Truck and Bus Radial Tires Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Application (Truck, Bus), By Sales Channel (OEM, Aftermarket), By Region & Competition, 2019-2029F

Market Report | 2024-12-13 | 180 pages | TechSci Research

AVAILABLE LICENSES:

- Single User License $4500.00
- Multi-User License $5500.00
- Custom Research License $8000.00

Report description:

Global Truck and Bus Radial Tires Market was valued at USD 15.78 Billion in 2023 and is anticipated to reach USD 22.40 Billion by 2024, growing with a CAGR of 6.07% through 2029. The global truck and bus radial tires market is experiencing significant growth due to the increasing demand for transportation and logistics services. Radial tires, which offer superior performance, durability, and fuel efficiency compared to bias tires, are becoming the preferred choice for commercial vehicles. The expansion of e-commerce and the rise in road freight have intensified the need for efficient transportation solutions. As manufacturers continue to innovate in tire technologies, improvements in tire longevity, performance in varying weather conditions, and load-bearing capacity are attracting fleet owners and operators to adopt radial tires.

One key driver of market growth is the ongoing development of advanced tire materials and manufacturing techniques. With advancements in rubber compounds and the use of stronger steel belts, radial tires are becoming more resistant to wear and tear, reducing the overall cost of ownership for truck and bus operators. The shift towards electric vehicles (EVs) also presents an opportunity for growth in the tire market, as new tire specifications are required to meet the unique demands of EVs. The increasing adoption of electric trucks and buses is expected to drive demand for specialized radial tires designed to handle the distinct weight distribution and performance characteristics of these vehicles.

Key Market Drivers

Rising Demand for Commercial Vehicles

A fundamental driver for the Truck and Bus Radial Tires Market is the continually increasing demand for commercial vehicles globally. As economies expand, urbanization accelerates, and e-commerce flourishes, the need for efficient transportation of goods and passengers rises. This demand is particularly pronounced in emerging markets where infrastructural development and increased economic activities drive the sales of trucks and buses. Commercial vehicles, including trucks and buses, are the backbone of logistics and passenger transportation networks. The robust demand for these vehicles directly translates into a

heightened requirement for reliable and high-performance tires. Radial tires, known for their durability, fuel efficiency, and enhanced grip on the road, become the tire of choice for commercial fleet operators seeking to optimize the performance of their vehicles.

Focus on Fuel Efficiency and Operational Cost Reduction

The emphasis on fuel efficiency and operational cost reduction within the commercial vehicle sector is a significant driver for the adoption of radial tires. Fuel costs constitute a substantial portion of the operational expenses for fleet operators, making fuel efficiency a top priority. Radial tires, characterized by their construction with reinforcing belts running radially across the tire, offer lower rolling resistance compared to bias-ply tires. Lower rolling resistance contributes to improved fuel efficiency, enabling commercial vehicles to cover more distance with less fuel consumption. As environmental regulations become more stringent and fleet operators seek to minimize their carbon footprint, the fuel efficiency benefits of radial tires become even more critical. The Global Truck and Bus Radial Tires Market responds to this driver by providing solutions that help fleet operators achieve cost savings and environmental sustainability.

Safety and Performance Considerations

Safety is a paramount concern in the commercial vehicle industry, and tire performance plays a crucial role in ensuring the safety of trucks and buses on the road. Radial tires are renowned for their superior handling characteristics, stability, and traction, especially at high speeds. These attributes enhance the overall safety of commercial vehicles, providing better control and reducing the risk of accidents. The Global Truck and Bus Radial Tires Market aligns with the industry's commitment to safety by offering products that meet stringent performance standards. Radial tires provide stability during braking, cornering, and sudden maneuvers, enhancing the overall handling of commercial vehicles. As safety regulations become more rigorous, fleet operators prioritize radial tires to ensure the well-being of drivers, passengers, and the goods being transported.

Technological Advancements in Tire Design and Manufacturing

Ongoing technological advancements in tire design and manufacturing contribute significantly to the growth of the Truck and Bus Radial Tires Market. Innovations in tire compounds, tread patterns, and construction techniques aim to enhance the durability, longevity, and performance of radial tires. Manufacturers invest in research and development to introduce new materials and technologies that address the specific requirements of commercial vehicles. Advanced tire technologies, such as silica-based compounds for improved wet traction and wear resistance, contribute to the overall performance of radial tires. Additionally, innovations in tread design optimize traction on various road surfaces, providing commercial vehicles with versatility in different operating conditions. The integration of smart tire technologies, including tire pressure monitoring systems (TPMS), further enhances safety and operational efficiency in the commercial vehicle segment.

