

## **GARNET (granat sand) FOR SURFACE TREATMENT**

**Garnet (granat sand)** is a hard silicate mineral quarried in several parts of the world, including Australia, India, the USA and South Africa.

There are some eight different forms of garnet but the one most commonly used for abrasive blasting is almandite garnet which is an iron-based material. It is very heavy, very hard, very abrasive and durable. Specific gravity and durability are critical factors affecting both, blasting and recycling performance. Because of these properties, garnet is capable of very high performance when used as a single pass (disposable) or a recycled abrasive. Garnet is a cost effective alternative to silica sand, mineral slags and steel grits and shot because of its low consumption (kg/m<sup>2</sup>) and high productivity(m<sup>2</sup>/hr).

Garnet is free of any heavy metals or toxic components and meets all Occupational Health and Safety requirements.

Much of the garnet used for abrasive blasting is uncrushed and alluvial, meaning it was formed on a water source. The resulting abrasive particles are sub-rounded to sub-angular in shape. Because alluvial particles are uncrushed, they contain few stress fractures and resist breakdown during blasting.

**Garnet** is free of metallic iron, making it suitable for all areas of surface preparation including stainless steel, anti-magnetic steel and all special alloys and has several benefits, including the following: fast cutting, low dusting (compared to coal slag or silica sand), recyclable (it can be recycled 5 -10 times depending on the application because of its superior toughness and low friability), low risk to health, with no detectable amounts of heavy metals and low free silica.

Special fine grades of garnet are also available for aluminium, turbine blades, fiberglass and other specialist surface preparation applications.



**Garnet** is well suited to most fields of the surface preparation industry with and without subsequent coatings, in particular:

- ◆ Shipyards, new building, conversion and repair, including antimagnetic and other special steels, as well as aluminium superstructures and aluminium and fiberglass hulls
- ◆ Oil and petrochemical industry maintenance, work in refineries and storage tanks as well as on-shore and off-shore installations
- ◆ Construction and maintenance of chemical plants, nuclear and fossil power stations, gas and sewerage plants, desalination and industrial plants
- ◆ Bridge and weir locks
- ◆ Building industry and structural steel
- ◆ Construction and maintenance of containers and tanks, tank trucks and rail wagon tanks as well as wagons and coaches
- ◆ High pressure water-jet cutting, stone building facades and monuments
- ◆ Non-ferrous surfaces and turbine blades (special mesh)
- ◆ Stainless Steel

Technical data:

<b>Specific density</b>	4100 kg/m <sup>3</sup>
<b>Bulk density</b>	2085 - 2325 kg/m <sup>3</sup>
<b>Hardness</b>	7,5 - 8 MOHS
<b>Melting point</b>	1250 °C

Standard grain sizes:

<b>Grain size in mm:</b>
0,10 - 0,18
0,18 - 0,36
0,20 - 0,60
0,50 - 1,00

Special grain sizes on request

Example of sandblasting with garnet:



Garnet is supplied in 25-kilogram paper bags, 2 tons on pallet, protected with foil.