolidated Statements of Cash Flows

	Years Ended December 31,		
	2024	2023	2022
	(In millions)		
Cash flows from operating activities:			
Net income	$ 44.2	$ 103.5	$ 106.2
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Depreciation of property, plant and equipment and amortization of intangible assets and right of use assets	125.3	113.0	105.7
Amortization of debt issuance costs	1.5	2.7	1.9
Stock based compensation	15.3	15.4	7.7
Deferred tax (benefit) provision	(19.7)	6.3	7.2
Foreign currency transactions	(1.7)	5.0	(8.4)
Reclassification of actuarial (gains)/losses from AOCI	—	(8.9)	—
Other operating non-cash items, net	1.8	0.8	(0.3)
Changes in operating assets and liabilities, net:			
Trade receivables	13.8	131.2	(95.6)
Inventories	(19.6)	(7.7)	(60.1)
Trade payables	(14.8)	1.6	9.2
Other provisions	1.4	(4.4)	(3.7)
Income tax liabilities	(17.8)	(2.1)	20.3
Other assets and liabilities, net	(4.4)	(10.5)	(9.1)
Net cash provided by operating activities	**125.3**	**345.9**	**81.0**
Cash flows from investing activities:			
Acquisition of property, plant and equipment	(206.7)	(172.8)	(232.8)
Net cash used in investing activities	**(206.7)**	**(172.8)**	**(232.8)**
Cash flows from financing activities:			
Proceeds from long-term debt borrowings	—	12.6	47.8
Repayments of long-term debt	(4.1)	(3.0)	(3.0)
Payments for debt issue costs	(0.2)	(2.7)	(1.5)
Cash inflows related to current financial liabilities	263.1	284.4	223.2
Cash outflows related to current financial liabilities	(138.1)	(417.9)	(107.7)
Dividends paid to stockholders	(4.8)	(4.9)	(5.0)
Repurchases of Common stock	(26.6)	(65.6)	(4.3)
Other financing activities	—	—	(0.2)
Net cash provided by (used in) financing activities	**89.3**	**(197.1)**	**149.3**
Increase (decrease) in cash, cash equivalents and restricted cash	**7.9**	**(24.0)**	**(2.5)**
Cash, cash equivalents and restricted cash at the beginning of the period	40.2	63.4	68.5
Effect of exchange rate changes on cash	(3.4)	0.8	(2.6)
Cash, cash equivalents and restricted cash at the end of the period	**44.7**	**40.2**	**63.4**
Less restricted cash at the end of the period	0.5	2.7	2.6
Cash and cash equivalents at the end of the period	**$ 44.2**	**$ 37.5**	**$ 60.8**
Cash paid for interest, net	$ (48.8)	$ (38.9)	$ (33.5)
Cash paid for income taxes	$ (47.3)	$ (56.1)	$ (23.9)
Supplemental disclosure of non-cash activity:			
Lease liabilities	$ 28.9	$ 30.0	$ 25.8

The accompanying notes are an integral part of these Consolidated Financial Statements.

Orion S.A
Consolidated Statements of Changes in Stockholders' Equity

(In millions, except share and per share data)	Common stock Number	Common stock Amount	Treasury stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Total
As of January 1, 2022	**60,656,076**	**$ 85.3**	**$ (6.3)**	**$ 71.4**	**$ 217.8**	**$ (48.5)**	**$ 319.7**
Net income	—	—	—	—	106.2	—	106.2
Other comprehensive income, net of tax	—	—	—	—	—	36.0	36.0
Dividends - $0.08 per share	—	—	—	—	(5.0)	—	(5.0)
Repurchases of Common stock	(244,032)	—	(4.3)	—	—	—	(4.3)
Stock based compensation	—	—	—	7.7	—	—	7.7
Issuance of stock under equity compensation plans	159,512	—	1.8	(2.7)	—	—	(0.9)
As of December 31, 2022	**60,571,556**	**85.3**	**(8.8)**	**76.4**	**319.0**	**(12.5)**	**459.4**
Net income	—	—	—	—	103.5	—	103.5
Other comprehensive loss, net of tax	—	—	—	—	—	(27.4)	(27.4)
Dividends - $0.08 per share	—	—	—	—	(4.9)	—	(4.9)
Repurchases of Common stock	(2,895,664)	—	(65.6)	—	—	—	(65.6)
Stock based compensation	—	—	—	15.4	—	—	15.4
Issuance of stock under equity compensation plans	222,880	—	4.3	(6.2)	—	—	(1.9)
As of December 31, 2023	**57,898,772**	**85.3**	**(70.1)**	**85.6**	**417.6**	**(39.9)**	**478.5**
Net income	—	—	—	—	44.2	—	44.2
Other comprehensive loss, net of tax	—	—	—	—	—	(30.0)	(30.0)
Dividends - $0.08 per share	—	—	—	—	(4.8)	—	(4.8)
Repurchases of Common stock	(1,402,999)	—	(26.6)	—	—	—	(26.6)
Stock based compensation	—	—	—	15.3	—	—	15.3
Issuance of stock under equity compensation plans	746,599	—	14.5	(16.2)	—	—	(1.7)
As of December 31, 2024	**57,242,372**	**$ 85.3**	**$ (82.2)**	**$ 84.7**	**$ 457.0**	**$ (69.9)**	**$ 474.9**

The accompanying notes are an integral part of these Consolidated Financial Statements.

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Note A. Significant Accounting Policies

Orion S.A.'s Consolidated Financial Statements include Orion S.A. and its subsidiaries ("Orion", the "Company", "we", "us", "our", or "OEC"). Orion is a Luxembourg joint stock corporation (société anonyme or S.A.), incorporated in 2014 as a Luxembourg limited liability company (société à responsabilité limitée).

Principles of Consolidation

The accompanying Consolidated Financial Statements have been prepared, in U.S. dollars, in conformity with accounting principles generally accepted in the United States ("U.S. GAAP" or "GAAP"). The Consolidated Financial Statements include the accounts of Orion S.A. and its wholly-owned subsidiaries and majority–owned and controlled entities. Subsidiaries are defined as being those companies over which we, either directly or indirectly, have control through a majority of the voting rights or the right to exercise control or to obtain the majority of the benefits and be exposed to the majority of the risks. Subsidiaries are consolidated from the date on which control is obtained until the date such control ceases.

All intercompany transactions and balances have been eliminated in consolidation.

Use of Estimates and Assumptions

We make estimates and assumptions to prepare our financial statements in conformity with GAAP. Those estimates and assumptions affect the amount we report in our Consolidated Financial Statements and accompanying Notes. Our actual results could differ from those estimates, and variances could materially affect our financial condition and results of operations in future periods.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents comprise bank balances and cash on hand and also include highly liquid investments with maturities of three-months or less at the date of purchase. We record cash and cash equivalents as restricted when we are unable to freely use such cash and cash equivalents for our general operating purposes.

A majority of our restricted cash and cash equivalents serves as cash collateral deposits, voluntary and/or mandatory, for third-party bank guarantees.

Accounts and Notes Receivables

Accounts receivable are amounts due from customers for merchandise sold or services performed in the ordinary course of business and are carried at transaction price net of allowance for credit losses. Allowance for credit losses is measured using historical loss rates for the respective risk categories and incorporating forward-looking estimates. The corresponding expense for the credit loss allowance is reflected in Selling, general and administrative expenses in the Consolidated Statements of Operations. Past due balances are written-off against credit loss allowance when the accounts are deemed no longer to be collectible.

We enter into agreements with various third-party financial institutions for the sale of certain Accounts receivable. We have concluded that there would generally be no risk of loss to us from non-payment of the sold receivables because:

- The transferred financial assets are isolated beyond the reach of our creditors, even in bankruptcy or other receivership;
- The party purchasing accounts receivables has the right to pledge and or exchange the transferred assets without restrictions; and
- We do not retain effective control over the transferred financial assets.

In the Condensed Consolidated Statements of Operations, the loss on receivables sale is reflected in Other expense (income), net.

Inventories

The Company values inventory at the lower of cost or net realizable value using the average cost method. We periodically evaluate the net realizable value of inventories based primarily upon their age, but also upon assumptions of future usage in production, customer demand and market conditions. Inventories have been reduced to the lower of cost or net realizable value by allowances for slow moving or obsolete goods. If actual circumstances are less favorable than those projected by management in its evaluation of the net realizable value of inventories, additional write-downs may be required.

Property, Plant and Equipment

Property, plant and equipment are recorded at historical cost. Historical cost includes expenditures that are directly attributable to the acquisition of the items. Costs may also include borrowing costs incurred on debt during construction of major projects exceeding one year, costs of major maintenance arising from turnarounds of major units and committed decommissioning costs. Expenditures for major renewals and improvements, which significantly extend the useful lives of the existing property, plant and equipment, are capitalized and depreciated.

Routine maintenance costs are expensed as incurred.

Depreciation is computed using the straight-line method over the estimated useful lives of assets. The depreciable lives for Buildings, Plant and machinery, as well as Furniture, fixtures and office equipment, are between 5 and 50 years, 3 and 25 years, and 3 and 25 years, respectively.

Land is not depreciated.

We evaluate property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Long-lived assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets, which, for us, is generally at the plant group level. If it is determined that an asset or asset group's undiscounted future cash flows will not be sufficient to recover the carrying amount, the asset is written down to its estimated fair value.

Gain or loss on retirement or sale of property, plant and equipment is reflected in Other expense (income), net in the Consolidated Statements of Operations. There were no material write-offs in 2024, 2023 or 2022.

Goodwill

Goodwill is tested for impairment annually as of September 30, or whenever events or changes in circumstances indicate that the fair value of a reporting unit with goodwill is below its carrying amount.

We first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. Qualitative factors assessed for each of the reporting units include, but are not limited to, changes in long-term commodity prices, discount rates, competitive environments, planned capacity, cost factors such as raw material prices, and financial performance of the reporting units. If the qualitative assessment indicates that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, a quantitative test is required. If the carrying value of the reporting unit including goodwill exceeds its fair value, an impairment charge equal to the excess would be recognized up to a maximum amount of goodwill allocated to that reporting unit.

For 2024 and 2023, we performed qualitative impairment assessments of our reporting units, which indicated that the fair value of our reporting units was more likely than not greater than their carrying value including goodwill. Based on this assessment, our historical assessment for impairment and forecasted demand for our products, a quantitative goodwill impairment test at September 30, 2024 was not necessary.

Intangible Assets

Intangible assets comprise trade names and trademarks, customer relationships, developed technologies and software costs. These assets are amortized, using the straight-line method, over their estimated useful lives of 3-15 years or over the term of the related agreement. The useful lives of intangibles related to customer relationships acquired in business combinations are estimated on the basis of contractual arrangements and the probability of a continuing relationship.

We evaluate definite-lived intangible assets with the associated long-lived asset group for impairment whenever impairment indicators are present, such as a significant reduction in cash flows associated with the assets.

Investments in Equity Method Affiliates

We account for equity investments ("equity investments") using the equity method of accounting if we have the ability to exercise significant influence over, but not control of, an investee. Significant influence generally exists if we have an ownership interest representing between 20% and 50% voting rights. Under the equity method of accounting, investments are stated initially at cost and are adjusted for subsequent additional investments and our proportionate share of profit or losses and distributions.

We record our share of the profit or losses of the equity method investments, net of income taxes, in the Consolidated Statements of Operations. When our share of losses in an equity investment equals or exceeds our interest in the equity investment, including any other unsecured receivables, we do not recognize further losses, unless we have incurred obligations or made payments on behalf of the equity investment.

We evaluate our equity method investments for impairment when events or changes in circumstances indicate, in our management's judgment, that the carrying value of such investments may have experienced other-than-temporary decline in value. When evidence of loss in value has occurred, we compare the estimated fair value of investment to the carrying value of investment to determine whether an impairment has occurred. If the estimated fair value is less than the carrying value and our management considers the decline in value to be other-than-temporary, the excess of the carrying value over the estimated fair value is recognized in the Consolidated Financial Statements as an impairment.

We have investments in *Kommanditgesellschaft Deutsche Gasrußwerke GmbH & Co* and *Kommanditgesellschaft Deutsche Gasrußwerke GmbH & Co*, (together "DGW"), and *Alpha Carbone* which are accounted for using the equity method of investment.

Income Taxes

The income tax for the period comprises current and deferred tax. Income tax is recognized in the Consolidated Statements of Operations, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In these cases, the applicable tax amount is recognized in other comprehensive income or directly in equity, respectively.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as the net tax effects of tax carryforwards. Valuation allowances are provided against deferred tax assets when it is more likely than not that some portion or all of the deferred tax asset will not be realized.

We recognize uncertain income tax positions in our financial statements when we believe it is more likely than not, based on the technical merits, that the position or a portion thereof will be sustained upon examination. For a position that is more likely than not to be sustained, the benefit recognized is measured at the largest cumulative amount that is greater than 50 percent likely of being realized.