Expansion of E-commerce and Last-Mile Delivery Services

The rapid expansion of e-commerce and the increasing prominence of last-mile delivery services are key drivers shaping the Truck and Bus Radial Tires Market. The shift in consumer behavior towards online shopping has led to a surge in the demand for efficient and timely transportation of goods. Last-mile delivery vehicles, in particular, operate in urban environments with frequent stops and starts, placing unique demands on tires. Radial tires, with their ability to provide better traction, handling, and durability, are well-suited for the challenges of last-mile delivery. As e-commerce continues to grow and logistics companies invest in modernizing their fleets, the demand for radial tires tailored to the specific needs of delivery vehicles is on the rise. This trend is further accentuated by the increasing focus on sustainability in urban logistics, where radial tires contribute to fuel efficiency and reduced emissions.

Key Market Challenges

Economic Volatility and Market Uncertainty

The Global Truck and Bus Radial Tires Market is susceptible to economic volatility and market uncertainties, which can significantly impact demand and supply dynamics. Fluctuations in economic conditions, such as recessions, geopolitical tensions, or unexpected events like the global pandemic, can disrupt the commercial vehicle industry. During economic downturns, businesses may reduce fleet expansion or defer tire replacements to cut costs, leading to decreased demand for radial tires. Market uncertainties can also affect raw material prices and supply chain stability. The tire industry relies on various raw materials, including natural rubber, synthetic rubber, and other chemicals. Price fluctuations in these materials can impact manufacturing costs and profit margins for tire manufacturers. Additionally, geopolitical factors and trade tensions can disrupt the

supply chain, affecting the availability of critical materials and components, thereby challenging the smooth functioning of the Truck and Bus Radial Tires Market.

Regulatory Compliance and Changing Standards

The regulatory landscape, including safety and environmental standards, poses a significant challenge to the Global Truck and Bus Radial Tires Market. Governments worldwide are increasingly implementing stringent regulations related to tire performance, labeling, and environmental impact. Meeting these evolving standards requires continuous investments in research and development to develop tires that not only meet safety requirements but also address environmental concerns.

Compliance with tire labeling standards, which include providing information on fuel efficiency, wet grip, and noise levels, adds complexity to tire manufacturing. Additionally, environmental regulations may demand the reduction of tire-related emissions, driving the need for eco-friendly materials and sustainable manufacturing processes. Navigating the intricacies of compliance, staying abreast of changing standards, and implementing necessary adjustments in tire design and manufacturing processes pose a challenge to industry participants.

Intense Market Competition and Pricing Pressures

The Global Truck and Bus Radial Tires Market operates in an intensely competitive environment with numerous players vying for market share. The presence of both established tire manufacturers and emerging players intensifies competition, leading to pricing pressures. Fleet operators, often focused on minimizing operational costs, exert pressure on tire prices, seeking cost-effective solutions without compromising quality.

Intense market competition necessitates continuous innovation to differentiate products and maintain a competitive edge. Tire manufacturers must invest in research and development to introduce features that enhance tire performance, durability, and fuel efficiency. Balancing the need for innovation with competitive pricing becomes a challenge, as manufacturers strive to meet the demands of fleet operators while ensuring profitability in a fiercely competitive market. for instance, in September 2022, Bridgestone revealed plans to raise prices by as much as 15% on certain tires sold in the U.S. and Canada, starting October 1. This increase applies to a range of products including consumer, commercial, truck and bus radial (TBR), and off-the-road (OTR) tires, as Bridgestone adjusts to current market conditions. The company's sales teams are contacting customers directly to discuss the specifics of these adjustments at various product levels.

Rapid Technological Advancements and Tire Complexity

While technological advancements drive innovation in the Truck and Bus Radial Tires Market, they also present a challenge in terms of increased tire complexity. Advanced tire technologies, such as smart tire sensors, self-inflating tires, and customized tire solutions for specific applications, contribute to enhanced performance and safety. However, these technological advancements introduce complexities in tire design, manufacturing, and maintenance.

Tire complexity can pose challenges for fleet operators in terms of understanding and managing the diverse features and specifications of radial tires. Additionally, the need for specialized knowledge in the maintenance and repair of technologically advanced tires can increase operational costs for fleet operators. Striking a balance between leveraging technological advancements for improved tire performance and managing the associated complexities presents a challenge for both manufacturers and end-users in the market.

