

Tire Pyrolysis Products Market to Reach USD 269.6 Million by 2035, Growing at 6.5% CAGR from USD 137.3 Million in 2024

Tire Pyrolysis Products Market to hit US\$ 269.6 Mn by 2035, expanding at 6.5% CAGR, fueled by demand for sustainable fuels, carbon black, and recycling.

WILMINGTON, DE, UNITED STATES, August 22, 2025 /EINPresswire.com/ -- The global tire pyrolysis products market has emerged as one of the most promising avenues in the waste management and circular economy space. Valued at US\$ 137.3 million in 2024, the market is projected to expand steadily at a CAGR of 6.5% between 2025 and 2035, reaching



approximately US\$ 269.6 million by 2035. The rising adoption of sustainable technologies, growing restrictions on landfilling and open burning of end-of-life tires (ELTs), and increased focus on resource recovery are driving this expansion.

Tire pyrolysis—the process of thermally decomposing waste tires in an oxygen-free environment—produces highly valuable by-products such as pyrolysis oil, recovered carbon black (rCB), steel wire, and gases. These outputs have significant industrial applications in energy production, chemical manufacturing, construction, automotive, and other industries. With over one billion waste tires discarded globally each year, tire pyrolysis is increasingly positioned as a strategic solution to simultaneously reduce waste, lower carbon emissions, and provide substitutes for fossil fuel-based raw materials.

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Industry analysts expect the tire pyrolysis products market to witness significant momentum during the forecast period. The growth trajectory is supported by:

Rising demand for sustainable industrial assets.

Stringent government policies banning tire landfilling and promoting green recycling technologies.

Advances in pyrolysis efficiency, scalability, and product quality.

Expanding commercial applications for recovered carbon black, pyrolysis oil, and recycled steel. The tire pyrolysis sector is also witnessing a surge in investment as new pyrolysis plants are being commissioned globally. Companies are focusing on scaling up operations, strengthening supply chains, and upgrading technologies to improve both product yield and energy efficiency.

Market Dynamics

Demand for Sustainability and Circular Economy

One of the strongest drivers of market growth is the global shift toward sustainability. Every year, more than one billion ELTs enter the waste stream, posing severe environmental risks when not managed properly. Landfilling and open burning of tires lead to:

Soil and water contamination.

Release of toxic gases and particulates.

Long-term environmental degradation due to non-biodegradable rubber.

Tire pyrolysis addresses these issues by transforming ELTs into reusable resources. Pyrolysis oil serves as an alternative fuel for industrial boilers, cement kilns, and power plants. Recovered carbon black (rCB) substitutes virgin carbon black in rubber, plastics, paints, and inks. Scrap steel re-enters construction and manufacturing industries, while combustible gases can be used to power the pyrolysis process itself.

Recovered carbon black, in particular, is gaining popularity as industries look for low-carbon substitutes to reduce dependency on fossil fuels and cut carbon footprints. The substitution of virgin carbon black with rCB not only saves costs but also reduces energy-intensive extraction processes.

Government Policies and Landfill Bans

Governments worldwide are tightening regulations on tire waste disposal. In North America and Europe, strict bans on landfilling and open burning of ELTs are already in place. Extended Producer Responsibility (EPR) policies require manufacturers to take accountability for the end-of-life management of their products, incentivizing the adoption of pyrolysis plants.

For example:

The European Union's Waste Framework Directive emphasizes recycling and resource recovery. The U.S. Environmental Protection Agency (EPA) and several state governments offer financial incentives for tire recycling initiatives.

China and India have enacted strong EPR policies for tire manufacturers, mandating sustainable disposal practices.

These regulations create favorable conditions for pyrolysis technology adoption and ensure consistent feedstock availability for recycling plants.

Tire Pyrolysis Product Market Overview

Tire Pyrolysis Process

Tire pyrolysis involves the thermal decomposition of tires in an oxygen-free environment. The process produces:

Pyrolysis oil (TPO): Used for transportation fuels, heating, power generation, and chemical manufacturing.

