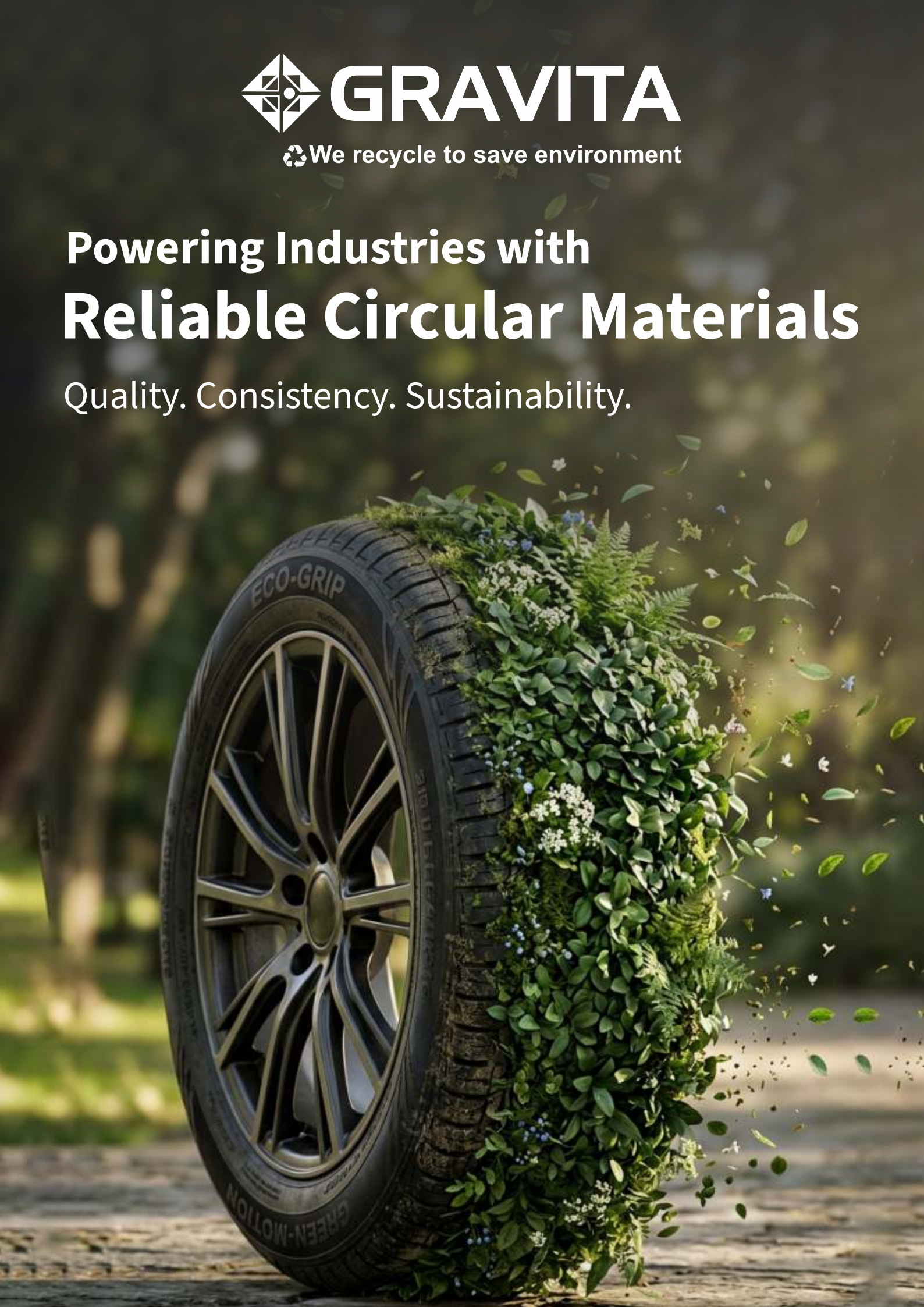
GRAVITA

♻We recycle to save environment

Powering Industries with

Reliable Circular Materials

Quality. Consistency. Sustainability.



About Gravita

Founded in 1992, Gravita Group is a leading global recycling and manufacturing company committed to building sustainable circular value chains across industries. With a strong presence across Asia, Africa, and Europe, Gravita serves customers in more than 70 countries through its advanced recycling facilities, global procurement network, and technology-driven operations.

