
Industrial Polyurethane-Tyred Iron Centred Wheels

Title	Industrial Polyurethane-Tyred Iron Centred Wheels
Thumb	
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Description

Industrial polyurethane-tyred wheels are widely used across material handling logistics. Overview to help you understand performance, construction, selection and maintenance.



What is a polyurethane wheel? Polyurethane wheel is a heavy-duty wheel that can be applied to metal casing in place, vulcanization, or adhesive bonding.

Why use Polyurethane for Heavy-duty Wheels?

1. Abrasion resistance: PU outlasts natural rubber and many plastics in abrasive environments.

2. Load capacity and resilience: Polyurethane supports high static and dynamic loads with lower deformation than rubber at comparable hardness.

2. Shock and noise reduction: Effective vibration damping and quieter operation than metal rollers.

4. Floor marking (depending on formulation): Reduce floor damage and provide good traction without marking.

5. Chemical and heat resistance: Tailored formulations resist oils, greases and some chemicals; high-temperature grades are available.

Typical Properties and Specs

Hardness: commonly 70A–95A Shore (softer for ride/floor protection, harder for abrasion needs; heavy loads). Choose hardness to balance floor protection versus load/abrasion.

1. Density: $\sim 1.1\text{--}1.3\text{ g/cm}^3$ (varies by formulation).

2. Temperature range: standard -20°C to $+80^\circ\text{C}$; specialized grades up to $\sim 120^\circ\text{C}$.

3. Tear strength: varies by compound; heavy-duty grades optimized for high tear strength and low abrasion.

4. Load capacity: highly dependent on wheel diameter, tread width, hardness, and construction—manufacturer load charts. A few hundred kilograms to several tonnes per wheel.

Conclusion and Recommendation

For heavy-duty industrial applications where abrasion resistance, load capacity, noise reduction, and maintenance are key, polyurethane rollers are the optimal choice. Regular inspections and maintenance will maximize service life and safety. Manufacturer's regular