Other Provisions

Asset retirement obligations—At some sites, we are contractually obligated to decommission our plants upon site exit. Asset retirement obligations are recorded at the present value of the estimated costs to retire the asset at the time the obligation is incurred. That cost, which is capitalized as part of the related long-lived asset, is depreciated on a straight-line basis over the remaining useful life of the related asset. Accretion expense in connection with the discounted liability is also recognized over the remaining useful life of the related asset.

Environmental provisions—We accrue for environmental remediation costs and other obligations when it is probable that a liability has been incurred and we can reasonably estimate the amount. The amount accrued reflects our assumptions about remediation requirements at the contaminated site, the nature of the remedy, the outcome of discussions with regulatory agencies and other potentially responsible parties at multi-party sites, and the number and financial viability of other potentially responsible parties. We do not reduce its estimated liability for possible recoveries from insurance carriers. Proceeds from insurance carriers are recorded when realized by either the receipt of cash or a contractual agreement. We determine the timing and amount of any liability based upon assumptions regarding future events. Inherent uncertainties exist in such evaluations primarily due to unknown conditions and other circumstances, changing governmental regulations and legal standards regarding liability, and evolving technologies. We adjust these liabilities periodically as remediation efforts progress or as additional technical or legal information becomes available.

Concentrations of Credit Risk

This concentration of customers may impact our overall exposure to credit risk, either positively or negatively, in that our customers may be similarly affected by changes in economic or other conditions. In addition, we and many of our customers operate worldwide and are therefore exposed to risks associated with the economic and political forces of various countries and geographic areas. We generally do not obtain any collateral for our receivables.

Foreign Currency Translation

Functional and Reporting Currency—Items included in the financial information of each of Orion's entities are measured using the currency of the primary economic environment in which the entity operates ("the functional currency") and then translated to the U.S. dollar ("the reporting currency") as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- Income and expenses for each income statement are translated at monthly average exchange rates; and
- All resulting exchange differences are recognized as a separate component within Other comprehensive income (foreign currency translation adjustments).

Transactions and Balances—Foreign currency transactions are recorded in their respective functional currency using exchange rates prevailing at the dates of the transactions. Exchange gains and losses, resulting from the settlement of such transactions and from remeasurement of monetary assets and liabilities denominated in foreign currencies at period-end exchange rates, are recognized in Interest and other financial expense, net in the Consolidated Statements of Operations.

Revenue Recognition

We recognize revenue when the customers obtain control of promised goods or services. The revenue recognized is the amount of consideration which we expect to receive in exchange for those goods or services. Our contracts with customers are generally for products only and do not include other performance obligations. Generally, we consider purchase orders, which in some cases are governed by master supply agreements, to be contracts with customers. The transaction price as specified on the purchase order or sales contract is considered the standalone selling price for each distinct product. To determine the transaction price at the time when revenue is recognized, we evaluate whether the price is subject to adjustments, such as for discounts or volume rebates, which are stated in the customer contract, to determine the net consideration to which we expect to be entitled.

Revenue from product sales is recognized based on a point in time model when control of the product is transferred to the customer, which typically occurs upon shipment or delivery of the product to the customer and title, risk and rewards of ownership have passed to the customer.

Taxes collected on sales to customers are excluded from the transaction price.

Shipping and handling activities that occur after the transfer of control to the customer are billed to customers and are recorded as sales revenue, as we consider these to be fulfillment costs. Shipping and handling costs are expensed in the period incurred and are included in Selling, general and administration expenses in our Consolidated Statements of Operations.

Payment terms on product sales to our customers typically range from 30 to 90 days. When the period of time between the transfer of control of the goods and the time the customer pays for the goods is one year or less, we do not consider there to be a significant financing component associated with the contract.

We do not have contract assets or liabilities that are material.

Stock-based compensation

Equity instruments are measured at fair value on the grant date. Stock-based compensation expense is generally recognized on a straight-line basis over the requisite service periods of the awards.

We use a Monte Carlo model to determine the fair value of certain stock-based awards that contain market and performance-based conditions. The use of these models requires highly subjective assumptions, such as assumptions about the expected life of the award, vesting probability, expected dividend yield and the volatility of our stock price.

Compensation expense for liability-classified stock-based awards are recognized on a straight-line basis over the vesting period as a liability and remeasured, at fair value, at the balance sheet date.

Leases

At inception of a contract, we determine if the contract contains a lease. When a lease is identified, we recognize a leased asset (i.e., “Right-of-Use” or “ROU” assets) and a corresponding lease liability based on the present value of the lease payments over the lease term, discounted using our incremental borrowing rate, unless an implicit rate is readily determinable. Lease payments include fixed and variable lease components derived from usage or market-based indices, such as the consumer price index. Variable lease payments may fluctuate for a variety of reasons including usage, output, insurance or taxes. These variable amounts are expensed as incurred and not included in the lease assets or lease liabilities. Options to extend or terminate a lease are reflected in the lease payments and lease term when it is reasonably certain that we will exercise those options. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statements of Operations.

Majority of our leases are operating leases for which we recognize lease expense on a straight-line basis over the lease term. We apply the practical expedient to account for lease and associated nonlease components as a single lease component.

Leases with an initial term of 12 months or less are recognized in the Consolidated Statements of Operations on a straight-line basis over the lease term.

Financial Instruments and Hedging Activities

Pursuant to our risk management policies, we may choose to enter into derivative transactions to manage market risk volatility associated with changes in commodity pricing, currency exchange rates and interest rates. Derivatives used for this purpose are generally designated as net investment hedges, cash flow hedges or fair value hedges. Derivative instruments are recorded at fair value in the balance sheet. Gains and losses related to changes in the fair value of derivative instruments not designated as hedges are recorded in Interest and other financial expense, net, in the Consolidated Statements of Operations.

Cash flows from derivatives designated as hedges are reported in our Consolidated Statements of Cash Flows under the same category as the cash flows from the hedged items unless the derivative contract contains a significant financing element. Cash flows for derivatives with a significant financing element are classified as Cash flows from financing activities.

Cash Flow Hedges—We enter into accounting cash flow hedges to manage the variability in cash flows of a future transaction. Our cash flow hedges include cross currency swaps, and options and swaps to hedge interest rate and foreign exchange risk. For derivatives designated as accounting cash flow hedges, the gains and losses are recorded in Other comprehensive income (loss) and released to earnings in the same line item and in the same period during which the hedged item affects earnings.

We use regression analysis to assess initial hedge effectiveness. Following the inception of a hedging relationship, hedge effectiveness is assessed quarterly based on qualitative factors, if applicable, or regression analysis.

We have *cross-currency swap contracts* designated as cash flow hedges to reduce our exposure to the foreign currency exchange risk associated with certain intercompany loans and debt denominated in currencies other than the functional currency of the issuer. Under the terms of these contracts, we make interest payments in euros and receive interest in U.S. dollars. Upon the maturities of these contracts, we will pay the principal amount of the loans in euros and receive U.S. dollars from our counterparties.

Net Investment Hedges—We enter into foreign currency derivatives and foreign currency denominated debt to reduce the volatility in stockholders' equity resulting from changes in currency exchange rates of our foreign subsidiaries with respect to the U.S. dollar. Our foreign currency derivatives consist of cross-currency contracts and forward exchange contracts.

For derivatives designated as accounting net investment hedges, gains or losses attributable to changes in spot foreign exchange rates over the designation period are reflected in foreign currency translation adjustments within Other comprehensive income (loss). Recognition in earnings is delayed until the net investment is sold or substantially liquidated. At that time, the amount recognized is reported in the same line item as the gain or loss on the liquidation of the hedged foreign operations. For our cross-currency swaps, the associated interest receipts and payments are recorded in Interest expense. For our foreign currency forward contracts, we amortize initial forward point values on a straight-line basis to Interest expense over the life of the hedging instrument. We monitor on a quarterly basis for any overhedged positions requiring de-designation and re-designation of the hedge to remove such over-hedged condition.

Fair Value of Financial Instruments

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. An established hierarchy for inputs is used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in valuing the asset or liability and are developed based on market data obtained from sources independent of Orion. Unobservable inputs are inputs that reflect our assumptions about the factors that market participants would use in valuing the asset or liability.

Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement.

- *Level 1*—inputs are based on quoted prices for identical instruments traded in active markets.
- *Level 2*—inputs are based on quoted prices for similar instruments in active markets, quoted prices for similar or identical instruments in inactive markets and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets and liabilities.
- *Level 3*—one or more significant inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques that include option pricing models, discounted cash flow models and similar valuation techniques.

For level 2, we use the following inputs and valuation techniques to estimate the fair value of our financial instruments:

- *Cross-Currency Swaps*—The fair value of our cross-currency swaps is calculated using the present value of future cash flows discounted using observable inputs such as known notional value amounts, yield curves, basis curves, as applicable, and with the foreign currency leg revalued using published spot and forward exchange rates on the valuation date.
- *Floating-for-Fixed Interest Rate Swaps*—The fair value of our floating-for-fixed interest rate swaps is calculated using the present value of future cash flows using observable inputs such as benchmark interest rates and market yield curves.
- *Long-Term Debt*—The fair value of our Term-Loan is calculated using pricing data obtained from well-established and recognized vendors of market data for debt valuations. The fair value of our term loan is determined based on a discounted cash flow model using observable inputs such as benchmark interest rates and public information regarding our credit risk.

The carrying amounts that we have reported for financial instruments, including Cash and cash equivalents, Restricted cash and cash equivalents, Accounts receivable, Accounts payable and Short-term debts, approximate their fair values due to the short maturity of those instruments.

Employee Benefits

Pension Plans:

Defined Benefit Plans—Our defined benefit pension obligations are measured in accordance with the projected unit credit method. The calculations and the resulting amounts recorded in our Consolidated Financial Statements are affected by assumptions including the discount rate, expected long-term rate of return on plan assets, the annual rate of change in compensation for plan-eligible employees, mortality tables, and other factors. We evaluate the assumptions used on an annual basis.

Past service cost and actual return on plan assets in excess of expected return are initially recorded in Other comprehensive income and subsequently recognized in earnings over the average remaining service period of the participants to the extent it exceeds the "corridor". The corridor is defined as the greater of 10 percent of the accumulated projected benefit obligation or the fair value of the plan assets as of the beginning of the year.

Defined contribution obligations—Defined contribution obligations arise from commitments and state pension schemes (statutory pension insurance). We account for our contributions to a defined contribution plan on an accrual basis. An asset or liability may result from advance payments or payments due, respectively, to a defined contribution fund.

Note B. Recent Accounting Pronouncements

Recently Adopted Accounting Standards

Segment—In November 2023, the Financial Account Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-07, *Segment Reporting (Topic 280), Improvements to Reportable Segment.* This ASU improves disclosures about a public entity's reportable segments, including expanded segment expenses disclosure.

We adopted this standard on January 1, 2024 for the 2024 fiscal year, and for interim periods beginning January 1, 2025. The adoption of this standard did not have a material impact to our Consolidated Financial Statements. Refer to *Note R. Segment Financial Information* for additional information.

Recently Issued Accounting Standards Not Yet Adopted

Consolidated Statements of Operations—In November 2024, the FASB issued ASU 2024-03, and in January 2025, ASU 2025-01, *Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures (Subtopic 220-4*0) and *Clarifying the Effective Date,* respectively. This ASU requires public entities to disclose, on an annual and interim basis, disaggregated information about certain income statement expense line items.

This ASU does not change the expense captions an entity presents in the face of its Consolidated Statements of Operations. Rather, it requires disaggregation of certain expense captions into specified categories in disclosures within the footnotes to the Consolidated Financial Statements.

This ASU is effective for fiscal years beginning after December 15, 2026 and interim periods within annual reporting periods beginning after December 15, 2027. Early adoption is permitted.

We believe, the adoption of this ASU will not materially impact our Consolidated Financial Statements, however, will require additional disclosures in the footnotes to the Consolidated Financial Statements.

Income Taxes—In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740) Improvements to Income Tax Disclosures*. This ASU:

- Establishes new income tax disclosure requirements in addition to modifying and eliminating certain existing requirements.
- Requires disaggregated information about a reporting entity's effective tax rate reconciliation.
- Requires disaggregated information about a reporting entity's information on income taxes paid.
- Requires all entities to disclose annually income taxes paid (net of refunds received) disaggregated by federal (national), state and foreign taxes and to disaggregate the information by jurisdiction based on a quantitative threshold.
- Is effective for fiscal years beginning after December 15, 2026. Early adoption is permitted.