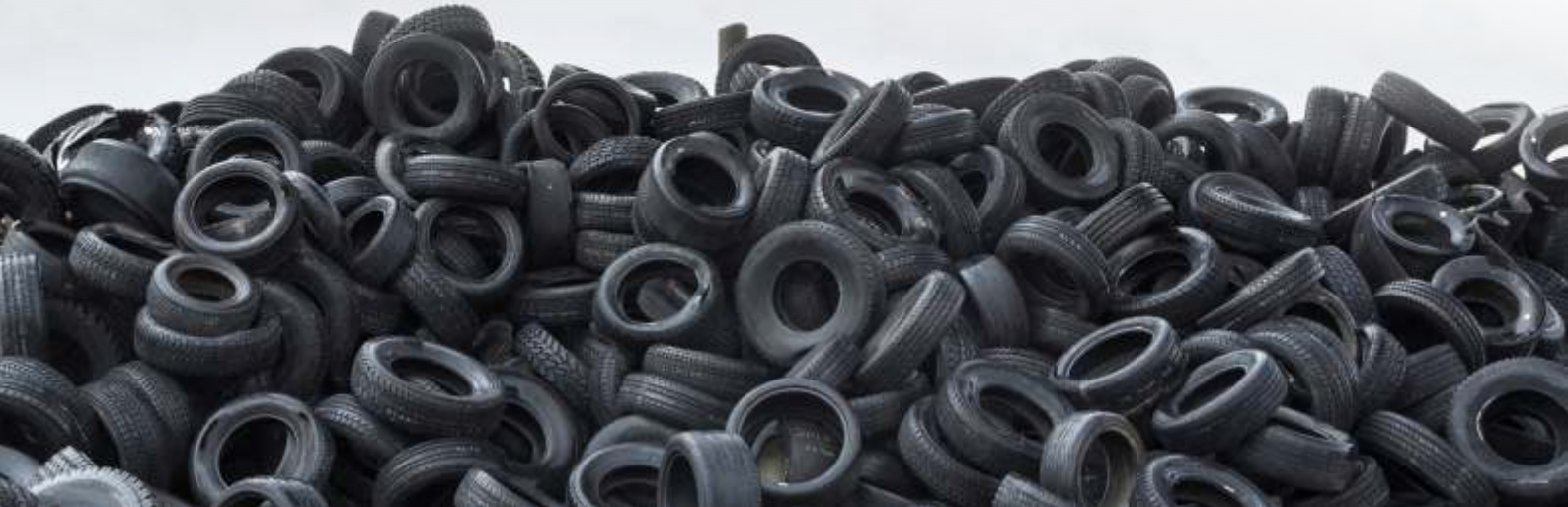
Gravita's core expertise spans lead recycling, aluminium alloy manufacturing, plastic recycling, lithium-ion battery recycling, and waste tyre recycling. In the Rubber Division, Gravita focuses on transforming end-of-life tyres into valuable secondary raw materials such as Tyre Pyrolysis Oil (TPO), Recovered Carbon Black (rCB), Crumb Rubber/Granules (with different size like 0 to 2mm, 2 to 4 mm and even bigger), Micronized rubber powder, Crumb Rubber Modified Bitumen, steel and fiber recovery products—supporting industries with sustainable and cost-effective alternatives.

Driven by innovation and sustainability, Gravita integrates advanced recycling technologies with stringent quality standards to deliver reliable, high-performance products across multiple industries. Its tyre recycling operations supply sustainable fuel solutions such as Tyre Pyrolysis Oil (TPO) to oil refineries and industrial users as an alternative biofuel and industrial fuel, while Recovered Carbon Black (rCB) and recycled rubber products support the infrastructure, automotive, and manufacturing sectors. Through its waste tyre recycling solutions, Gravita helps reduce landfill dependency, lower carbon emissions, and promote resource efficiency across the entire value chain.

