BLASTING ABRASIVES

for dry or wet abrasive blasting

silica sand

garnet

crushed glass

mineral sands

coal slag

glass beads

plastic

walnut
8 ABRASIVES COMPARED

The following data is intended for orientation purposes only. These are approximations of general product categories. Specific products vary significantly. Check the manufacturer’s data sheets for the most current and accurate information.

Depth profile estimates are based on mild steel at 90-100 psi, nozzle at 18” at a 110 degree angle using a Geoblaster GB 600 wet abrasive blaster.
1. **SILICA SAND**

Silica sand is the original blasting abrasive, but is **no longer recommended for blasting** applications due to the occupational hazard silicosis. It is included here for comparative purposes only.

- **Mesh sizes**: 6-270
- **Hardness**: 5-6 MOHS
- **Density**: 2.65 SG
- **Shape**: Rounded
- **Cost**: €
2. **GARNET**

Garnet is a gemstone with excellent naturally abrasive properties. This hard abrasive is **fast-cutting, low-dust producing** and **low-consuming**, excellent for removing tough coatings, paint, rust and mill scale from steel. Garnet is a good general outdoor surface preparation abrasive, permitting precise control.

- **Mesh sizes**: 30-120
- **Hardness**: 7-7.5 MOHS
- **Density**: 3.5-4.3 SG
- **Shape**: Subangular
- **Cost**: €€€
## 2. GARNET

Depth profiles for garnet (for steel)

<table>
<thead>
<tr>
<th>Mesh Size</th>
<th>Max Profile</th>
<th>Recommended Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/60</td>
<td>2.5 - 4.7 mil</td>
<td>Steel, Concrete, Asphalt, Aluminium</td>
</tr>
<tr>
<td>80</td>
<td>1.5 - 3.6 mil</td>
<td>Steel, Concrete, Asphalt, Aluminium</td>
</tr>
<tr>
<td>120</td>
<td>0.5 - 2.0 mil</td>
<td>Steel, Concrete, Asphalt, Aluminium, Fiberglass, Brick, Boat Bottom Paint</td>
</tr>
<tr>
<td>150</td>
<td>0.5 - 1.5 mil</td>
<td>Steel, Concrete, Asphalt, Aluminium, Fiberglass, Brick, Boat Bottom Paint</td>
</tr>
</tbody>
</table>
3. **CRUSHED GLASS**

Made from 100% recycled glass, this abrasive creates a sharp profile and is useful in removing a **variety of coatings**. It produces a **whiter, cleaner finish** than slags and mineral sands. Crushed glass is the abrasive of choice for preparing **concrete**.

- **Mesh sizes:** 30-400
- **Hardness:** 5.5-7 MOHS
- **Density:** 2.5 SG
- **Shape:** Angular
- **Cost:** €
## 3. Crushed Glass

Depth profiles for crushed glass (for steel)

<table>
<thead>
<tr>
<th>Mesh Size</th>
<th>Max Profile</th>
<th>Recommended Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/30</td>
<td>2.5 - 4.5 mil</td>
<td>Steel, Concrete, Asphalt, Aluminum, Fiberglass, Brick</td>
</tr>
<tr>
<td>30/70</td>
<td>2.0 - 3.5 mil</td>
<td>Steel, Concrete, Asphalt, Aluminum, Fiberglass, Brick, Boat Bottom Paint</td>
</tr>
<tr>
<td>50/100</td>
<td>0.5 - 2.5 mil</td>
<td>Steel, Concrete, Asphalt, Aluminum, Fiberglass, Brick, Boat Bottom Paint</td>
</tr>
</tbody>
</table>
Mineral sands, like olivine and staurolite, are fast-cutting, low dust abrasives that contain less than 5% silica per volume. Good for removal of rust, paint, weathered coatings and mill scale.

- Mesh sizes: 20-120
- Hardness: 6.5-7.5 MOHS
- Density: 3.3-3.6 SG
- Shape: Angular to subangular (olivine), subangular to rounded (staurolite)
- Cost: €€
5. COAL SLAG

Coal slag is by-product of coal-burning power plants. It is a relatively cheap, low dusting abrasive with low free silica, but is not widely used because the high amount of fine particles mud up on the surface. Typical applications include the removal of rust, paint, weathered coatings and scale from steel and concrete.

- Mesh sizes: 12-80
- Hardness: 6-7.5 MOHS
- Density: 2.7 SG
- Shape: Angular
- Cost: €
Glass beads are used for general cleaning, peening and cosmetic finishing of sensitive metal surfaces; removing automotive paint; brightening grout and removing fungus and calcium deposits from tile; polishing cast iron, stainless steel, aluminium, propellers and turbine blades.

- Mesh sizes: 30-325
- Hardness: 5.5-6 MOHS
- Density: 2.5 SG
- Shape: Rounded
- Cost: €€€
Plastic is a soft, light abrasive that leaves no anchor pattern, good for stripping paint and mold from sensitive surfaces, deburring and deflashing aluminium, brass, plastics and fiberglass. Considered a less-hazardous alternative to chemical stripping, and faster than hand-stripping.

- Mesh sizes: 12-80
- Hardness: 3-4 MOHS
- Density: 1.5 SG
- Shape: Angular
- Cost: €€€
Nut shells and other organic materials **don’t cause anchor patterns**, making them useful for cleaning dirt, grease, oil, carbon, scale, burrs and paint **without changing the underlying substrate**. Useful for cleaning auto body panels, electric motors and aircraft engines, dies and molds, polishing watches and jewelry, and restoring antique surfaces.

- **Mesh sizes:** 6-100
- **Hardness:** 3-4 MOHS
- **Density:** 1.2-1.35 SG
- **Shape:** Subangular
- **Cost:** €€€
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