We believe, the adoption of this ASU will not materially impact our Consolidated Financial Statements, however, will require additional disclosures in *Note P. Income Taxes.*

Note C. Accounts Receivable

Accounts receivable, at December 31, are as follows:

	2024	2023
	(In millions)	
Accounts receivable	$ 213.1	$ 242.2
Expected credit losses	(1.2)	(1.2)
Accounts receivable, net of expected credit losses	**$ 211.9**	**$ 241.0**

Allowance for credit losses, at December 31, are as follows:

	2024	2023
	(In millions)	
Allowance for credit losses as of January 1,	$ (1.2)	$ (2.6)
Credit loss income and utilization	—	0.4
Foreign currency translation effects	—	1.0
Allowance for credit losses as of December 31,	$ (1.2)	$ (1.2)

Accounts Receivable Factoring Facilities—For the fiscal years ended December 31, 2024 and 2023, the gross amounts of receivables sold were $440.7 million and $427.2 million, respectively.

In the Condensed Consolidated Statements of Operations, the loss on receivables sold is reflected in Other expense (income), net. For the fiscal years ended December 31, 2024 and 2023, the loss on receivables sale was $5.0 million and $4.4 million, respectively.

Note D. Inventories

Inventories, net of reserves, at December 31, are as follows:

	2024	2023
	(In millions)	
Raw materials, consumables and supplies, net	$ 103.8	$ 113.8
Work in process	0.1	0.2
Finished goods, net	186.5	173.1
Total	**$ 290.4**	**$ 287.1**

As of December 31, 2024 and 2023, inventory reserves were approximately $32.8 million and $25.4 million, respectively. The inventory reserve primarily relates to spare-parts and finished goods.

Note E. Prepaid Expenses and Other Current Assets and Other Assets

Prepaid expenses and Other current assets, at December 31, consist of the following components:

	2024	2023
	(In millions)	
VAT	$ 29.0	$ 37.3
Deposits	9.9	15.6
Restricted Cash	0.5	2.7
Miscellaneous other	14.8	18.8
Total	**$ 54.2**	**$ 74.4**

Other assets, at December 31, consist of the following components:

	2024	2023
	(In millions)	
Financial assets	$ 39.5	$ 36.5
Miscellaneous other	2.0	3.4
Total	**$ 41.5**	**$ 39.9**

Note F. Property, Plant and Equipment

Property, plant and equipment, at December 31, consists of the following:

	2024	2023
	(In millions)	
Land	$ 28.2	$ 30.7
Land rights and buildings	139.9	138.1
Plant and machinery	1,339.7	1,308.3
Other equipment, furniture and fixtures, including Asset retirement obligation	51.0	46.2
Construction in progress	215.9	140.0
Total property, plant and equipment	**1,774.7**	**1,663.3**
Less: accumulated depreciation	809.7	763.2
Net property, plant and equipment	**$ 965.0**	**$ 900.1**

Depreciation expense was $101.5 million, $92.4 million and $89.0 million for fiscal years ending December 31, 2024, 2023 and 2022, respectively.

Note G. Leases

Orion has entered into lease contracts as a lessee and is not acting as a lessor. The vast majority of Orion's lease contracts are for operating assets such as rail cars, company cars, offices and office equipment, etc. Lease costs for the years ended December 31, are as follows:

	2024	2023	2022
		(In millions)	
Finance lease costs	$ 11.2	$ 9.3	$ 7.1
Operating lease costs	11.1	8.5	7.1
Short-term leasing costs	5.3	5.5	4.6
Total	**$ 27.6**	**$ 23.3**	**$ 18.8**

ROU assets and lease liabilities related to operating and finance leases reflected in the Consolidated Balance Sheets, at December 31, are as follows:

	2024	2023
	(In millions)	
ROU Assets		
Operating leases	$ 36.6	$ 21.7
Finance leases	81.3	88.9
Total	**$ 117.9**	**$ 110.6**
Lease Liabilities[1]		
Operating leases		
Current	$ 9.6	$ 6.1
Long-term	26.5	15.4
	36.1	**21.5**
Finance leases		
Current	5.6	6.5
Long-term	80.0	84.9
	85.6	**91.4**
Total	**$ 121.7**	**$ 112.9**

(1) Reflected in Current and Other liabilities in the Consolidated Balance Sheets.

The weighted remaining average minimum lease period for finance and operating leases are 16.1 years and 6.3 years, respectively.

Maturities of operating and finance lease liabilities are as follows:

	Finance Leases	Operating Leases	Total
		(In millions)	
Next 12 months	$ 9.3	$ 10.7	$ 20.0
1 to 2 years	10.3	5.3	15.6
2 to 3 years	10.3	4.4	14.7
3 to 4 years	10.3	3.8	14.1
4 to 5 years	8.5	3.4	11.9
More than 5 years	73.5	13.4	86.9
Total undiscounted minimum lease payments	**122.2**	**41.0**	**163.2**
Imputed interest	36.6	4.9	41.5
Lease liability (current and non-current)	**$ 85.6**	**$ 36.1**	**$ 121.7**

The weighted average discount rate applied to the lease liabilities for finance and operating leases are 4.8% and 5.6%, respectively.

Note H. Goodwill and Intangible Assets

Goodwill

The carrying amount of goodwill attributable to each reportable segment for the years ended December 31, are as follows:

	Rubber	Specialty	Total
		(In millions)	
Balance as of January 1, 2023	**$ 29.4**	**$ 44.0**	**$ 73.4**
Foreign currency impact	1.1	1.6	2.7
Balance as of December 31, 2023	**30.5**	**45.6**	**76.1**
Foreign currency impact	(1.9)	(2.7)	(4.6)
Balance as of December 31, 2024	**$ 28.6**	**$ 42.9**	**$ 71.5**

Intangible Assets

The components of identifiable intangible assets, at cost, and the related accumulated amortization, at December 31, are as follows:

	2024			2023		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
			(In millions)			
Developed technology and patents	$ 65.6	$ 59.7	$ 5.9	$ 69.8	$ 58.7	$ 11.1
Customer relationships	70.4	68.1	2.3	74.9	72.2	2.7
Trademarks	17.9	16.2	1.7	19.0	15.6	3.4
Long-term contracts	7.3	2.4	4.9	7.7	2.8	4.9
Other intangible assets	46.7	43.0	3.7	46.8	43.4	3.4
Total intangible assets	**$ 207.9**	**$ 189.4**	**$ 18.5**	**$ 218.2**	**$ 192.7**	**$ 25.5**

Amortization expense for the years ended December 31, 2024, 2023 and 2022 was $7.2 million, $6.1 million and $6.6 million, respectively, and is included in Cost of sales and Selling, general and administrative expenses in the Consolidated Statements of Operations.

The estimated aggregate amortization expense for intangible assets for the fiscal years ending December 31, are as follows:

Year	(In millions)
2025	$ 7.1
2026	4.1
2027	1.4
2028	1.0
2029	0.8
Thereafter	4.1
Total aggregated amortization	**$ 18.5**

Note I. Accruals and Other Liabilities

The components of Current accrued liabilities, at December 31, are as follows:

	2024	2023
	(In millions)	
Accrued employee compensation	$ 20.6	$ 16.4
Accrued liabilities for sales and procurement	7.9	8.5
Accrued liabilities for restructuring	2.2	4.5
Environmental reserves	1.8	2.3
Other accrued liabilities	7.0	10.0
Total	**$ 39.5**	**$ 41.7**

The components of Other current liabilities, at December 31, are as follows:

	2024	2023
	(In millions)	
Employee related liabilities	$ 6.3	$ 6.5
Current lease liabilities (refer to *Note G. Leases*)	15.2	12.6
Other current liabilities	35.9	24.6
Total	**$ 57.4**	**$ 43.7**

The components of Other long-term liabilities, at December 31, are as follows:

	2024	2023
	(In millions)	
Employee related liabilities	$ 4.4	$ 4.8
Liabilities for asset retirement obligation	11.4	4.3
Environmental reserve	0.6	0.7
Long-term lease liabilities (refer to *Note G. Leases*)	106.5	100.3
Other non-current liabilities	0.8	0.5
Total	**$ 123.7**	**$ 110.6**

Note J. Debt and Other Obligations

Debt and Other Obligations, at December 31, are as follows:

	2024	2023
	(In millions)	
Current		
Term Loans	$ 3.0	$ 3.1
Deferred debt issuance costs - Term Loans	(0.8)	(0.8)
China Term Loan	5.7	—
Other short-term debt and obligations	250.9	134.7
Current portion of long-term debt and other financial liabilities	**258.8**	**137.0**
Non-current		
Term Loans	598.9	621.8
Deferred debt issuance costs - Term Loans	(2.1)	(3.1)
China Term Loan	50.2	58.6
Long-term debt, net	**647.0**	**677.3**
Total	**$ 905.8**	**$ 814.3**

(a) Term Loan

In 2014, Orion entered into credit agreement (the “Credit Agreement”), which included an $895.0 million term loan, which was allocated to a term loan facility denominated in U.S. dollars of $358.0 million and a term loan facility denominated in euros of €399.0 million with both having an original maturity date of July 25, 2021 (the “Prior Term Loans”). Initial interest was calculated based on three-month EURIBOR (for the euro-denominated loan), and three-month USD-LIBOR (for the USD-denominated loan) plus a 3.75% - 4.00% margin depending on the Company’s net leverage ratio. For both EURIBOR and USD-LIBOR a floor of 1.0% applied. At least 1% of the principal amount is required to be repaid per annum.

In September 2021, Orion entered into the Ninth Amendment to the Credit Agreement, which includes an amended and restated term loan agreement (the "Term Loans"). The Term Loan facility was allocated to a term loan facility denominated in U.S. dollars of $300 million and denominated in euros of €300 million with both having a maturity date of September 2028, replacing the Prior Term Loans. Interest is calculated based on three months EURIBOR (for the euro-denominated loan) plus a margin of 2.50%, or three-month USD-LIBOR (for the USD-denominated loan) plus a margin of 2.25%. For the U.S. dollar loan, a floor of 0.50% applies and for the euro-denominated loan no floor exists. 1% of the principal amount is required to be repaid per annum in respect to the USD-denominated loans, whereas there is no scheduled amortization for the euro-denominated loans.

Due to cessation of U.S. dollar LIBOR after June 30, 2023 (“LIBOR cessation date”), in May 2023, the Company entered into the Eleventh Amendment to the Credit Agreement to update the referenced floating benchmark rate. The U.S. dollar loan, three-month USD-LIBOR was replaced by USD Term SOFR 3M + CAS (Credit Adjustment Spread) effective for all interest rate periods after June 30, 2023.

The Term Loans include a sustainability-linked margin adjustment that applies to both the euro and U.S. dollar loans. The margin adjustment is based on annual SO_2 and NOx emission reduction targets for the Company’s North American plants between 2022 and 2028, respectively. Specifically, the credit spread on the Term Loans will decline or rise by up to 10 basis points depending on the emissions profile of the Company’s North American plants, in aggregate. Starting in 2022 and continuing through 2025, the Company reviews annually whether both interim targets have been met. If the Company achieves both targets, it will benefit from up to a 10-basis point credit spread reduction for the prospective 12 months period following the submission of the annual ESG compliance certificate. For the period from 2026 to 2028, a margin step-up by 5 or 10 basis points would occur if Orion does not maintain the reduced emissions profile of one or both targets.

During 2024, the Company received a 10 basis point interest rate reduction on its sustainability linked Term-Loan because it met 2023 emissions target.

In connection with the September 2021 modification of the Term Loan, Orion incurred approximately $7.8 million of refinancing costs of which $2.8 million of loan origination costs were capitalized and $5.0 million of other fees were directly expensed.

Other provisions of the Credit Agreement relating to the Term Loans remained unchanged.

The Term Loan interest rates as of December 31 were as follows:

	2024	2023
Euro-denominated Term Loan	6.1 %	5.6 %
U.S. dollars denominated Term Loan	7.4 %	7.4 %

(b) China Term Loan

To partially finance the construction of our Huaibei facility in China, on March 16, 2022, our wholly owned subsidiary, Orion Engineered Carbons (Huaibei) Co., Ltd. ("OECCL"), entered into a 4.5% fixed interest rate, CNY500 million (approximately $68 million), eight-year term-loan agreement with The Bank of China ("China Term-Loan") maturing on December 21, 2029. OECCL is required to repay the China Term-Loan principal in semi-annual payments beginning June 2024. Interest is payable quarterly, beginning June 2022. The agreement restricts OECCL's ability to make external investments, repay intercompany loan or distribute dividends. The principal repayments under the agreement are: 2% in 2024, 10% in 2025 and 22% each year thereafter, concluding in June 2029. The China Term-Loan is secured with the Huaibei facility's land, construction in progress, and buildings as collateral. As of December 31, 2024, we have drawn $55.9 million on the facility.