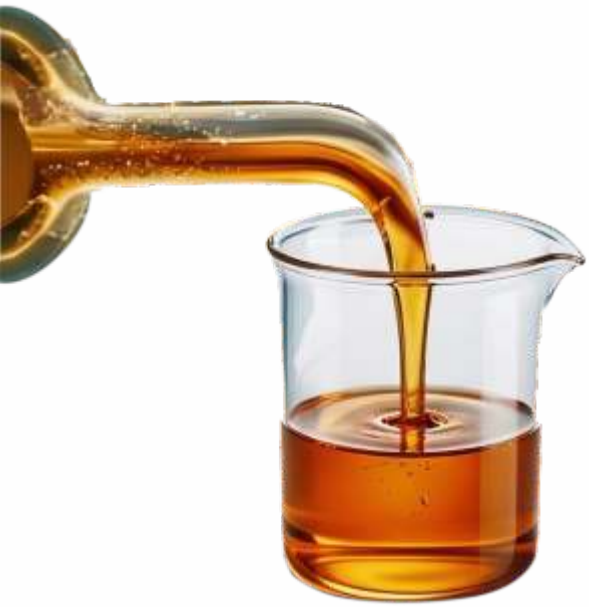
As one of the world's leading turnkey recycling solution providers, Gravita also offers complete project consultancy, engineering, and project execution services for recycling plants globally. With a strong commitment to sustainability, operational excellence, customer value creation, Gravita continues to lead the transition towards a greener and more responsible future.

Why Gravita?

- Part of a globally trusted recycling conglomerate
- Strong focus on ESG & Environmental Responsibility
- Consistent Quality & Traceability
- 33+ years of global recycling experience
- Coming with one of the first automated recycling plant in India built to international standards
- Zero liquid discharge and emission-controlled processes
- Integrated sourcing-to-product traceability
- Commitment to circular economy principles
- Long term Partnership network spanning OEMs, Tire manufacturers, and recyclers across the world



Tire Pyrolysis Oil (TPO)



Tire Pyrolysis Oil (TPO) from Gravita is a high-value hydrocarbon product specifically designed for use as a refinery feedstock and for downstream fuel blending applications. It is produced through an advanced pyrolysis process at temperatures between 350°C and 500°C in an oxygen-free environment. The feedstock consists of a controlled mix of truck and bus radial (TBR), passenger car tires (PCR), and off-the-road (OTR) tires, ensuring uniformity and process reliability.

Gravita's TPO process ensures consistent quality, stable composition, and reliable supply—critical requirements for refinery and petrochemical operations. Additionally, the presence of biogenic content from natural rubber supports sustainability objectives and regulatory compliance.

Application

Refinery & Chemical Applications

- Refinery feedstock for further upgrading
- Blending in Heating Oils and Diesel Alternatives
- Feedstock for chemical recovery processes

Feedstock for Sustainable Products

- Power Generation Units
- Feedstock for producing Circular Carbon Black (CCB)

Industrial Heating & Combustion

- Industrial boiler fuel
- Furnace oil substitute

Transportation & Marine Blending

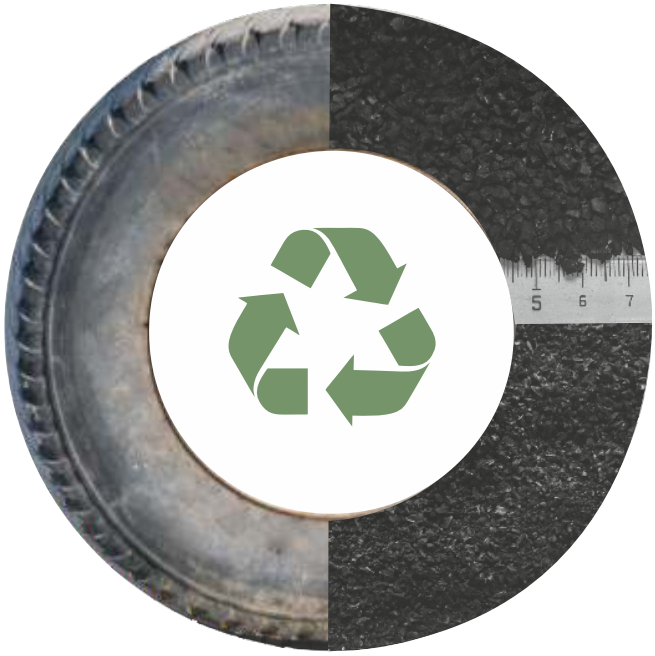
- Marine fuel blending component

Physical & Chemical Properties

Property	Test Method	Typical Value	Unit
Appearance	Visual	Dark brown to black	–
Odour	Sensory	Aromatic petroleum	–
Biogenic Content	ASTM D6866	60-70%	wt%
Total Acid Number (TAN)	ASTM D664	≤ 5	mg KOH/g
Total Metals	ASTM D5185	≤ 50	ppmw
Sulfur Content	ASTM D4294	< 1	wt%
Water Content	ASTM D95	≤ 0.3	wt%
Density @ 15°C	ASTM D4052	0.90 – 0.93	g/cm³

