

Master Comparison Table: Surface Preparation Blasting Media

Blasting Media Type	Source/Composition	Hardness (Mohs / HRC)	Specific Gravity (g/cm³)	Primary Action	Best Applications / Substrates
Garnet	Natural Mineral	7.5 – 8.0 Mohs	3.8 – 4.3	Cutting / Etching	Steel, aluminum, concrete, heavy rust, marine fouling, mill scale stripping.
Aluminum Oxide	Synthetic Mineral	9.0 Mohs	3.9 – 4.1	Highly Aggressive Cutting	Hardened alloys, aerospace maintenance, thick epoxies, powder coat prep.
Crushed Glass	100% Recycled Glass	5.5 – 6.0 Mohs	2.4 – 2.5	Shearing / Wiping	Automotive body panels, log homes, graffiti removal, historical restoration.
Steel Grit	Crushed Hardened Shot	40 – 65 HRC	7.4 – 7.8	Aggressive Chiseled Etching	Structural steel fabrication, automated wheel blast rooms, heavy descaling.
Steel Shot	Molten Cast Steel	40 – 51 HRC	7.4 – 7.8	Peening / Pounding	Shot peening, strengthening aerospace parts, polishing foundry castings.
Silicon Carbide	Synthetic Crystal	9.5 Mohs	3.2	Ultra-Fast Precision Micro-Etching	Hardened steels, semiconductor parts, electronics, glass engraving.
Coal Slag	Power Plant Byproduct	6.0 – 7.0 Mohs	2.7	Fast Industrial Cutting	Outdoor open blasting, bridges, massive ship hulls, construction steel.
Copper Slag	Copper Smelting Byproduct	7.0 – 7.5 Mohs	3.5 – 3.8	Heavy High-Mass Impact	Marine shipyards, oil refineries, pipelines, heavy-duty marine epoxies.
Nickel Slag	Nickel Smelting Byproduct	7.0 Mohs	3.5	High-Impact Slicing	Heavy fabrication shops, storage tanks, refinery infrastructure maintenance.
Walnut Shells	Crushed Organic Shells	3.0 – 4.0 Mohs	1.2 – 1.4	Gentle Micro-Scraping	Engine components, aircraft skin paint stripping, electronics deflashing.
Corn Cob	Organic Cob Interior	2.0 – 4.5 Mohs	1.0 – 1.2	Absorbent Scrubbing	Log homes, wood decks, absorbing industrial oils/grease, historic wood.

Glass Beads	Soda-Lime Glass Spheres	5.5 – 6.0 Mohs	2.5	Spherical Peening	Satin/matte finishing on aluminum/stainless steel, precision deburring.
Plastic Abrasive	Cured Thermoset Resins	3.0 – 4.0 Mohs	1.4 – 1.5	Angular Paint Scraping	Military aircraft maintenance, composite structures, thin-gauge automotive panels.
Soda Bicarbonate	Sodium Bicarbonate Crystals	2.5 Mohs	2.2	Friable Coating Disruption	Fire damage/soot cleanup, chrome, glass, food processing equipment.
Pumice	Volcanic Porous Glass	5.5 – 6.0 Mohs	2.2 – 2.4	Lightweight Scrubbing	Printed circuit boards, plastic injection molds, garment denim distressing.
Staurolite	Natural Silicate Sand	7.0 Mohs	3.6 – 3.7	Low-Dust Wiping	New structural steel plates, piping fabrications, storage tanks.
Olive Pits	Crushed Organic Pits	3.0 – 4.0 Mohs	1.3 – 1.5	Scratch-Free Scrubbing	Soft metal detailing, plastic deflashing, architectural masonry cleaning.