(c) Other Short-Term Debt and Obligations

Other short-term debt and obligations, at December 31 were as follows:

	2024	2023
	(In millions)	
Revolving Credit Facility	$ —	$ —
Ancillary Credit Facilities		
OEC GmbH outstanding borrowings	147.8	88.8
OEC LLC outstanding borrowings	14.0	21.1
OEC Huaibei outstanding borrowings	16.5	—
Korea Working Capital Loans (capacity **$49.2 million**)		
Uncommitted	1.7	1.9
Committed	22.7	20.1
China Working Capital Loans	11.7	2.8
Repurchase Agreement	36.5	—
Total of Other Short-term Debt and Obligations	**$ 250.9**	**$ 134.7**
Supplemental information:		
Total ancillary capacity - EUR	**€ 234.0**	**€ 214.0**
Total ancillary capacity - U.S. Dollars	**$ 243.1**	**$ 236.5**

Revolving Credit Facility

In 2014, under the Credit Agreement, we entered into a €115.0 million multicurrency revolving credit facility ("Prior RCF") with an original maturity date of July 25, 2019. Interest is calculated based on EURIBOR (for euro drawings), and USD-LIBOR (for U.S. dollar drawings) plus a 2.5% - 3.0% margin (depending on leverage ratio).

Subsequent to 2014, Orion entered into a number of amendments, which largely were made to increase the Prior RCF capacity. The Prior RCF amendment completed in April 2019, extended the Prior RCF maturity date to April 25, 2024, increased the aggregate amount of revolving credit commitments in euro by €75.0 million and reduced the interest margin to a 1.7% to 2.7% range, using a revised pricing grid. In May 2022, we added an additional €100 million of capacity to our Prior RCF which expands our facility to €350.0 million.

In October 2023, Orion entered into the Thirteenth Amendment to the Credit Agreement, which amended and restated our revolving credit facility (as amended and restated, the "RCF") and extended the maturity to September 2028. We voluntarily reduced the borrowing capacity under the RCF from €350 million to €300 million. Interest is calculated based on EURIBOR plus a 1.65% - 3.30% margin (depending on leverage ratio).

The RCF includes a sustainability-linked margin adjustment. Starting in 2024 continuing through 2028, the credit spread will increase or decrease up to 5 basis points depending on two key performance indicators: greenhouse gas intensity and environmental, social and governance rating from EcoVadis, a provider of corporate sustainability rating.

Other provisions of the Credit Agreement relating to the RCF remained unchanged, including the commitment fee, which remains at 35% of the interest margin or 1.0% at December 31, 2024.

As of December 31, 2024 and 2023, there were no borrowings under the RCF.

Letters of credit can be issued for the amount available under the RCF and ancillary facilities. The weighted average interest rates on the utilized RCF and ancillary facilities as of December 31, 2024 and 2023 were 5.7% and 6.2%, respectively.

For the years ended December 31, 2024 and 2023, amortized transaction costs were $0.7 million and $1.9 million, respectively. Amortized transaction costs in 2023 included the release of $0.5 million from Prior RCF.

Unamortized transaction costs included in the Consolidated Balance Sheets, as of December 31, 2024 and 2023, were approximately $2.6 million and $3.6 million, respectively.

As of December 31, 2024, the Company's net leverage ratio, as defined under the Credit Agreement, was 3.14x.

Ancillary Credit Facilities—As part of the RCF, the Company can also establish ancillary credit facilities by converting the commitments of select lenders under the RCF into bilateral credit agreements. Borrowings under the ancillary credit facilities reduce RCF availability. For RCF financial covenant testing, borrowing under ancillary credit facilities are considered debt drawn under the RCF, as discussed elsewhere in this footnote.

As of December 31, 2024, the total commitment was €300 million (approximately $312 million) and was split between an €66 million RCF tranche and €234 million of bilateral ancillary facilities established directly with several banks under the RCF.

As of December 31, 2024 and 2023, committed ancillary credit facilities totaled $243.1 million and $236.5 million, respectively.

As of December 31, 2024, unutilized ancillary borrowing capacity was approximately $58.9 million.

The general terms of the ancillary credit facilities are linked to the terms in the RCF.

Korea Working Capital Loans—For working capital flexibility, we have a local facility of ₩67.5 billion ($45.8 million). As of December 31, 2024, we have outstanding borrowings of ₩33.5 billion ($22.7 million). In the Consolidated Statements of Cash Flows, this loan is reflected in *Cash inflows related to current financial liabilities*. Due to the short maturity, the carrying value approximates the fair value.

China Working Capital Loans—For working capital flexibility in Qingdao, we have a local facility of CNY 50.0 million ($6.8 million). As of December 31, 2024 and 2023, we have drawn CNY 49.2 million ($6.8 million) and CNY 20.0 million ($2.8 million), respectively.

For working capital flexibility in Huaibei, in October 2024, we began drawings from a facility agreement totaling $10.0 million. As of December 31, 2024, we have drawn $4.9 million (CNY 36.0 million).

In the Consolidated Statements of Cash Flows, these loans are reflected in *Cash inflows related to current financial liabilities*. Due to the short maturity, the carrying value approximates the fair value.

Repurchase Agreement—On August 23, 2024, we entered into a repurchase agreement to sell European Emission Allowance ("EUA") certificates. Under the agreement, we sold 500 thousand EUA certificates for €35.1 million cash to a counterparty. The same counterparty has an obligation to resell, and we have the obligation to purchase, the same or substantially the same EUA certificates on June 25, 2025 for €36.5 million. The difference between the consideration received and the amount of consideration to be paid will be recognized as interest expense. At December 31, 2024, the amount outstanding, including accrued interest, was $37.0 million. Due to the short maturity, the carrying value approximates the fair value.

Future Years Payment Schedule

The aggregate principal amounts of long-term debt, excluding finance lease liabilities presented in *Note G. Leases*, are as follows:

	Repayment (In millions)
2025	$ 8.7
2026	15.6
2027	15.6
2028	605.4
2029	12.5
2030	—
Total	**$ 657.8**

Covenant Compliance

The Credit Agreement contains certain non-financial covenants that, among other things, limit the Company's ability and the ability of certain of its subsidiaries to (i) incur additional debt, (ii) pay dividends, repurchase stocks or make certain other restricted payments or investments, (iii) incur liens, (iv) sell assets, (v) to pay dividends or to make other payments to the Company, (vi) enter into affiliate transactions, (vii) engage in sale and leaseback transactions, and (viii) consolidate, merge, sell or otherwise dispose of all or substantially all of the Company's assets. These covenants are subject to significant exceptions and qualifications.

In addition, there is one financial covenant under the amended RCF that will be tested when RCF utilization (including debt drawn under ancillary credit facility lines) exceeds 50%, which is that net leverage, as defined in the Credit Agreement, is not permitted to exceed 4.0x.

As of December 31, 2024, and 2023, we were in compliance with our debt covenants.

Note K. Financial Instruments and Fair Value Measurement

Risk management

We have policies governing the use of derivative instruments and do not enter into financial instruments for trading or speculative purposes.

By using derivative instruments, we are subject to credit and market risk. To minimize counterparty credit (or repayment) risk, we enter into transactions, primarily with investment grade financial institutions. The market risk exposure is not hedged in a manner to completely eliminate the effects of changing market conditions on earnings or cash flow. No significant concentration of credit risk existed as of December 31, 2024 and 2023.

Cash flow hedge

On November 14, 2017 the Company acquired floored forward interest rate swaps to hedge interest rate risk on current euro-denominated term loan financing. On May 15, 2018 the Company entered into a $235.0 million cross-currency swap to hedge both foreign exchange rate and interest rate risk on current USD-denominated term loan financing which replaced the USD-denominated Caps terminated on May 14, 2018. Both of these instruments were designated as accounting hedges at the time we entered into the transactions. In July 2024 our interest rate swap expired and was not renewed. There were no material transactions recorded as a result of the expiration.

In September 2021, the Company restructured its previously existing cross-currency swaps in the amount of $197 million, to align with terms of the new U.S. dollar denominated term loan credit facility. Specifically for changes in the loan interest margin of 2.25% (formerly 2.0%) and the three-month USD-LIBOR floor of 0.50% (formerly 0.00%). The cross-currency swap became effective on September 30, 2021 and will expire on September 30, 2028, in line with the maturity of the term loan. This cross-currency swap was determined to be highly effective, continues to qualify for hedge accounting and was cost-neutral.

Fair value measurement

The following table summarizes outstanding financial instruments that are measured at fair value on a recurring basis:

	December 31, 2024		December 31, 2023		
	Notional Amount	Fair Value	Notional Amount	Fair Value	Balance Sheet Classification
	(In millions)				
Assets					
Derivatives designated as hedges:					
Cross currency swaps	$ 197.0	$ 38.9	$ 197.0	$ 31.3	Other financial assets (non-current)
Interest rate swaps	—	—	303.9	4.6	Other financial assets (non-current)
Total	**$ 197.0**	**$ 38.9**	**$ 500.9**	**$ 35.9**	
Liabilities					
Derivatives designated as hedges:					
Cross currency swaps	$ —	$ —	$ —	$ —	Other liabilities (non-current)
Interest rate swaps	—	—	—	—	Other liabilities (non-current)
Total	**$ —**	**$ —**	**$ —**	**$ —**	

All financial instruments in the table above are classified as Level 2. We present the gross assets and liabilities of our derivative financial instruments on the Consolidated Balance Sheets.

For financial assets and liabilities that are recognized in the financial statements on a recurring basis, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization at the end of each reporting period. There were no transfers of assets measured at fair value between Level 1 and Level 2, and there were no Level 3 investments during fiscal 2024 and 2023.

Our cross currency swaps designated as a cash flow hedge of principal and interest payments related to our Term Loan matures in September 2028.

The following table presents the carrying value and estimated fair value of our financial instruments that are not measured at fair value on a recurring basis for the periods presented. Due to the short maturity, the fair value of all non-derivative financial instruments included in Current assets and Current liabilities for which the carrying value approximates fair value are excluded from the table below. Short-term and long-term debt are recorded at amortized cost in the Consolidated Balance Sheets.

	December 31, 2024		December 31, 2023	
	Notional Amount	Fair Value	Notional Amount	Fair Value
	(In millions)			
Non-derivatives:				
Liabilities:				
Term loan	$ 601.9	$ 601.9	$ 624.9	$ 617.0
China Term-loan	55.9	56.8	58.6	57.1
Total	**$ 657.8**	**$ 658.7**	**$ 683.5**	**$ 674.1**

Term-Loan and China Term-loan in the table above are classified as Level 2.

At both December 31, 2024 and 2023, the fair values of Cash and cash equivalents and restricted cash, Accounts receivable, net, Accounts payable and Accrued liabilities and short term borrowings approximated their carrying values due to the short-term nature of these instruments.

The carrying amounts of our variable rate debt approximate the fair values due to variable interest rates with short reset periods.

The following tables summarize the pre-tax effect of derivative and non-derivative instruments recorded in Accumulated other comprehensive loss ("AOCI"), the gains (losses) reclassified from AOCI to earnings and additional gains (losses) recognized directly in earnings:

	Effect of Financial Instruments			
	Year Ended December 31, 2024			
	Gain (Loss) Recognized in AOCI	Gain (Loss) Reclassified from AOCI to Income	Additional Gain (Loss) Recognized in Income	Income Statement Classification
	(In millions)			
Derivatives designated as hedges:				
Cross currency swaps	$ (3.3)	$ 0.1	$ —	Interest and other financial expense, net
Interest rate swaps	(4.1)	(0.6)	—	Interest and other financial expense, net
Total	**$ (7.4)**	**$ (0.5)**	**$ —**	

	Effect of Financial Instruments			
	Year Ended December 31, 2023			
	Gain (Loss) Recognized in AOCI	Gain (Loss) Reclassified from AOCI to Income	Additional Gain (Loss) Recognized in Income	Income Statement Classification
	(In millions)			
Derivatives designated as hedges:				
Cross currency swaps	$ (8.9)	$ 1.7	$ —	Interest and other financial expense, net
Interest rate swaps	(4.9)	—	—	Interest and other financial expense, net
Total	**$ (13.8)**	**$ 1.7**	**$ —**	

	Effect of Financial Instruments			
	Year Ended December 31, 2022			
	Gain (Loss) Recognized in AOCI	Gain (Loss) Reclassified from AOCI to Income	Additional Gain (Loss) Recognized in Income	Income Statement Classification
	(In millions)			
Derivatives designated as hedges:				
Cross currency swaps	$ 31.1	$ 1.7	$ —	Interest and other financial expense, net
Interest rate swaps	18.1	—	—	Interest and other financial expense, net
Total	**$ 49.2**	**$ 1.7**	**$ —**	

The amount recognized in AOCI related to cash flow hedges that will be reclassified to the Consolidated Statement of Operations in the next twelve months is approximately $1.1 million.

Note L. Employee Benefit Plans

Provisions are established to cover defined benefit plans for retirement, disability and surviving dependents' pensions. The benefit obligations vary depending on the legal, tax and economic circumstances in the various countries in which we operate. Generally, the level of benefit depends on the length of service and the remuneration.