Property	Test Method	Typical Value	Unit
Flash Point	ASTM D93	45 – 65	°C
Pour Point	ASTM D97	<-10	°C
Kinematic Viscosity @122°F/50°C	ASTM D445	1 – 4	cSt
Carbon Residue	ASTM D4530	≤ 2.5	wt%
Nitrogen	ASTM D5762	≤ 0.5	wt%
Iron (Fe)	ASTM D5185	< 10	ppmw
Nickel (Ni)	ASTM D5185	≤ 0.50	ppmw
Vanadium (V)	ASTM D5185	1	ppmw

Recycled Rubber Crumb Solution



Our premium Recycled Rubber Crumb is produced from selected end-of-life tires using a controlled mechanical process, supported by rigorous quality control systems that effectively remove steel and textile fibers. This results in a clean, free-flowing material with 99.9% metal free rubber.

Engineered for consistency and performance, our high-quality rubber crumb features low moisture content, uniform particle size distribution, and a stable composition ensuring smooth processing and reliable, repeatable results across applications including sports surfaces, moulded rubber products, flooring applications, and construction solutions.

Aligned with global sustainability standards, we support your environmental goals with ISCC EU and ISCC PLUS certifications by offering product under biogenic fraction of end-of-life tire chips and tire granules.

Application

Sports and Recreational Surfaces

- Sports surfaces
- Playgrounds
- Shock absorbing surfaces

Construction & Infrastructure

- Asphalt modification
- Insulation materials
- Landscaping & civil applications

Manufacturing and Industrial Uses

- Moulded rubber products
- Rubber manufacturing

Flooring Applications

- Indoor flooring
- Outdoor flooring

Physical & Chemical Properties

Physical Properties

Material Type
- Recycled Rubber

Color
- black

Odour
- Mild Rubber Odour

Physical State
- Solid

Bulk Density (kg/m³)
- 450-650

Moisture Content (%)
- ≤ 1.0

Steel Content (%)
- ≤ 0.10

Fiber Content (%)
- ≤ 0.05

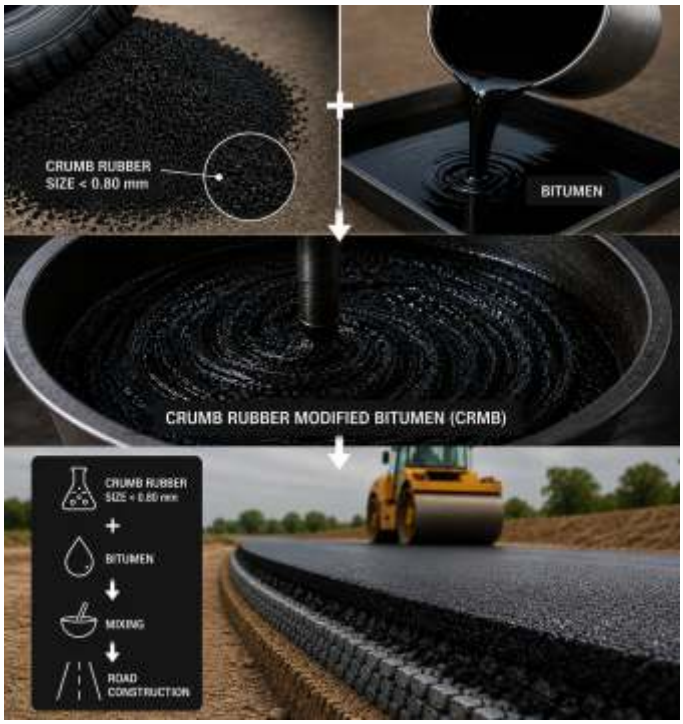
Particle Shape
- Irregular / Granular

Particle Size
- 0 - 2mm, 2 - 4mm

Ingredient Information

Value	CAS No.	Percentage
Natural Rubber / SBR Blend	9006-04-6	20% - 35%
Carbon Black	1333-86-4	20% - 30%
Magnesium Silicates	14807-96-6	6% - 7%
Zinc Oxide	1314-13-2	1% - 2%
Sulfur	7704-34-9	1.5% - 2.5%

Crumb Rubber Modified Bitumen



Crumb Rubber Modified Bitumen (CRMB) is a high-performance bituminous binder produced by blending recycled crumb rubber—derived from scrap tires—with conventional bitumen. The crumb rubber used for CRMB generally has a particle size ranging from 0 to 0.80 mm (maximum). The process involves high-shear mixing at elevated temperatures, where fine rubber particles interact with bitumen to form a more resilient, elastic, and durable paving material.