Recovered carbon black (rCB): Utilized in tire production, industrial rubber, coatings, plastics, and inks.

Steel wire: Recycled for use in construction, mining, and manufacturing.

Combustible gases: Employed for heat generation and to sustain the pyrolysis process. The technology not only helps recover valuable materials but also closes the loop in tire manufacturing by reintroducing recycled carbon black into new tires, advancing the circular economy model.

Market Segmentation by Product

Pyrolysis Oil:

Expected to account for a substantial market share.

Applications include transportation fuel blending, heat and power generation, and chemical feedstock for petrochemical industries.

Carbon Black:

One of the fastest-growing segments.

Widely used in tire production, industrial rubber goods, paints, plastics, and coatings.

Steel Wire:

Provides a consistent source of recycled steel for construction and manufacturing.

Gases:

Mainly used for in-plant power generation, improving the self-sustainability of pyrolysis units.

Regional Insights

Asia Pacific - Leading Region

Asia Pacific dominates the global tire pyrolysis products market and is expected to continue leading through 2035. Key factors include:

Large-scale automotive industries in China, India, and Japan, resulting in massive ELT generation.

Strong regulatory support through landfill bans and EPR frameworks.

Rising demand for sustainable materials across construction, automotive, and manufacturing. The growing industrial base and large availability of feedstock make Asia Pacific a lucrative market for pyrolysis companies.

North America

High demand for sustainable waste management solutions.

Strong government incentives for tire recycling.

Rising consumption of pyrolysis oil in cement and power generation industries.

Europe

Strict landfill bans and circular economy regulations.

Significant adoption of pyrolysis technology in Germany, the U.K., and France.

Growing demand for recovered carbon black in tire and rubber manufacturing.

Middle East & Africa and Latin America

Increasing investment in energy recovery and construction.

Potential growth driven by high ELT generation, especially in emerging economies like Brazil, Mexico, and South Africa.

Key Market Players

Prominent companies are investing heavily in technology advancements and capacity expansions. Notable players include:

Pyrum Innovations (Germany) – commissioning a new ELT pyrolysis plant in 2025.

Marubeni Corporation (Japan) – strategic investment in Green Rubber Energy Company Limited

in Thailand to establish a recycling supply chain.

Black Bear Carbon B.V. (Netherlands) – focusing on recovered carbon black applications.

Bolder Industries (U.S.) – integrating rCB and pyrolysis oil into industrial supply chains.

Niutech Environment Technology (China) – offering large-scale pyrolysis solutions.

Other key companies: Novum Energy, Entyr Limited, Scandinavian Enviro Systems, Reoil SP.o.o., Contec S.A., Vagmine Energies, and Bridgestone Corporation.

These players are differentiating through technological innovation, regional expansion, strategic partnerships, and supply chain optimization.

Recent Developments

December 2024: Pyrum Innovations AG announced plans for its second ELT pyrolysis plant in Germany, enhancing production capacity.

September 2024: Marubeni Corporation invested in Green Rubber Energy Company Limited (GRE) in Thailand to establish a tire recycling supply chain.

2023-2024: Several companies expanded operations in Europe and Asia, with an emphasis on high-quality recovered carbon black for the automotive industry.

Market Outlook 2025-2035

The tire pyrolysis products market is expected to nearly double in size, from US\$ 137.3 million in 2024 to US\$ 269.6 million by 2035. Growth will be driven by:

Rising demand for green materials in automotive, energy, and construction sectors.

Expansion of pyrolysis capacity in Asia Pacific, Europe, and North America.

Development of advanced pyrolysis technologies that improve yield, reduce emissions, and enhance product quality.

The global tire pyrolysis products market represents a significant step toward sustainable industrialization and resource recovery. With regulatory support, technological advancements, and increasing demand for eco-friendly materials, the industry is set for strong expansion. Pyrolysis oil, recovered carbon black, steel, and gases are expected to find wider applications, strengthening their position in multiple sectors.

As governments, manufacturers, and recycling companies collaborate on circular economy initiatives, tire pyrolysis will continue to evolve into a mainstream waste management and industrial resource solution by 2035.

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