We have defined benefit plans in Germany and South Korea for which Germany accounted for approximately 93.1% and 93.6% in 2024 and 2023, respectively, of provisions for projected defined benefit pension plan obligations. Effective at the end of 2013, all defined benefit plans in Germany were modified to close access to new participants and freeze benefits accrued under these plans at December 31, 2013 levels. Interest expense on the frozen obligation relating to these plans will continue to accrue.

We have defined contribution plans in Germany and the U.S. Most employees are eligible to participate by contributing a portion of their compensation. We make employer contributions, such as matching contributions, to certain of these plans.

In South Korea, the Company's pension plan provides, at the option of employees for either projected benefit or defined contribution benefits. Plan assets relating to this plan reduce the pension provision disclosed.

Obligations and Funded Status

The following provides information about projected benefit obligations, plan assets, the funded status and weighted-average assumptions of the defined benefit pension plan:

Change in Projected Benefit Obligation	December 31	
	2024	2023
	(In millions)	
Present value of projected benefit obligation at the beginning of the year	**$ 65.4**	**$ 56.1**
Actuarial (gain)/ loss	1.3	7.7
Service cost	0.3	0.3
Interest cost	2.6	2.6
Benefits paid	(1.7)	(1.6)
Curtailments, settlements, special and contractual termination benefits	(0.4)	(1.2)
Currency translation	(4.1)	1.5
Present value of projected benefit obligation at the end of the year	**$ 63.4**	**$ 65.4**

Based on the weighted Macaulay method the projected benefit obligation has a duration of 16.0 years (17.0 years in 2023).

Change in Plan Assets	December 31	
	2024	2023
	(In millions)	
Fair value of plan assets at the beginning of the year	**$ 3.6**	**$ 4.5**
Actual return on plan assets	0.2	0.2
Employer contributions	0.5	0.1
Settlement	(0.4)	(1.1)
Currency translation	(0.5)	(0.1)
Fair value of plan assets at the end of the year	**$ 3.4**	**$ 3.6**

The plan assets are held by Orion Engineered Carbons Co. Ltd. Korea, Bupyeong-gu, South Korea, and relate to qualifying insurance policies. These insurance policies do not have a quoted market price. The actual return on plan assets amounted to $0.2 million and $0.2 million for the years ended December 31, 2024 and 2023, respectively.

Net Unfunded Status	December 31	
	2024	2023
	(In millions)	
Projected benefit obligation	$ 63.4	$ 65.4
Less: Fair value of plan assets	3.4	3.6
Net unfunded status	**$ 60.0**	**$ 61.8**

Amount Recognized in the Consolidated Balance Sheets	December 31	
	2024	2023
	(In millions)	
Non-current assets	$ —	$ —
Current liabilities	1.5	1.4
Non-current liabilities	58.5	60.4
Net liability recognized - pension plans	**$ 60.0**	**$ 61.8**

Pension Assumptions and Strategy

The assumptions used in the actuarial valuation of the underlying the obligations are as follows:

Assumptions	December 31	
	2024	2023
Discount rate	3.6 %	3.6 %
Expected long-term rate of return on plan assets	3.5 %	4.3 %
Rate of compensation/salary increase	3.0 %	3.0 %
Future pension increase	2.9 %	2.4 %

Mortality is based on Heubeck guidelines, the generally accepted biometric calculation bases for the balance sheet valuation of pension obligations in Germany.

A 0.5% increase or decrease in the discount rate or in the future pension increase would have impacted the projected benefit obligation as follows:

Sensitivities	December 31, 2024			
	Discount rate		Future pension increase	
	0.5% decrease	0.5% increase	0.5% decrease	0.5% increase
	(In millions)			
Impact on projected benefit obligation	$ 4.7	$ (4.2)	$ (6.0)	$ 6.6

Net Periodic Pension Cost (Benefit)

	Years Ended December 31,		
	2024	2023	2022
	(In millions)		
Service cost	$ 0.3	$ 0.3	$ 0.4
Interest cost	2.6	2.6	1.5
Expected return on plan assets	(0.2)	(0.2)	(0.1)
Net periodic pension cost	**$ 2.7**	**$ 2.7**	**$ 1.8**

The total expected defined benefit pension contribution amounts to $1.7 million in 2025.

The Company paid $19.1 million, $17.9 million and $15.0 million for the years ended December 31, 2024, 2023 and 2022, respectively, for state defined contribution pension schemes (statutory pension insurance) in Germany and other countries. This amount is recognized as personnel expenses in cost of sales and in selling, general and administrative expenses in the Consolidated Statements of Operations.

Estimated Future Benefit Payments

We expect the following benefit payments will be made to plan participants in the years from 2025 to 2034:

Benefit payments	(In millions)
2025	$ 1.7
2026	1.9
2027	2.1
2028	2.3
2029	3.2
2030 - 2034	15.0

We do not anticipate making funding contributions to the Pension Plan in 2025.

Amounts Recognized in Accumulated Other Comprehensive (Income)/Loss

Amounts recognized in AOCI, at December 31, related to the Company's defined benefit pension plan are as follows:

	2024	2023	2022
		(In millions)	
Net actuarial (gain) loss	$ 1.3	$ 7.7	$ (19.5)
Net prior service cost	—	—	—
Balance in accumulated other comprehensive (income) / loss	**$ 1.3**	**$ 7.7**	**$ (19.5)**

No amount is estimated to be amortized from accumulated other comprehensive loss into net periodic benefit cost in 2025.

Plan Assets

The fair value (all Level 2) of Orion's pension plan assets, at December 31, are as follows:

	2024	2023
	(In millions)	
Government and corporate fixed income financial instruments	3.4	3.6
Total pension plan assets	**$ 3.4**	**$ 3.6**

Defined Contribution Plans

We provide tax-qualified retirement contribution plans in the United States for the benefit of all full-time employees. The plans are designed to provide employees with an accumulation of funds for retirement on a tax-deferred basis. For the years ended December 31, 2024, 2023 and 2022 the Company contributions to the Employee Savings Plans were $1.5 million, $2.3 million and $2.0 million, respectively.

Note M. Stock-Based Compensation

Under our 2023 Omnibus Incentive Compensation Plan (the "Omnibus Plan"), we are authorized to grant Restricted Stock Units ("RSU"), Performance-based Restricted Stock Units ("PSU"), and other cash and stock awards under our Long-Term Incentive Plan ("LTIP"). The Compensation Committee of the Board of Directors (the "Compensation Committee") oversees our equity award grants, the type of awards, the required performance measures and the timing and duration of each grant.

Performance-Based Restricted Stock Units—PSU awards are earned based on achievement against one or more performance metrics established by the Compensation Committee in respect of a specified performance period. Earned PSUs range from zero to a specified maximum percentage of a participant's target award based on the achievement of applicable performance metrics, and are subject to vesting terms based on continued employment.

Certain PSU awards are based on the relative Total Shareholder Return ("TSR"). TSR is an objective calculation that takes into account our TSR as compared to the average of Total Shareholder Return percentage results for the Performance Period of two published indices (S&P SmallCap 600 Index, and the S&P 600 Chemicals Index) and whether our specific TSR is positive or negative. The fair value of PSUs is estimated on the grant date using a Monte-Carlo simulation.

Under the LTIP plans, the PSU vesting period is three years with cliff vesting occurring on December 31 of the third year.

Restricted Stock Units—RSUs entitle the recipient to be paid out an equal number of common stocks upon vesting. The RSUs vesting period is ratably over three years starting on January 1 in the year of the grant.

In certain instances, we issue RSU as sign-on incentives and one-time grants for employees. These RSUs vest over a three-year period and on a cliff vesting basis vesting occurs on the anniversary of the grant.

Restricted Stock—Certain members of our Board of Directors receive compensation in form of Restricted Stock ("RS") in accordance with our 2023 Non-employee Director Plan. Under this plan 48,688 RS are currently outstanding. The RS vest and become non-forfeitable on the first anniversary of the grant date.

Performance-based Restricted Stock Units

In the following table summarizes PSU activity assuming payout at 100% of target shares for unvested awards:

	Number of units	Weighted-average grant-date fair value per unit
Unvested at January 1, 2024	674,736	$ 26.67
Granted	348,857	18.99
Vested	(305,939)	15.99
Forfeited	(46,591)	18.30
Unvested at December 31, 2024	671,063	$ 28.13

During 2023 and 2022 we granted 594,922 and 312,538 performance-based units, respectively, with a per unit weighted-average grant-date fair value of $29.62 and $16.14, respectively.

The 2022 PSU awards based on relative TSR and other metrics will be paid out at a multiple of 1.0X.

Restricted Stock Units

In the following table summarizes RSU activity:

	Number of units	Weighted-average grant-date fair value per unit
Unvested at January 1, 2024	312,177	$ 21.46
Granted	213,055	20.41
Vested	(195,090)	21.18
Forfeited	(34,395)	17.37
Unvested at December 31, 2024	295,747	$ 21.37

During 2023 and 2022 weighted average RSU grant-date fair value was $26.14 and $15.83, respectively. Total grant date fair value of RSUs were approximately $5.9 million and $3.8 million during 2023 and 2022, respectively.

Total fair value of RSUs vested was approximately $3.3 million and $7.4 million during 2023 and 2022, respectively.

As of December 31, 2024, we had unrecognized compensation cost of $14.6 million, based on the target amounts, related to unvested PSU, RSU and RS, which is expected to be recognized over a weighted average period of 1.54 years.

During 2024, 2023 and 2022 fiscal years, we recognized compensation expenses of $15.3 million, $15.4 million and $7.7 million, respectively, in the Consolidated Statements of Operations.

Note N. Accumulated Other Comprehensive Income (Loss)

Changes in each component of AOCI, net of tax, for fiscal 2024, 2023 and 2022, are as follows:

	Currency Translation Adjustments	Hedging Activities Adjustments	Pension and Other Postretirement Benefit Liability Adjustment	Total
	(In millions)			
Balance at January 1, 2022	**$ (34.1)**	**$ (10.8)**	**$ (3.6)**	**$ (48.5)**
Other comprehensive income (loss) before reclassification	(13.6)	46.9	20.3	53.6
Income tax effects	0.2	(15.2)	(6.3)	(21.3)
Amounts reclassified from AOCI	—	1.7	—	1.7
Income tax effects	—	(0.5)	—	(0.5)
Currency translation AOCI	—	2.3	0.2	2.5
Balance at December 31,2022	**(47.5)**	**24.4**	**10.6**	**(12.5)**
Other comprehensive income (loss) before reclassification	(7.9)	(14.9)	(8.1)	(30.9)
Income tax effects	0.3	4.7	2.5	7.5
Amounts reclassified from AOCI	—	1.7	(8.9)	(7.2)
Income tax effects	—	(0.5)	2.8	2.3
Currency translation AOCI	—	0.7	0.2	0.9
Balance at December 31,2023	**(55.1)**	**16.1**	**(0.9)**	**(39.9)**
Other comprehensive income (loss) before reclassification	(24.5)	(6.7)	(0.7)	(31.9)
Income tax effects	0.2	2.1	0.3	2.6
Amounts reclassified from AOCI	—	(0.5)	—	(0.5)
Income tax effects	—	0.1	—	0.1
Currency translation AOCI	—	(0.3)	—	(0.3)
Balance at December 31,2024	**$ (79.4)**	**$ 10.8**	**$ (1.3)**	**$ (69.9)**

Amounts recorded in AOCI exceeding 10% of the defined benefit obligation are recorded ratably as reclassification of actuarial gains or losses over the current year through profit and loss separately from income from operations and amounted to 8.9 million income for the year ended December 31, 2023. We were not outside of the 10% corridor for 2024 or 2022.

Note O. Earnings Per Share

Basic earnings per share (“EPS”) is computed by dividing net income attributable to Orion by the weighted average number of common stock outstanding during the period. Diluted EPS equals net income attributable to Orion divided by the weighted average number of common stock outstanding during the period, adjusted for the dilutive effect of our stock–based and other equity compensation awards.

The following table reflects the income and share data used in the basic and diluted EPS computations:

	Years Ended December 31,		
Dollars in millions, shares in thousands and per share amount in dollars	**2024**	**2023**	**2022**
Net income for the period - attributable to ordinary equity holders of the parent	$ 44.2	$ 103.5	$ 106.2
Weighted average number of ordinary shares	58,223	58,995	60,902
Basic EPS	**$ 0.76**	**$ 1.75**	**$ 1.74**
Dilutive effect of share-based payments	150	985	475
Weighted average number of diluted ordinary shares	58,373	59,980	61,378
Diluted EPS	**$ 0.76**	**$ 1.73**	**$ 1.73**

Note P. Income Taxes

The Company operates in multiple jurisdictions with complex tax and regulatory environments and our income tax returns are periodically audited or subjected to review by tax authorities. We monitor tax law changes and the potential impact to our results of operations.