This modification significantly improves the engineering properties of conventional bitumen, making CRMB highly suitable for heavy-duty pavements and roads exposed to high traffic loads and varying climatic conditions. CRMB provides superior elasticity, flexibility, resistance to rutting and deformation, enhanced fatigue life, better crack resistance, and improved overall pavement durability. These benefits result in longer service life of pavements and reduced maintenance costs.

Application

Road Construction & Intersections

- Ensures long-term durability
- Reduces rutting and cracking
- Suitable for medium to heavy traffic loads

Airport Runways

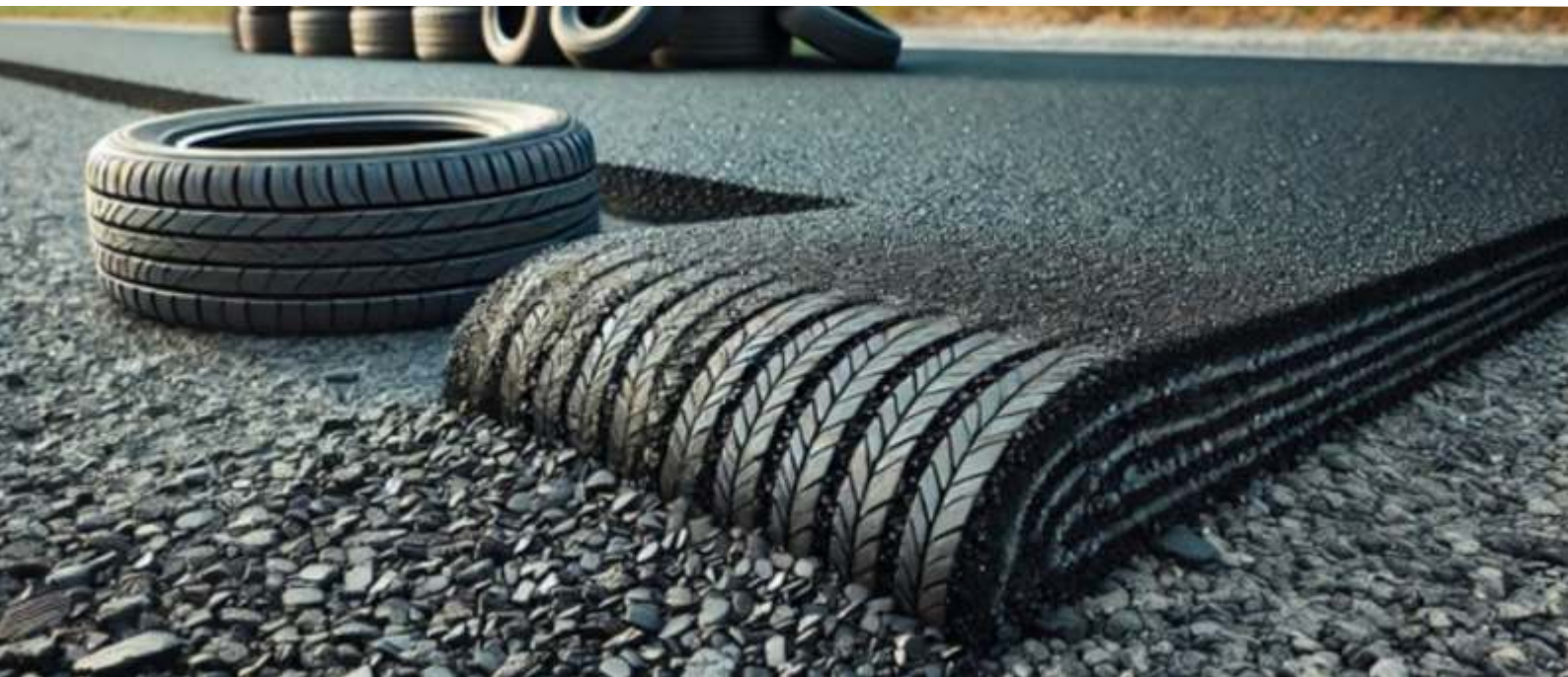
- Provides excellent load-bearing capacity
- Resists deformation under heavy aircraft movement

Highways & Expressways

- Superior performance under high-speed traffic
- Handles continuous axle loads

Industrial Roads & Container Yards

- Suitable for slow-moving heavy vehicles
- Performs well under concentrated loads
- Ideal for industrial and logistics areas



Carbon Char

Our Carbon Char is a high-grade carbon-rich material produced through grinding and milling processes to deliver superior performance across multiple industrial applications. Known for its high fixed carbon content, low ash, and excellent calorific value, it serves as an ideal fuel and raw material for various manufacturing processes.