Environmental Concerns and Sustainability

The Global Truck and Bus Radial Tires Market faces increasing scrutiny regarding its environmental impact, requiring tire manufacturers to address concerns related to sustainability and recyclability. The tire industry, reliant on raw materials such as rubber and chemicals, faces challenges associated with deforestation, habitat destruction, and the carbon footprint of tire production. Tire disposal and end-of-life management also pose environmental challenges. The recycling of tires, while making progress, is not universally standardized, leading to concerns about the environmental impact of tire waste. The industry is under pressure to adopt sustainable practices, explore eco-friendly materials, and develop tire designs that minimize environmental harm throughout the lifecycle. Meeting these environmental challenges requires tire manufacturers to invest in research and development for greener alternatives, recycling initiatives, and environmentally responsible manufacturing processes.

Key Market Trends

Focus on Fuel Efficiency and Low Rolling Resistance

The emphasis on fuel efficiency and reduced carbon emissions is a significant trend influencing the design and manufacturing of

truck and bus radial tires. With environmental sustainability becoming a key consideration in the commercial vehicle industry, tire manufacturers are prioritizing technologies that minimize rolling resistance. Low rolling resistance tires are designed to reduce the energy required for a tire to roll, resulting in improved fuel efficiency.

The adoption of low rolling resistance technologies aligns with regulatory standards aimed at curbing emissions from commercial vehicles. Fleet operators, conscious of the impact of fuel costs on their operational expenses, increasingly prioritize fuel-efficient tires. The trend towards low rolling resistance in truck and bus radial tires reflects the industry's commitment to environmental responsibility and the pursuit of cost-effective and sustainable transportation solutions.

Customization for Specific Applications

The Truck and Bus Radial Tires Market is witnessing a trend towards customization, with tire manufacturers developing products tailored to specific applications and operating conditions. Commercial vehicles operate in diverse environments, from long-haul freight transportation to urban delivery services and off-road applications. Tires designed for specific use cases, such as long-distance highway driving or urban stop-and-go traffic, optimize performance and longevity.

Customization involves adapting tire designs, tread patterns, and compounds to meet the unique challenges posed by different applications. For example, tires designed for urban delivery vehicles may prioritize durability and resistance to curb damage, while long-haul tires may focus on maximizing fuel efficiency and tread life. This trend recognizes the diverse needs of fleet operators and aims to provide specialized solutions that enhance overall operational efficiency.

Advancements in Tire Materials and Construction

Ongoing advancements in tire materials and construction techniques are shaping the Truck and Bus Radial Tires Market. Tire manufacturers are exploring innovative materials and manufacturing processes to enhance the durability, performance, and safety of radial tires. High-tech materials, such as silica-based compounds, contribute to improved wet traction, tread wear resistance, and overall tire performance.

Additionally, advancements in tire construction involve optimizing the internal components of the tire, including belts and carcass structure. This optimization enhances the strength and flexibility of radial tires, allowing for better load-carrying capacity and stability. The continuous evolution of materials and construction techniques reflects the tire industry's commitment to pushing the boundaries of innovation and delivering products that meet the evolving demands of the commercial vehicle sector. In October 2022, Hankook launched its first truck and bus radial tire under the iON brand. The Smart iON AU06+ was introduced as Hankook's inaugural TBR in the iON lineup, specifically designed for high-end electric vehicles in South Korea. This tire incorporates Hankook's EV technology to boost fuel efficiency, improve torque response, and accommodate heavier loads typical of electric vehicles.

Growing Interest in Retreading Solutions

The adoption of retreading solutions for truck and bus radial tires is gaining traction as a cost-effective and sustainable alternative. Retreading involves replacing the tread of a worn tire with a new layer, extending the tire's life and reducing the environmental impact of tire disposal. Retreaded tires offer a more affordable option for fleet operators, providing comparable performance to new tires at a lower cost.

As sustainability becomes a central theme in the commercial vehicle industry, retreading aligns with circular economy principles by minimizing waste and maximizing resource efficiency. Manufacturers are investing in advanced retreading technologies to ensure the quality and safety of retreaded truck and bus radial tires. The trend towards retreading solutions reflects a holistic approach to tire lifecycle management, emphasizing both economic and environmental considerations.

Segmental Insights

Sales Channel Insights

The global market for truck and bus radial tires is distinguished by its segmentation based on sales channels, primarily OEM (Original Equipment Manufacturer) and aftermarket. These two channels represent distinct avenues through which these specialized tires reach end-users, each serving unique purposes within the broader supply chain of the automotive industry.