Tax provision (benefit) for income taxes consisted of the following:

	Years Ended December 31,		
	2024	2023	2022
	(In millions)		
Current			
Domestic [1]	$ 8.4	$ 34.3	$ 17.8
Foreign	21.0	19.7	26.5
Total	**29.4**	**54.0**	**44.3**
Deferred			
Domestic [1]	(5.2)	3.1	7.4
Foreign	(14.5)	3.2	(0.2)
Total	**(19.7)**	**6.3**	**7.2**
Provision for income taxes	**$ 9.7**	**$ 60.3**	**$ 51.5**

[1] Domestic refers to Germany.

The following table presents the components of income before income taxes for continuing operations for fiscal years 2024, 2023 and 2022 is as follows:

	Years Ended December 31,		
	2024	2023	2022
	(In millions)		
Domestic [1]	$ 5.5	$ 119.1	$ 35.5
Foreign	48.4	44.7	122.2
Income before income taxes	**$ 53.9**	**$ 163.8**	**$ 157.7**

[1] Domestic refers to Germany.

A statutory corporate income tax rate of 15.00% was used to calculate the current and deferred taxes for the German entities. A solidarity surcharge of 0.825% and a trade tax rate of 16.18%, for the years ended December 31, 2024, 2023 and 2022, respectively, were also reflected in the calculation. As a result, the overall statutory income tax rate for the German entities was 32.00%, for the years ended December 31, 2024, 2023 and 2022. The current and deferred taxes for the non-German entities were calculated using their respective country-specific tax rates.

Our effective income tax rate fluctuates based on, among other factors, changes in pre-tax income in countries with varying statutory tax rates, changes in valuation allowances, the amount of tax-free income, and impact of non-deductible expenses.

The following table reconciles the expected tax expense (benefit) at the German statutory tax rate of 32.0% as calculated for the years ended December 31, 2024, 2023 and 2022.

	Years Ended December 31,		
	2024	2023	2022
		(In millions)	
Income before income taxes	**$ 53.9**	**$ 163.8**	**$ 157.7**
Expected income tax thereon	17.0	52.3	50.5
Tax rate differences	1.0	(4.2)	(4.0)
Effect of cross-border tax laws	(9.4)	—	—
Change in valuation allowance	13.0	5.0	1.8
Income taxes for prior years	(1.0)	3.3	—
Uncertain tax position	(13.3)	1.6	0.3
Non-deductible interest expenses	—	0.1	1.9
Non-deductible expenses, and non-deductible taxes	1.5	2.1	3.5
Effects of changes in permanent differences	1.2	—	—
Tax effect on tax-free income	(1.4)	(1.5)	(1.4)
Other tax effects	1.1	1.6	(1.1)
Income tax expense	$ 9.7	**$ 60.3**	**$ 51.5**
Effective tax rate	18.0 %	36.9 %	32.7 %

The 2024 effective income tax rate was 18.0% compared with 36.9% in 2023. The decrease in the effective tax rate was mainly due to the release of uncertain tax positions and changes in U.S. international tax laws. Those were partially offset by the effects of valuation allowances on tax losses and nondeductible expenses.

For the tax year ended December 31, 2024, additional valuation allowances were established primarily related to certain foreign net operating losses and other deferred tax assets. As part of the process of preparing the consolidated financial statements, we are required to determine the provision for income taxes. This process involves measuring temporary and permanent differences resulting from differing treatment of items for tax and accounting purposes. Non-deductible expenses and non-deductible taxes were analyzed and resulted in additional income tax.

Differences resulting from differing treatment of items for tax and accounting purpose, the net operating loss, and tax credit carryforwards result in deferred tax assets and liabilities. The deferred tax effects of tax losses, credit and interest carryforwards ("tax attributes") and the tax effects of temporary differences between the tax basis of assets and liabilities and their amounts reported in the Consolidated Financial Statements, reduced by a valuation allowance where appropriate, are presented below.

	December 31	
	2024	2023
	(In millions)	
Deferred tax assets		
Inventories	$ 5.8	$ 3.0
Deferred Compensation	4.0	4.1
Provisions	14.3	13.0
Liabilities including leases liabilities	42.5	40.3
Loss carryforwards	54.0	51.1
Interest carryforwards	5.6	7.1
Tax credits	21.0	8.1
Other	2.6	3.2
Total deferred tax assets	149.8	129.9
Deferred tax asset valuation allowances	(50.5)	(40.1)
Net deferred tax assets	$ 99.3	$ 89.8
Deferred Tax Liabilities		
Intangible assets	$ 1.4	$ 2.2
Property, plant and equipment including right of use assets	92.0	89.9
Financial assets	13.7	10.3
Receivables, other assets	7.1	9.0
Other	—	14.7
Total deferred tax liabilities	$ 114.2	$ 126.1
Net deferred tax assets / (liabilities)	**$ (14.9)**	**$ (36.3)**

Our net deferred tax assets and liabilities reflected in our balance sheet are as follows:

Net deferred tax position	December 31	
	2024	2023
	(In millions)	
Deferred tax assets		
Net deferred tax assets	$ 21.6	$ 30.0
Deferred tax liabilities		
Net deferred tax liabilities	36.5	66.3
Net deferred tax asset / (liability) positions	**$ (14.9)**	**$ (36.3)**

As of each reporting date, management considers the weight of all evidence, both positive and negative, to determine if a valuation allowance is necessary for each jurisdiction's deferred tax assets. We place greater weight on historical evidence over future projections of our ability to utilize deferred tax assets. We consider future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences, and taxable income in prior carryback year(s) if carryback is permitted under applicable law, as well as available prudent and feasible tax planning strategies that would, if necessary, be implemented to ensure realization of the net deferred tax assets. The following table presents a summary of our valuation allowance positions:

Valuation allowance	2024	2023	2022
		(In millions)	
As of January 1,	**$ 40.1**	**$ 38.1**	**$ 36.3**
Additions for Loss carryforwards	10.6	6.0	5.2
Additions Other	0.2	0.2	0.8
Reduction for Tax Credits	—	—	(4.2)
Reduction for Loss and Interest carryforwards	(0.4)	(4.2)	—
As of December 31,	**$ 50.5**	**$ 40.1**	**$ 38.1**

The following table provides detail surrounding the expiration dates of the gross amount of tax loss carryforwards and tax credits:

	December 31, 2024	
	Net operating loss carryforwards	Tax Credits
	(In millions)	
2025 to 2031	$ 5.0	$ 6.5
2032 and thereafter	31.1	14.5
Indefinite carryforwards	176.5	—
Total	**$ 212.6**	**$ 21.0**

We continue to make an assertion to indefinitely reinvest the unrepatriated earnings of most of our foreign subsidiaries that would incur incremental tax consequences upon the distribution of such earnings. As of December 31, 2024, we did not provide for deferred taxes on earnings of most of our foreign subsidiaries that are indefinitely reinvested. If we were to make a distribution from the unremitted earnings of these subsidiaries, we could be subject to taxes in various jurisdictions. However, it is not practical to estimate the amount of tax that could ultimately be due if such earnings were remitted. If our expectations were to change regarding future tax consequences, we may be required to record additional deferred taxes that could have a material effect on our consolidated financial statements. Deferred tax liabilities amounting to $0.1 million, (2023: $0.1 million, 2022: $1.4 million) were recognized for certain subsidiaries for which we are not indefinitely reinvested, and a dividend distribution is expected in the future.

Tax uncertainties

We had no tax benefit relating to uncertain tax positions unrecognized as of December 31, 2024. Tax benefits totaling $13.3 million and $11.6 million relating to uncertain tax positions were unrecognized as of December 31, 2023 and 2022, respectively. The following table presents a reconciliation of the beginning and ending amounts of unrecognized tax benefits:

	2024	2023	2022
		(In millions)	
Balance at beginning of the year	**$ 13.3**	**$ 11.6**	**$ 12.1**
Additions for tax positions of prior year	—	1.7	—
Reductions of tax positions of prior year	(11.9)	—	(0.5)
Reductions related to settlements and other	(1.4)	—	—
Balance at end of the year	**$ —**	**$ 13.3**	**$ 11.6**

As per December 31, 2024 we released all uncertain tax positions in a total amount of $13.3 million and related interest and penalties and associated interest and penalties. We did not accrue anything for interest and penalties as of December 31, 2024. We accrued $4.4 million and $4.0 million for interest and penalties as of December 31, 2023 and 2022, respectively.

Orion and certain subsidiaries are under audit in several jurisdictions. In 2024, the audits in Germany for periods 2011-2017 had been closed and an audit in France has been initiated. It is reasonably possible that our existing liabilities for unrecognized tax benefits may increase in future, primarily due to the progression of open audits. We cannot reasonably estimate a range of potential changes in our existing liabilities for unrecognized tax benefits due to various uncertainties, such as the unresolved nature of various audits.

Note Q. Commitments and Contingencies

Long-Term Commitments—To safeguard the supply of raw materials, contractual purchase commitments under long-term supply agreements for raw materials, primarily carbon black oil and natural gas, are in place are as follows:

Maturity	December 31, 2024
	(In millions)
2025	$ 78.7
2026	82.2
2027	82.2
2028	82.2
2029	82.2
2030 and thereafter	313.8
Total	**$ 721.3**

Legal Proceedings—We are subject to various lawsuits and claims, including but not limited to, matters involving contract disputes, environmental damages, personal injury and property damage. We vigorously defend ourselves and prosecute these matters as appropriate. We regularly assess the adequacy of legal accruals based on our professional judgment, experience and the information available regarding our cases.

The outcome of legal proceedings is inherently uncertain, and we offer no assurances as to the outcome of any of these matters or their effect on the Company.

Based on a consideration of all relevant facts and circumstances, we do not believe the ultimate outcome of any currently pending lawsuit against us will have a material adverse effect upon our operations, financial condition or impact the Consolidated Financial Statements.

Loss due to misappropriation of assets, net—On August 10, 2024, the Company determined that a Company employee, who is not a Named Executive Officer, was the target of a criminal scheme that resulted in multiple fraudulently induced outbound wire transfers to accounts controlled by unknown third parties. As a result of this incident, we recognized a one-time pre-tax charge of approximately $55.7 million, net of recoveries, for the unrecovered fraudulently induced wire transfers. The Company has cooperated, and will continue to cooperate, with law enforcement as appropriate and is pursuing recovery of these funds through all legally available means, including potentially available insurance coverage. The incident did not result in any unauthorized access to data or systems maintained by the Company. The business and operations of the Company were not affected. In addition, we incurred $3.6 million of professional fees in connection with our investigations. Together, the amount of $59.3 million is reported in Loss due to misappropriation of assets, net in our Condensed Consolidated Statements of Operations.

The tax benefit related to Loss due to misappropriation of assets, net was $16.4 million.

Pledges and guarantees

The Company has pledged the majority of its assets (amongst others shares in affiliates, bank accounts and receivables) within the different regions excluding China as collateral under the Credit Agreement. As of December 31, 2024, the Company had guarantees totaling $23.8 million issued by various financial institutions.

Note R. Segment Financial Information

Segment information

We disclose the results of each of our operating segments in accordance with ASC 280, *Segment Reporting*. We manage our business in two operating segments as follows:

- *Rubber Carbon Black*—Used in the reinforcement of rubber in tires and mechanical rubber goods, and
- *Specialty Carbon Black*—Used for protection, colorization and conductivity in coatings, polymers, batteries, printing and special applications.

Corporate includes income and expense that cannot be directly allocated to the business segments or are managed on the corporate level. This includes Interest and other financial expense, net, taxes and items with less bearing on the underlying core business.

Our operations are managed by senior executives who report to our Chief Executive Officer ("CEO"), the *chief operating decision maker* ("CODM"). Discrete financial information is available for each of the segments, and the CODM uses operating results of each operating segment for performance evaluation and resource allocation.

Our CODM uses Adjusted EBITDA as the primary measure for reviewing our segment profitability. We define Adjusted EBITDA as Income from operations before depreciation and amortization, stock-based compensation, and non-recurring items (such as, restructuring expenses, Loss due to misappropriation of assets, net, etc.) plus Earnings in affiliated companies, net of tax.

The CODM does not review reportable segment asset or liability information for purposes of assessing performance or allocating resources.