Key Features

- High Fixed Carbon Content
- Low Moisture & Low Ash Percentage
- Excellent Heat Generation Capacity
- Consistent Quality & Uniform Size
- Eco-Friendly and Efficient Combustion
- Suitable for Bulk Industrial Consumption

Application

Construction

- Asphalt modification
- Cement bricks
- Bitumen reinforcement

Energy

- Solid fuel for boilers and cement kilns

Sustainable Products

- Feedstock for producing rCB

Physical & Chemical Properties

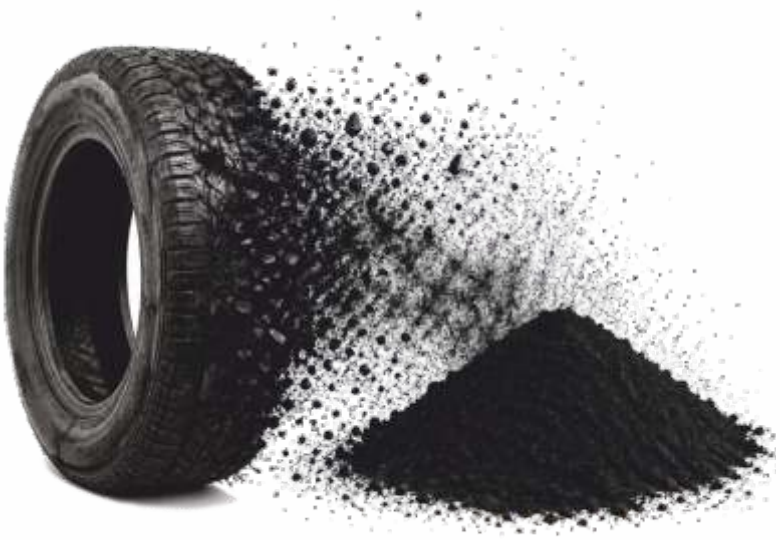
Physical Properties

Component	Typical Range
Appearance	Solid, black powder
Particle Size (D50)	20-80 µm
Surface Area	50-90 m^2/g
Density	0.40 to 0.60 g/cm^3
pH Value	6 – 8
Calorific Value	5500 – 6500 kcal/kg

Chemical Composition

Value	Percentage
Carbon %	75-85
Fixed Carbon%	75-80
Ash Content %	15-20
Volatile Matter %	3-5
Sulphur %	≤ 2.5
Hydrogen %	0.5 – 1.0

Recovered Carbon Black



Recovered Carbon Black (rCB) is a sustainable material obtained from end-of-life tires through a thermal recycling process known as pyrolysis. Unlike virgin carbon black, which is produced from petroleum-based feedstocks, rCB is generated by reusing existing waste tires, making it an important component of the circular economy.

With the growing global concern over tire waste management and carbon emissions, industries are increasingly adopting rCB as an environmentally responsible alternative. It helps reduce landfill waste, minimizes dependence on fossil resources, and supports sustainability targets across manufacturing sectors.