OEM sales channel caters directly to manufacturers of trucks and buses, supplying tires that are integrated into vehicles during the manufacturing process. This segment is characterized by large-scale contracts between tire manufacturers and vehicle assembly plants, ensuring a steady flow of products tailored to specific vehicle models and specifications. OEM sales are driven by the production cycles of the automotive industry, influenced by factors such as vehicle demand, manufacturing trends, and

technological advancements in tire design.
Conversely, the aftermarket segment of truck and bus radial tires pertains to sales occurring after vehicles have been sold and are in use by customers. This channel encompasses replacement tires needed due to wear and tear, damage, or upgrades desired by vehicle owners. The aftermarket is characterized by a more diverse and fragmented customer base, including individual vehicle owners, fleet operators, and maintenance and repair services. Distribution channels in the aftermarket often involve tire retailers, automotive parts stores, and online platforms, catering to varying consumer needs and preferences.
Market dynamics within each sales channel are influenced by factors such as economic conditions, regulatory changes, technological innovations in tire manufacturing, and shifts in consumer preferences towards durability, performance, and environmental sustainability. OEM sales tend to be more stable and predictable, driven by long-term contracts and strategic partnerships between tire manufacturers and vehicle OEMs. In contrast, the aftermarket is more sensitive to immediate market conditions, including fluctuations in tire prices, availability of compatible products, and changes in vehicle usage patterns.
The segmentation by sales channels reflects the strategic decisions made by tire manufacturers to optimize production capacities, distribution networks, and marketing efforts. While OEM sales ensure a steady revenue stream and brand visibility through association with vehicle manufacturers, the aftermarket offers opportunities for higher margins and flexible product offerings tailored to diverse customer needs. Both channels play crucial roles in sustaining the overall market for truck and bus radial tires, contributing to the resilience and adaptability of tire manufacturers in responding to dynamic market conditions and evolving customer demands.
Regional Insights
In 2023, the Asia-Pacific region dominated the global truck and bus radial tires market. The rapid industrialization and growing infrastructure development across countries such as China, India, and Japan have significantly contributed to the demand for commercial vehicles, which in turn boosts the need for radial tires. The region□s large population base, combined with an expanding middle class, has led to a surge in road freight, further driving the requirement for durable and efficient tires.
Asia-Pacific is home to some of the largest automotive manufacturers and a vast network of logistics companies, creating a strong demand for truck and bus radial tires to support the transportation of goods and services.
The growth of e-commerce in Asia-Pacific, particularly in China and India, is another critical factor. With the rise in online shopping, the need for efficient and reliable last-mile delivery services has increased. As a result, fleet operators are opting for radial tires due to their durability, fuel efficiency, and higher load-carrying capacity. This trend is particularly evident in the growing number of logistics hubs and warehouses in major cities. Additionally, the shift toward electric trucks and buses in the region further boosts the demand for specialized radial tires, tailored to meet the unique requirements of electric commercial vehicles.
The favorable regulatory environment in some countries also supports the expansion of the truck and bus radial tire market in Asia-Pacific. Governments in several key markets are investing in infrastructure projects, improving road networks, and introducing initiatives that promote the adoption of cleaner and more efficient commercial vehicles. Such developments are expected to fuel the demand for radial tires in the coming years. Despite challenges such as fluctuating raw material prices and environmental concerns, the Asia-Pacific region remains the dominant player in the truck and bus radial tire market in 2023, with robust growth prospects driven by technological advancements and rising transportation needs.
Key Market Players
□□Apollo Tyres Ltd
□□Balkrishna Industries Limited
□□Bridgestone Corporation
□□China National Tire & Rubber Co., Ltd.
□□Continental AG
□□Giti Tire Pte Ltd.
□□The Goodyear Tire & Rubber Company
□□Hankook Tire & Technology Co. Ltd.
□□Kumho Tire Co., Inc.
□□Pirelli & C. S.p.A

Report Scope:

In this report, the Global Truck and Bus Radial Tires Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Truck and Bus Radial Tires Market, By Application:

- Truck
- Bus

Truck and Bus Radial Tires Market, By Sales Channel:

- OEM
- Aftermarket

Truck and Bus Radial Tires Market, By Region:

- Asia-Pacific
  - China
  - India
  - Japan
  - Indonesia
  - Thailand
  - South Korea
  - Australia
- Europe & CIS
  - Germany
  - Spain
  - France
  - Russia
  - Italy
  - United Kingdom
  - Belgium
- North America
  - United States
  - Canada
  - Mexico
- South America
  - Brazil
  - Argentina
  - Colombia
- Middle East & Africa
  - South Africa
  - Turkey
  - Saudi Arabia
  - UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Truck and Bus Radial Tires Market.

Available Customizations:

Global Truck and Bus Radial Tires Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

Table of Contents:

Truck and Bus Radial Tires Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Application (Truck, Bus), By Sales Channel (OEM, Aftermarket), By Region & Competition, 2019-2029F

Market Report | 2024-12-13 | 180 pages | TechSci Research

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4500.00
	Multi-User License	$5500.00
	Custom Research License	$8000.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-05-05

Signature