Segment operating results are as follows:

	Rubber	Specialty	Corporate	Total
		(In millions)		
2024				
Net sales from external customers	$ 1,231.2	$ 646.3	$ —	$ 1,877.5
Cost of Sales	954.3	494.4	—	1,448.7
Gross Profit	**276.9**	**151.9**	**—**	**428.8**
Selling, general and administrative expenses	152.1	84.7	1.0	237.8
Loss due to misappropriation of assets, net	—	—	59.3	59.3
Other segment items	14.3	15.7	(1.0)	29.0
Income (loss) from operations	**110.5**	**51.5**	**(59.3)**	**102.7**
LTIP and other non-operating charges	7.2	7.1	—	14.3
Loss due to misappropriation of assets, net	—	—	59.3	59.3
Equity in earnings of affiliated companies, net of tax	0.6	—	—	0.6
Depreciation and amortization of intangible assets, right of use assets, and property, plant and equipment	75.8	49.5	—	125.3
Adjusted EBITDA	**$ 194.1**	**$ 108.1**	**—**	**$ 302.2**
Assets	$ 1,047.8	$ 698.3	$ 111.2	$ 1,857.3
Capital expenditures	102.1	104.6	—	206.7
2023				
Net sales from external customers	$ 1,283.3	$ 610.6	$ —	$ 1,893.9
Cost of Sales	992.6	450.3	—	1,442.9
Gross Profit	**290.7**	**160.3**	**—**	**451.0**
Selling, general and administrative expenses	135.0	85.7	1.2	221.9
Other segment items	12.2	13.5	(1.9)	23.8
Income (loss) from operations	**143.5**	**61.1**	**0.7**	**205.3**
LTIP and other non-operating charges	7.2	7.0	(0.7)	13.5
Equity in earnings of affiliated companies, net of tax	0.5	—	—	0.5
Depreciation and amortization of intangible assets, right of use assets, and property, plant and equipment	70.4	42.6	—	113.0
Adjusted EBITDA	**$ 221.6**	**$ 110.7**	**—**	**$ 332.3**
Assets	$ 1,014.3	$ 703.4	$ 115.7	$ 1,833.4
Capital expenditures	99.5	73.3	—	172.8
2022				
Net sales from external customers	$ 1,355.5	$ 675.4	$ —	$ 2,030.9
Cost of Sales	1,107.4	474.7	—	1,582.1
Gross Profit	**248.1**	**200.7**	**—**	**448.8**
Selling, general and administrative expenses	137.7	88.6	0.8	227.1
Other segment items	11.0	12.3	1.3	24.6
Income (loss) from operations	**99.4**	**99.8**	**(2.1)**	**197.1**
LTIP and other non-operating charges	3.4	3.5	2.1	9.0
Equity in earnings of affiliated companies, net of tax	0.5	—	—	0.5
Depreciation and amortization of intangible assets, right of use assets, and property, plant and equipment	65.1	40.6	—	105.7
Adjusted EBITDA	**$ 168.4**	**$ 143.9**	**—**	**$ 312.3**
Assets	$ 1,085.6	$ 647.1	$ 156.0	$ 1,888.7
Capital expenditures	134.1	98.7	—	232.8

Other segment items—Other segment items for each reportable segment includes Research and Development costs and Other expense (income), net.

A reconciliation of Adjusted EBITDA to Income from continuing operations before income taxes for each of the periods presented is as follows:

	2024	2023	2022
		(In millions)	
Income before earnings in affiliated companies and income taxes	$ 53.3	$ 163.3	$ 157.2
LTIP and other non-operating charges	14.3	13.5	9.0
Depreciation and amortization of intangible assets, right of use assets, and property, plant and equipment	125.3	113.0	105.7
Loss due to misappropriation of assets, net			
Misappropriation of assets, net	55.7	—	—
Professional fees related to misappropriation of assets	3.6	—	—
Equity in earnings of affiliated companies, net of tax	0.6	0.5	0.5
Interest and other financial expense, net	49.4	50.9	39.9
Reclassification of actuarial (gains)/losses from AOCI	—	(8.9)	—
Adjusted EBITDA	**$ 302.2**	**$ 332.3**	**$ 312.3**

LTIP and other non-operating charges include the following:

	2024	2023	2022
		(In millions)	
LTIP	15.3	15.4	7.7
Environmental reserves	—	(2.2)	(0.4)
Other non-operating	(1.0)	0.3	1.7
	$ 14.3	**$ 13.5**	**$ 9.0**

Geographic information:

Net sales	Years Ended December 31,		
	2024	2023	2022
		(In millions)	
Americas	**$ 622.5**	**$ 657.4**	**$ 714.3**
USA	430.0	470.4	514.6
Brazil	145.5	145.4	157.9
Rest of Americas	47.0	41.6	41.8
EMEA	**831.6**	**804.5**	**854.6**
Germany	168.3	189.5	227.9
South Africa	66.8	69.5	71.4
Italy	83.6	84.8	90.8
Spain	53.3	52.8	$ 61.0
Turkey	43.7	47.7	56.4
France	46.4	46.2	52.8
Rest of EMEA	369.5	314.0	294.3
APAC	**423.4**	**432.0**	**462.0**
China	187.0	178.3	173.2
Republic of Korea	130.4	139.0	169.6
Rest of Asia	106.0	114.7	119.2
Total	**$ 1,877.5**	**$ 1,893.9**	**$ 2,030.9**

For the year ended December 31, 2024, one customer in the Rubber segment, aggregating to approximately $280.1 million, accounted for 10% or more of consolidated revenue. For the years ended December 31, 2023 and 2022, two customers in the Rubber segment, aggregating to approximately $466.5 million and $480.2 million, respectively, accounted for 10% or more of consolidated revenue.

Net sales to top ten customers	Years Ended December 31,		
	2024	2023	2022
		(In millions)	
Rubber segment	804.1	829.8	864.1
Specialty segment	165.4	161.4	177.0

Long-lived tangible assets[1]	December 31	
	2024	2023
	(In millions)	
Germany	$ 168.6	$ 167.6
Sweden	24.5	26.1
Italy	62.1	65.3
Poland	22.1	16.7
Rest of Europe	23.1	23.3
Subtotal Europe	**300.4**	**299.1**
United States	530.1	454.3
South Korea	98.2	104.2
South Africa	27.5	18.9
Brazil	17.7	20.8
China	108.9	113.4
Other	0.1	0.1
Total	**$ 1,082.9**	**$ 1,010.7**

[1] Long-lived assets include property, plant and equipment, net and right-of-use assets, net.

Note S. Related Parties

Related parties include key management personnel having authority and responsibility for planning, directing and monitoring the activities of the Company directly or indirectly and their close family members.

In the normal course of business, Orion from time to time receives services from, or sells products to, related unconsolidated parties, in transactions that are either not material or approved in accordance with our Related Party Transaction Approval Policy.

As of December 31, 2024, related parties primarily includes our joint venture that is accounted for using the equity method of accounting, “Deutsche Gaßrußwerke” (DGW).

	December 31,	
	2024	2023
	(In millions)	
Trade receivables	$ 0.4	$ 0.4
Trade payables	16.9	29.9

	Years Ended December 31,		
	2024	2023	2022
		(In millions)	
Purchases	$ 131.0	$ 111.7	$ 157.1
Sales and services	3.9	2.5	5.6

Alpha Carbone—In the second quarter of 2024, we invested in Alpha Carbone (“AC”), a French tire recycling company. This partnership will enable AC to produce commercial volumes of tire pyrolysis oil and recovered carbon black. In addition, we entered in a long-term supply agreement for the tire pyrolysis oil produced by AC. The tire pyrolysis oil will be used to manufacture circular carbon black for tire and rubber goods customers.

We invested approximately $0.3 million (€0.3 million) in shares of AC and agreed to contribute, in 12 installments through 2025, $7.0 million (€6.7 million) in convertible bonds. In 2024, we contributed $2.8 million (€2.7 million) in a convertible bond.

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

As of the end of the period covered by this Annual Report on Form 10-K, we carried out an evaluation, under the supervision and with the participation of management, including the Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rule 13a-15(e) and 15d-15(e) of the Exchange Act. Based on that evaluation and the remediation of the material weakness in internal controls over financial reporting described below, the CEO and the CFO have concluded that our disclosure controls and procedures are effective in ensuring that material information that is required to be disclosed in our reports filed under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure as of December 31, 2024.

Management’s Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). The Company’s internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of the Company’s financial statements for external purposes in accordance with GAAP.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements or omissions. In addition, 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.

Management conducted its assessment of the effectiveness of our internal control over financial reporting as of December 31, 2024 based on the framework in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on that assessment and discussion with the Company's Audit Committee, management has concluded that, as of December 31, 2024, the Company’s internal control over financial reporting was effective.

Material Weakness in Internal Control over Financial Reporting

During the quarter ended September 30, 2024, we determined a material weakness existed over our control over manual wire transfers. Specifically, although we believe our internal controls, as designed, were adequate to prevent or detect unauthorized wire transfers, the control did not operate effectively to safeguard the Company’s assets.

To address the identified material weakness, management implemented the following remedial measures:

- implemented additional processes and controls over the cash disbursement process,
- enhanced management’s quarterly sub-certifications related to the cash disbursement process and increasing the certifiers’ awareness of its financial reporting implications,
- provided training to employees on appropriate cash disbursement practices and procedures, and
- we have and will continue to promote ethical conduct, timely escalation of concerns and communication with employees.

Subsequent to the implementation of these remedial measures, the Company’s controls operated for a sufficient period of time to allow management to conclude, through testing, that the controls are operating effectively, and accordingly, management determined that as of December 31, 2024, the material weakness has been fully remediated.

Audit Report of the Independent Registered Public Accounting Firm

The Company’s independent registered public accounting firm, Ernst & Young, has issued an audit report on management’s internal control over financial reporting which appears below.

Changes in Control over Financial Reporting

Other than as discussed above, there were no changes in our internal control over financial reporting that occurred during the fiscal year ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

Orion S.A

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Orion S.A.

Opinion on Internal Control Over Financial Reporting

We have audited Orion S.A.'s internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Orion S.A. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2024 consolidated financial statements of the Company and our report dated February 19, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP
Houston, TX
February 19, 2025

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The Directors and certain Governance information required by this item will be included in our Proxy Statement for the 2025 Annual Meeting of Stockholders (“Proxy Statement”) and is herein incorporated by reference.

Executive Officers

The following table sets forth certain information concerning our executive officers:

Name	Age	Title
Corning F. Painter	62	Chief Executive Officer
Jeffrey Glajch	62	Chief Financial Officer
Sandra Niewiem	47	Senior Vice President, Global Specialty Carbon Black and EMEA Region
Pedro Riveros	54	Senior Vice President, Global Rubber Carbon Black and Americas Region
Carlos J. Quinones	60	Senior Vice President, Global Operations

Corning F. Painter - Mr. Painter became the CEO of the Company in September 2018. He is responsible for implementing strategy and policies, setting company culture, developing leadership talent and meeting customer and shareholder commitments. Prior to joining the Company, he was the Executive Vice President for the Industrial Gases division at Air Products and Chemicals, a publicly listed global industrial gas company from 2014 until he left the company in 2018. Prior to that, he was Senior Vice President of the Merchant Gases division of Air Products and Chemicals from 2013 to 2014. Mr. Painter joined Air Products and Chemicals in 1984 as a participant in a career development program and held various positions including Vice President, Global Electronics, Senior Vice President, Corporate Strategy and Technology, and Senior Vice President Supply Chain (operations, engineering, procurement and safety). He was based overseas in Asia and Europe for ten years. Mr. Painter has served on numerous non-profit boards. He is a Certified Professional Engineer and holds a Bachelor of Science degree in chemical engineering from Carnegie-Mellon University.

Jeffrey Glajch - Mr. Glajch joined the Company on April 18, 2022, as Chief Financial Officer. Mr. Glajch has over 35 years of experience leading corporate finance and accounting and control functions for both public and private companies. Prior to joining the Company, he served as CFO and Corporate Secretary at Graham Corporation from 2009 to 2022, a NYSE listed company, which is a leading designer and manufacturer of vacuum and heat transfer equipment for energy markets, process industries and the U.S. Navy. Prior to joining the Graham Corporation, he held senior financial roles at a number of public and private companies. Mr. Glajch is on the advisory board of M42, a private AI company. He has previously served on numerous non-profit and university boards. Mr. Glajch holds a Master of Science degree in Industrial Administration (MBA) from Purdue University, a Master of Administrative Science from Johns Hopkins University, a Master of Science degree in chemical engineering from Clarkson University and a Bachelor of Science degree in chemistry from Carnegie-Mellon University.

Dr. Sandra Niewiem - Dr. Niewiem was appointed Senior Vice President Global Specialty Carbon Black and EMEA Region in September 2019. She joined the Company in December 2013 and previously held the position of Vice President Global Product Management and Business Development Specialty Carbon Black. She has over 19 years of experience in process industries, engineering and industrial goods, and more than 13 years in management consulting at a global consulting firm. Dr. Niewiem holds an Economics Doctorate from European Business School, Oestrich-Winkel, Germany and a Master of Science degree in business administration from James Madison University, Virginia.

