

Advanced Materials

0.29 Mn tonnes

Sales volume

₹33,786 Mn

Revenue from operations

22%

Contribution to consolidated revenue

Did you know?

Our engineered products, PETRORES® and LiONCOAT® LM, are used to produce graphite-based anode materials for lithium-ion batteries, supporting the growing demand for electromobility and energy storage systems.





We are among the global leaders in advanced materials, transforming our carbon output, petrochemicals and other raw materials into high-value, eco-friendly products. Our materials are vital for speciality chemicals, coatings, construction, automotive, petroleum and other industries.



Upcycling industrial byproducts into high value materials ✦

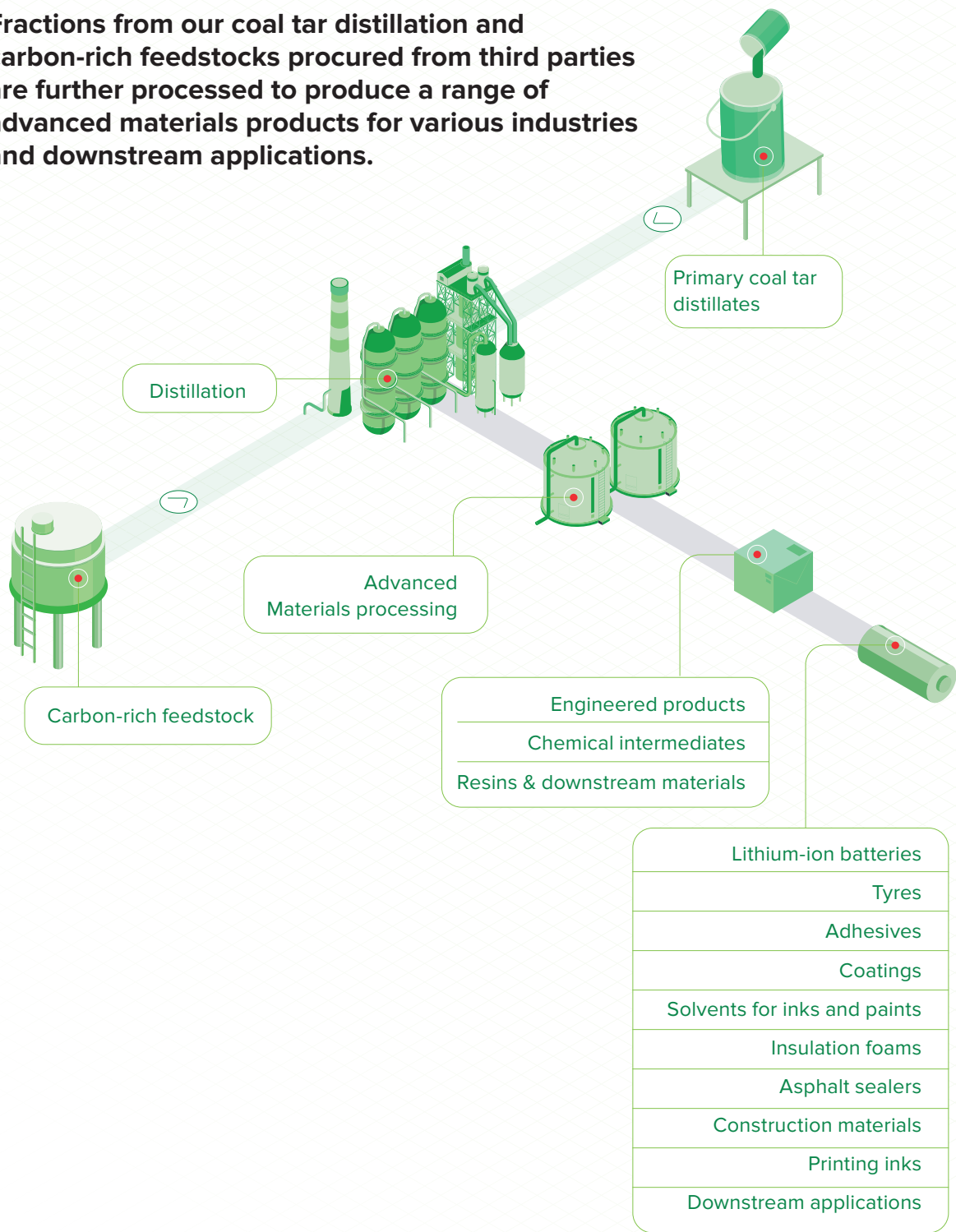
More than **96,000 tonnes** of raw materials used in this segment come from repurposed industrial byproducts, reducing waste and supporting a circular economy.

