TECHNICAL REFERENCE · PRINT & KEEP

Chemical Resistance for Casters Sizing & Spec

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

Quick answer. Caster chemical resistance is material specific: polyurethane handles oils and mild solvents, phenolic handles ketones and caustics, and glass-filled nylon spans the widest chemical range, including strong acids below pH 2. Stainless rigs are required for washdown and pharma. Pair the wheel with the correct seal: nitrile for oils, Viton for acids, PTFE for aggressive solvents.

Wheel Chemistry Compatibility Matrix

Chemical Class	Polyurethane	Phenolic	Glass-filled Nylon	Cast Iron
Petroleum oils	Good	Good	Good	Good
Mild acids (pH 3-6)	Fair	Good	Good	Poor
Strong acids (pH under 2)	Poor	Fair	Good	Poor
Caustics (pH 10-14)	Poor	Good	Good	Good
Alcohols	Good	Good	Good	Good
Ketones / MEK / acetone	Poor	Good	Fair	Good
Chlorinated solvents	Poor	Fair	Fair	Good
Salt spray	Good	Good	Good	Poor (unless coated)

Washdown Applications: Daily Hosing and Chemical Wash

Environment	Rig	Wheel	Bearing Seal	Grease
Dairy washdown	304 SS	Polyurethane	Viton	NSF H1
Meat processing	304 SS	Phenolic	Viton	NSF H1 high-temp
Pharma cleanroom	316 SS electropolished	Glass-filled nylon	PTFE	NSF H1
Chemical wash	316 SS	Phenolic	PTFE	NSF H1 or specialty
Brewery / beverage	304 SS	Polyurethane	Viton	NSF H1

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