

TECHNICAL REFERENCE · PRINT & KEEP

Outdoor Casters: UV, Weather & Terrain Spec

One-page quick reference · Full engineering guide + live tools at the QR codes below

Quick answer. Outdoor casters fail from UV degradation, corrosion, and terrain shock. Standard indoor casters last 3 to 12 months outside; a proper outdoor spec runs 4 to 7 years. Spec UV-stabilized polyurethane or EPDM rubber wheels (5 to 8 year sun life), hot-dip galvanized or stainless rigs, sealed bearings, and pneumatic tires for uneven terrain.

UV and Weather Degradation of Wheels

Wheel Compound	UV Service Life (Direct Sun)	Rain/Snow Tolerance	Best Use
UV-stabilized polyurethane	5-7 years	Excellent	Commercial outdoor equipment
EPDM rubber	5-8 years	Excellent	Grounds/facility carts
Pneumatic rubber tire	3-5 years	Excellent	Uneven terrain
Standard polyurethane	1-2 years	Good	Not recommended outdoor
Natural rubber	1-3 years	Fair	Avoid for sustained outdoor
Cast iron/steel	10+ years (rust)	Surface rust, still functions	Heavy industrial outdoor

Terrain and Pneumatic vs Solid Tires

Terrain	Best Tire	Typical Diameter	Notes
Sealed parking lot	Solid UV urethane	5"-8"	Smooth surface; solid is fine
Pavement with cracks	Semi-pneumatic	8"-10"	Absorbs 1/2"-1" cracks
Gravel / packed dirt	Pneumatic tire	10"-16"	Diameter overcomes loose surface
Curbs and uneven	Large pneumatic	12"-16"	Diameter 3x curb height
Snow/ice	Rubber with tread	8"-12"	Traction compound + tread
Grass / soft ground	Large pneumatic	10"-16"	Wide tire reduces sinking



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