Pedro Riveros - Mr. Riveros joined the Company in his current role as Senior Vice President, Global Rubber Carbon Black and Americas Region in June 2019. Prior to joining the Company, he served in multiple business leadership roles at Air Products and Chemicals from 1994 to 2019, where his key areas of expertise included business strategy, margin enhancement, productivity and supply chain management. He has over 25 years of experience in varied general management and business management roles in the industrial gas and chemicals area both in North and South America. Mr. Riveros holds a Bachelor of Science degree in mechanical engineering from Rensselaer Polytechnic Institute, New York.

Carlos Quinones - Mr. Quinones joined the Company in his current role as Senior Vice President, Global Operations in June 2019. Prior to joining the Company, he held multiple operational leadership positions at Air Products and Chemicals from 2015 to 2019. Prior to Air Products, Mr. Quinones held various positions of increasing leadership responsibilities in the chemical industry with Praxair, Rohm and Haas/Dow Chemical, and Arco Chemical. Mr. Quinones holds a Bachelor of Science degree in Mechanical Engineering from Texas A&M University.

Code of Conduct/Code of Ethics/Insider Trading Policy

Orion has adopted a Code of Conduct and Insider Trading Policy (included as an Exhibit in this Annual Report) that apply to all Company employees and directors, including the Chief Executive Officer, the Chief Financial Officer, senior management and other senior financial officers. The Code of Conduct and Insider Trading Policy are posted on our website, www.orioncarbons.com (under “Investors” and then

“Corporate Governance” section). In addition, the Company has adopted a Code of Ethics that applies to its Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer. The Code of Ethics is posted on our website, www.orioncarbons.com (under “Investors” then “Governance” section). We intend to satisfy the disclosure requirement regarding any amendment to, or waiver of, a provision of the Code of Conduct and Code of Ethics applicable to the Chief Executive Officer, the Chief Financial Officer, senior management or other senior financial officers by posting such information on our website.

Item 11. Executive Compensation

The information required by this item will be included in our proxy statement for the Company’s 2025 annual meeting of stockholders (the “2025 Proxy Statement”) and is incorporated herein by reference.

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

The information relating to security ownership of certain beneficial owners of our common stock and information relating to the security ownership of our management required by this item will be included in our 2025 Proxy Statement and is incorporated herein by reference.

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

The information required by this item will be included in our 2025 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item will be included in our 2025 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements.

See *Item 8* of this Form 10-K.

(b) Schedules.

The Schedules have been omitted since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto included in this Form 10-K.

(c) Exhibits. (Certain exhibits not included in copies of the Form 10-K sent to stockholders.)

The exhibit numbers in the Exhibit Index correspond to the numbers assigned to such exhibits in the Exhibit Table of Item 601 of Regulation S-K. Orion will furnish to any stockholder, upon written request, any exhibit listed in the Exhibit Index, upon payment by such stockholder of the Company's reasonable expenses in furnishing such exhibit.

Item 16. 10-K Summary

None applicable.

Exhibit Number	Description
3.1	Articles of Association of Orion S.A. (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q filed on August 9, 2023 (File No. 001-36563))
4.1	Form of Specimen of Common Share Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 2 to the Registration Statement on Form F-1 filed on July 14, 2014 (File No. 333-196593))
4.2	Description of Orion S.A.'s Common Shares (incorporated by reference to Exhibit 4(b) to the Annual Report on Form 10-K for the year ended December 31, 2019 filed on February 20, 2020 (File No. 001-36563))
10.1	Credit Agreement, dated as of July 25, 2014, among the Company, Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons Bondco GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the revolving borrowers named therein, the guarantors named on the signature page thereto, the lenders named therein, and Goldman Sachs Bank USA as administrative agent (incorporated by reference to Exhibit 99.1 to the Current Report on Form 6-K furnished on July 31, 2014 (File No. 001-36563)
10.2	First Amendment, dated as of August 7, 2014, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, in its capacity as administrative agent for the Lenders (incorporated by reference to Exhibit 10.2 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.3	Second Amendment, dated as of September 29, 2016, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as Assuming Lender with respect to the Initial Dollar Term Loans and Initial Euro Term Loans (incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.4	Third Amendment, dated as of May 5, 2017, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as Assuming Lender with respect to the Initial Dollar Term Loans and Initial Euro Term Loans (incorporated by reference to Exhibit 10.4 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.5	Fourth Amendment, dated as of May 31, 2017, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, in its capacity as administrative agent for the Lenders, and UniCredit Bank AG, as arranger with respect to the Amendment (incorporated by reference to Exhibit 99.1 to the Current Report on Form 6-K furnished on July 25, 2017 (File No. 001-36563))
10.6	Fifth Amendment, dated as of November 2, 2017, to the Credit Agreement, by and among Orion S.A,, Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.6 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))

10.7	Sixth Amendment, dated as of May 3, 2018, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.7 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.8	Seventh Amendment, dated as of October 29, 2018, to the Credit Agreement, by and among Orion Engineered Carbons S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.8 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.9	Eighth Amendment, dated as of April 2, 2019, to the Credit Agreement, by and among Orion S.A., Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.9 to the Annual Report on Form 10-K filed on February 20, 2020 (File No. 001-36563))
10.10	Ninth Amendment, dated as of September 30, 2021, by and among Orion Engineered Carbons GmbH, a limited liability company (Gesellschaft mit beschränkter Haftung) organized under the laws of Germany, the other Loan Parties party thereto, the New Term Lenders party thereto, Goldman Sachs Bank USA, in its capacity as administrative agent for the Lenders, Goldman Sachs Bank USA as sole book runner and Deutsche Bank Securities Inc., ING Bank, a branch of ING-DiBa AG and UniCredit Bank AG in their capacities as exclusive mandated lead arrangers (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on October 5, 2021).(File No. 001-36563))
10.11	Tenth Amendment, dated as of May 26, 2022, by and among Orion Engineered Carbons GmbH, a limited liability company (Gesellschaft mit beschränkter Haftung) organized under the laws of Germany, the other Loan Parties party hereto, each Lender party hereto, Goldman Sachs Bank USA, in its capacity as administrative agent for the Lenders and UniCredit Bank AG in its capacity as exclusive coordinator, bookrunner and mandated lead arranger (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on August 4, 2022). (File No. 001-36563))
10.12	Eleventh Amendment, dated as of May 11, 2023, to the Credit Agreement, by and among Orion S.A. (f/k/a Orion Engineered Carbons S.A.), Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on August 9, 2023 (File No. 001-36563))
10.13	Twelfth Amendment, dated as of August 16, 2023, to the Credit Agreement, by and among Orion S.A. (f/k/a Orion Engineered Carbons S.A.), Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on November 2, 2023 (File No. 001-36563))
10.14	Thirteenth Amendment, dated as of October 6, 2023, to the Credit Agreement, by and among Orion S.A. (f/k/a Orion Engineered Carbons S.A.), Orion Engineered Carbons Holdings GmbH, Orion Engineered Carbons BondCo GmbH, Orion Engineered Carbons GmbH, OEC Finance US LLC, the Revolving Borrowers named therein, the Guarantors party thereto, the Lenders party thereto, Goldman Sachs Bank USA, as administrative agent for the Lenders. (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed on November 2, 2023 (File No. 001-36563))
10.15+	Fixed Asset Loan Agreement, dated March 16, 2022, by and between Orion Engineered Carbons (Huaibei) Co., Ltd. and Bank of China Limited Shanghai Pilot Free Trade Zone Sub-Branch (incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K filed on February 23, 2023 (File No. 001-36563))
10.16†	Orion Engineered Carbons S.A. 2023 Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed on August 9, 2023 (File No. 001-36563)
10.17†	Orion Engineered Carbons S.A. 2023 Non-Employee Director Plan (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed on August 9, 2023 (File No. 001-36563)
10.18†	Employment Agreement, dated as of September 2, 2018, by and between Corning Painter and Orion Engineered Carbons S.A. (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed on May 7, 2020). (File No. 001-36563))
10.19†	Restrictive Covenants Agreement, dated as of September 2, 2018, by and between Corning Painter and Orion Engineered Carbons S.A. (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed on May 7, 2020). (File No. 001-36563))
10.20†	Restricted Stock Unit Award (sign-on grant), dated as of November 4, 2019, by and between Corning Painter and Orion Engineered Carbons S.A. (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed on May 7, 2020). (File No. 001-36563))
10.21†	Form of PSU Award Agreement
10.22†	Form of RSU Award Agreement
10.23†	Form of Director Restricted Share Award Agreement
19	Insider Trading Policy

21.1	Subsidiaries of the Registrant
23.1	Consent of Ernst & Young LLP
31.1	Certification by Corning F. Painter pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934
31.2	Certification by Jeffrey Glajch pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934
32.1	Certification by Corning F. Painter pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification by Jeffrey Glajch pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97	Clawback Policy
101	XBRL
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)
+	Certain confidential information — identified by bracketed asterisks “[****]” — has been omitted from this exhibit pursuant to Item 601 (b)(10) of Regulation S-K because it is both (i) not material and (ii) the type that the registrant treats as private or confidential
†	Management compensatory arrangement

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.

ORION S.A.

February 19, 2025

By /s/ Corning F. Painter
Name: Corning F. Painter
Title: Chief Executive Officer

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/ Corning F. Painter Corning F. Painter	Chief Executive Officer (Principal Executive Officer)	February 19, 2025
/s/ Jeffrey Glajch Jeffrey Glajch	Chief Financial Officer (Principal Financial Officer)	February 19, 2025
/s/ Kerry A. Galvin Kerry A. Galvin	Director	February 19, 2025
/s/ Paul Huck Paul Huck	Director	February 19, 2025
/s/ Mary Lindsey Mary Lindsey	Director	February 19, 2025
/s/ Didier Miraton Didier Miraton	Director	February 19, 2025
/s/ Yi Hyon Paik Yi Hyon Paik	Director	February 19, 2025
/s/ Dan F. Smith Dan F. Smith	Director	February 19, 2025
/s/ Hans Dietrich Winkhaus Hans Dietrich Winkhaus	Director	February 19, 2025
/s/ Michel Wurth Michel Wurth	Director	February 19, 2025

Board of Directors*

Dan Smith
Chairman
Former Chairman, President and Chief Executive Officer, Lyondell Chemical

Corning F. Painter
Chief Executive Officer,
Orion S.A.

Kerry Galvin
Former General Counsel,
Lyondell Chemical

Paul Huck
Former Chief Financial Officer,
Air Products and Chemicals

Mary Lindsey
Former Chief Financial Officer,
Commercial Metals Company

Didier Miraton
Former Chief Executive Officer,
Aalmérys SAS

Yi Hyon Paik
Former President and Chief Strategy Officer,
Samsung SDI Company

Hans-Dietrich Winkhaus
Former Chief Executive Officer,
Henkel KGaA

Michel Wurth
Chairman of the Board, ArcelorMittal Luxembourg S.A. and Non-Independent Director, ArcelorMittal

Management Team

Corning F. Painter
Chief Executive Officer

Jeff Glajch
Chief Financial Officer

Sandra Niewiem
Senior Vice President Global Specialty Carbon Black and EMEA Region

Carlos J. Quinones
Senior Vice President, Global Operations

Pedro Riveros
Senior Vice President & GM, Global Rubber Carbon Black and Americas Region

Transfer Agent

The transfer agent and registrar for Orion S.A.'s common shares is Equiniti Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, New York 11219.

Stock Information

Orion S.A. is listed on the New York Stock Exchange under the ticker symbol OEC.

Independent Auditors

Orion S.A.'s auditors are Ernst and Young LLP.

Annual Meeting

The Annual Meeting of Stockholders will be held on Thursday, June 26, 2025 at 2:00pm Central European Time at the company's office, located at 6, Route de Trèves, L-2633 Senningerberg (Municipality of Niederanven), Grand Duchy of Luxembourg.

* Mentioned above positions of Directors are exemplary and do not reflect all positions currently or formerly held.

This document contains certain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. You should not place undue reliance on forward-looking statements. Forward-looking statements include, among others, statements regarding the generation of long-term benefits to stakeholders, responsible business practices, industry conditions, macroeconomic and geopolitical conditions and trends, free cash flow generation and allocation, strategic plans, anticipated outcomes of our partnerships, tariffs, anticipated demand and supply chain conditions, the resilience of and future prospects regarding our business, foreign exchange, plans relating to share repurchases, capital expenditures and otherwise, expectations, beliefs, estimates, forecasts, projections and forecasts of management, and others. Factors that could cause our actual results to differ materially from those expressed or implied in such forward-looking statements include those factors detailed under the captions "Cautionary Statement for Purposes of the "Safe Harbor" Provisions of the Private Securities Litigation Reform Act of 1995" and "Risk Factors" in our Annual Report in Form 10-K for the year ended December 31, 2024 and in the other documents we file with or furnish to the Securities and Exchange Commission. It is not possible for our management to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement. We undertake no obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information, other than as required by applicable law.

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