Application

Tire & Automotive Industry

- Tire and Rubber manufacturing
- Automotive rubber parts

Rubber Industry

- Rubber mats
- Conveyor belts
- Footwear soles

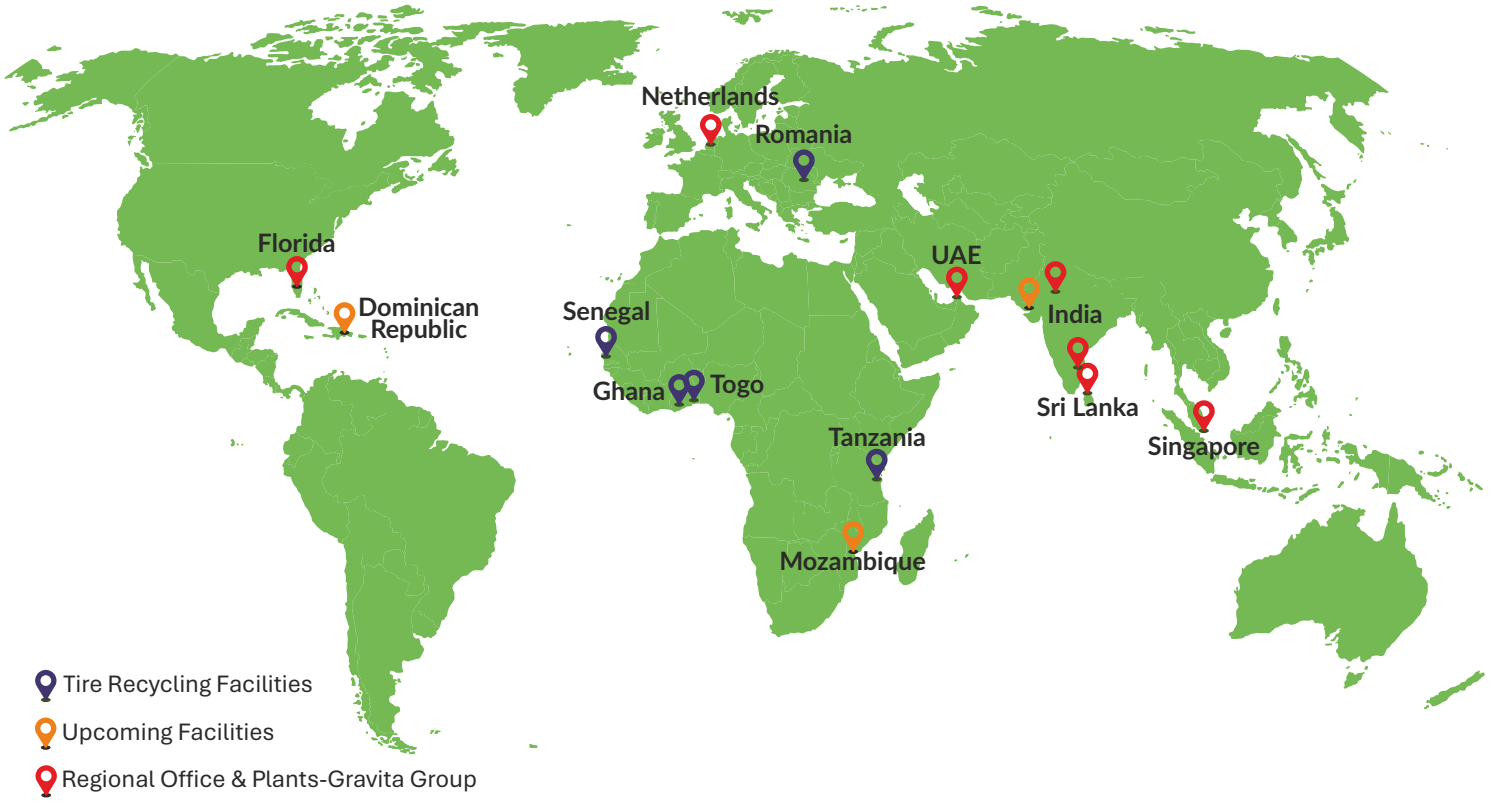
Plastics Industry

- Masterbatch filler
- Pigment for HDPE / PP / PVC
- Printing Inks

rCB vs vCB

Recovered Carbon Black (rCB)	Virgin Carbon Black (vCB)
Derived from end-of-life tires	Derived from fossil fuel feedstock
Lower Co_2 footprint	Higher Co_2 footprint
Partly replaces virgin carbon black	Stronger reinforcement performance
Contains mixed Carbon structures and inorganics	Higher purity

Global Operation - Gravita Group



Business Verticals

• Lead • Aluminium • Plastic • Rubber • Lithium
• Copper • Turnkey Solutions • EPR

DEEP ROUTED - PROCUREMENT NETWORK

39 Own Yards

2200+ Touchpoints

3,30,000 MT+ Scrap Collection

DIVERSIFIED CUSTOMER NETWORK - GLOBAL

Presence in **37+** Countries

400+ Customers

2,13,000 MT+
Recycled Products Delivered

Rubber Recycling Facilities-Gravita Group

Strategically located in Europe and Africa, Our State-of-the-Art Rubber Recycling Facilities are designed to meet the rising global demand for sustainable and high-quality tire pyrolysis oil solutions. With an annual production capacity of over 12,000 MT, our plants efficiently convert end-of-life tires, industrial rubber waste, and post-consumer rubber materials into valuable TPO oil and other reusable by-products.