Product portfolio

	Engineered products	Chemical intermediates	Resins
Raw materials	Coal tar pitch and petroleum pitch	Naphthalene oil, crude benzene and cracker residues	Petro-based C9 feedstock (vinyl toluene and indene)
Manufacturing	Enhanced purification and physical separation processes significantly reduce the concentration of polycyclic aromatic hydrocarbons (PAHs) and raise the softening point.	Derived from our internal naphthalene oil production process, this material is further refined into downstream products such as phthalic anhydride	Cationic polymerisation and hydrogenation
End-industry applications	CARBORES®, PETRORES®, LiONCOAT® and asphalt sealers	Refined naphthalene, phthalic anhydride, modifiers, benzene, toluene, xylene, solvents and fuel additives	Carbon resins, pure resins, hydrogenated resins and phenolics
Production locations	Belgium, Canada, Germany and Poland	Belgium and Germany	Germany

Advanced Materials upcycling value chain

Fractions from our coal tar distillation and carbon-rich feedstocks procured from third parties are further processed to produce a range of advanced materials products for various industries and downstream applications.



Market dynamics

Our Advanced Materials segment faced multiple challenges and leveraged numerous in 2024, driven by shifting market dynamics and customer needs:

CARBORES® products

Demand remained muted due to reduced refractory production, a direct result of declining steel industry output in Europe. However, this was partly offset by increased sales in markets outside Europe.

PETRORES® products

The battery anode market experienced slower-than-expected growth, reducing demand. Additional pressure arose from intensified competition, particularly from new entrants in China. However, opportunities emerged with potential new producers of anode materials in Europe and North America.

Hydrocarbon resins

Production was limited by raw material shortages, particularly affecting relevant industries. Demand remained strong in the rubber and coating segments, but adhesives demand slowed due to a declining construction sector and cheaper imports of hydrocarbon resins from the Far East.

Our response

We adopted a strategic approach with

Market diversification

Expanded sales of CARBORES® products to non-European markets, mitigating the impact of reduced European demand.

Operational improvements

Focused on building resilience in supply chains to address raw material shortages and improve reliability for customers.

Key developments of 2024

NOVARES® eco line

Introduced ISCC PLUS certified products derived from sustainable raw material sources, using mass balance calculations to enhance sustainability across the value chain.

Duisburg and Castrop-Rauxel certifications

RAIN achieved the ISCC PLUS certification at the Duisburg and Castrop-Rauxel sites, enabling the production and sale of 100%-ISCC PLUS-compliant materials.

NOVARES® pure 2090

Launched to cater to niche de-waxing applications, reflecting a commitment to technical excellence and emerging customer needs.

Future prospects

We are focusing on driving growth from this segment by:

Expanding sustainable products

Building on ISCC PLUS certifications, we plan to increase our portfolio of eco-friendly materials to meet rising customer demands for enhanced transparency and low-carbon solutions.

Diversifying into growing markets

Continue exploring opportunities in non-European markets, particularly in regions with growing industrial activity.

Improving customer-centricity

Strengthen supply chain resilience to ensure improved lead times and reliability of supply for critical products.

