Polyurethane (PU) Tread on Steel Core Wheels

Title	Polyurethane (PU) Tread on Steel Core Wheels
Thumb	
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Description

Polyurethane (PU) Tread on Steel Core Wheels is engineered for heavy-duty applications where maximum load-bearing capacity and floor protection are required.



Key Characteristics of Polyurethane (PU) Tread on Steel Core Wheels

By combining a robust semi-steel core with a premium-grade polyurethane elastomer, these wheels offer an optimal balance of strength and durability:

Superior Load Capacity: Featuring weight capacities ranging from 500 to 4,400 pounds per wheel, these wheels are built to handle the most demanding industrial loads without deformation.

Chemically Bonded Integrity: Our polyurethane elastomer is chemically bonded to the semi-steel core, ensuring maximum structural adhesion and preventing tread delamination even under intense operational stress.

Floor Protection: Despite their high load capacity, the polyurethane tread provides excellent floor protection, cushioning impacts and reducing scratches and operational noise compared to traditional iron or steel wheels.

Broad Temperature Tolerance: Engineered to perform reliably in a variety of climates, these wheels feature an operating temperature range of -40°F to +180°F.

Versatile Performance: Works exceptionally well in both indoor and outdoor environments, offering smooth rolling and low starting resistance.

> Important Operational Note: While these wheels offer high performance in various settings, please note that the semi-steel core is susceptible to rust when exposed to moisture. Therefore, this specific model is not recommended for applications that operate in wet conditions, wash-down areas, or environments with standing water.

The Applications of Polyurethane (PU) Tread on Steel Hub Wheels

Our wheels are not just components; they are solutions engineered to solve specific operational challenges in demanding environments:

Automated Logistics (AGVs & AMR): Designed for autonomous guided vehicles that require high-precision tracking and low rolling resistance. The high-grade 95 Shore A polyurethane ensures consistent energy efficiency for battery-powered systems, while the non-marking properties keep warehouse floors pristine for optical sensor navigation.

Heavy-Duty Manufacturing & Assembly: Ideal for transfer carts moving raw materials or sub-assemblies across factory floors. These wheels handle high static loads (when equipment is parked for long periods) without developing "flat spots," ensuring the equipment remains ready for immediate, smooth operation.

Precision Machining Environments: For large-scale precision machinery that requires stable, vibration-dampened transport. The elastomer tread absorbs microscopic floor irregularities, protecting delicate electronic components and alignment accuracy of the machinery during transit.

Industrial Warehousing & Distribution: Built to withstand the rigors of multi-shift, high-frequency operations. From heavy-duty warehouse trailers navigating complex aisles to high-rack order pickers, our wheels provide the reliability required to minimize downtime and maintenance costs associated with premature wheel failure.

Customization Support

We understand that every industrial environment has unique requirements. We provide comprehensive customization services to ensure our wheels perform perfectly in your specific application:

Size & Fit: Custom diameters, wheel widths, and bore sizes to match your existing equipment specifications.

Hardness & Formulation: Specialized polyurethane formulations available for specific rebound or load-bearing requirements.

Finish & Coating: For cores requiring higher corrosion resistance (if dry conditions cannot be guaranteed), we can provide specialized powder coatings or protective paints.

Technical Consulting: Our engineering team is available to assist with load calculations and bearing selections to ensure safety and efficiency.

Ready to upgrade your equipment’s performance? Whether you are dealing with ultra-heavy loads or looking for a durable, floor-friendly solution, our team is here to help. Contact us.