Romania, Europe
Capacity : 2400 MTPA

Ghana, Africa
Capacity : 3600 MTPA

Togo, Africa
Capacity : 2400 MTPA

Tanzania, Africa
Capacity : 2400 MTPA

Senegal, Africa
Capacity : 1200 MTPA

Quality Built in Trust Delivered.

Our robust quality systems and advanced testing ensure consistent, reliable, and compliant materials - every batch, every time.

Quality at the Core

Consistent Quality

Tight process control and rigorous testing ensure uniform specifications across every batch.

Certified & Compliant

Our processes and products comply with ISCC EU, ISCC PLUS, REACH, and ISO 9001:2015 standards.

Traceable & Transparent

Complete traceability from raw material to final product with batch-level documentation and Certificates of Analysis.

REACH · COMPLIANT · COMPLIANT

ISO 9001:2015 Quality Management Certified

ISCC EU

ISCC PLUS

Our Quality Assurance Journey

Raw Material Inspection

Careful inspection and analysis of incoming materials to ensure quality at the source.

In-process Monitoring

Continuous monitoring of key parameters to maintain process stability and performance.

Final Testing

Advanced laboratory testing to verify product properties and ensure specification compliance.

Documentation & COA

Each batch is issued with complete documentation and Certificate of Analysis for full transparency.

ENGINEERED FOR RELIABLE PERFORMANCE.

Our quality systems are designed to deliver consistent performance across applications-from TPO to rCB and a wide range of rubber solutions.

DRIVING CIRCULAR VALUE FROM WASTE TYRES

Sustainable today. Responsible for tomorrow.

SUSTAINABILITY IN ACTION

At Gravita, sustainability is embedded in everything we do. We transform end-of-life tyres into high-quality circular materials through advanced, efficient, and responsible recycling processes-supporting industries and preserving our planet.

Waste To Value

End-of-life tyres are transformed into high-value industrial materials, reducing landfill dependency and conserving resources.

Lower Carbon Impact

Energy-efficient recycling processes and circular solutions help lower emissions and reduce reliance on fossil-based raw materials.

Responsible Operations

Traceable sourcing, compliant processes, and certified production systems ensure the highest standards of safety, quality and integrity.

Every tonne of tyres recycled reduces landfill burden.

Supports circular raw material substitution across multiple industries.

Contributing to a cleaner environment and a more sustainable future.

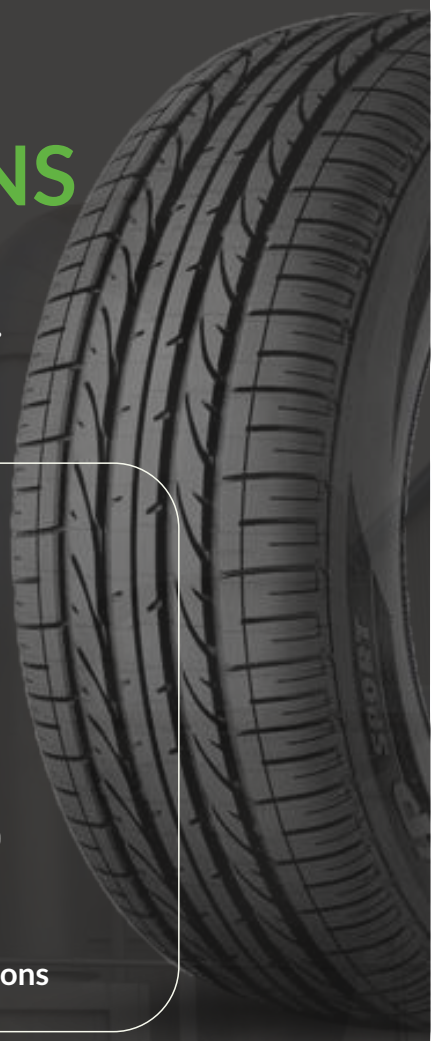
INTEGRATED INTO EVERY PRODUCT WE DELIVER

• TPO • rCB • RECYCLED RUBBER CRUMB AND MORE

♻ We recycle to save environment

FROM WASTE TYRES
TO RELIABLE SUPPLY CHAINS

Gravita converts end-of-life tyres into high-value circular materials that power industries and build a sustainable future.



SECURE YOUR SUPPLY OF
CIRCULAR MATERIALS

Request A Quote

Schedule A Discussion

Explore Supply Options

Secure your supply of certified sustainable materials.

Gravita Europe SRL

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E- Brochure

Website

REACH · COMPLIANT · COMPLIANT

ISO 9001:2015 Quality Management Certified

ISCC EU

ISCC PLUS