

## Product Description and Technical Data:

Garnet is derived from mined Almandine mineral deposits. Almandine is the heaviest and hardest of all the garnet types in the garnet family group, resulting in an ideal abrasive grain for blasting applications. It can withstand high cutting speeds and has low dust emission levels. Garnet can be recycled and being a natural mineral, it does not cause pollution to the environment.

Once extracted, the raw material is processed to remove chlorides and sulfates, magnetically screened to remove ferrous particulate, and finally screened to the desired size range.



Being an inert, non-toxic mineral, containing less than 0.1% free silica, garnet is an environmentally safe, user friendly alternative, to silica sand and other expendable abrasive.

Garnet particles are sub-angular in shape resulting in extremely fast cutting rates and low abrasive consumption. The high specific gravity of the abrasive grains, and the low breakdown rate, results in significantly reduced dust levels, thus ensuring good operator visibility, and less risk to personnel or environmental contamination in surrounding areas. The low consumption rate and the recyclability of the abrasive for up to 5 times, also ensures the volume of waste generated for disposal is minimised. Being a naturally occurring mineral, garnet is also non-pollutant to the environment.

Blast cleaning production rates using Garnet are greatly increased when compared to other expendable abrasives. This factor, along with the reduced amount of abrasive consumed, can lead to significant cost savings per square meter blasted, and often results in Garnet being the most cost effective abrasive available for the blasting project.

Garnet is processed under stringent quality control regulations to ensure the size and distribution of particles in the abrasive mix is maintained at the correct proportion. This ensures an accurate, consistent surface profile is maintained. A surface cleanliness of Class Sa3, even on heavily pitted and corroded steel, is easily achievable with garnet and abrasive embedment into the surface is minimal.

Containing minimal ferrous particles garnet can be utilised to blast corrosion resistant steels and non-ferrous products without the risk of ferrous contamination to the surface.

Garnet is also utilised as a cutting media in water jet cutting, and as a filtration media.



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## GARNET TECHNICAL SPECIFICATION

APPEARANCE	: Pinkish, free flowing grit
SPECIFIC GRAVITY	: Approx. 4.1 g/cm <sup>3</sup>
SOLUBILITY IN WATER	: Insoluble
HARDNESS (Mohs)	: 8

### CHEMICAL COMPOSITION

Alumina (as Al <sub>2</sub> O <sub>3</sub> )	: 21.0%
Iron (as Fe <sub>2</sub> O <sub>3</sub> )	: 31.0%
Silica (as SiO <sub>2</sub> )	: 35.0%
Magnesium (as MgO)	: 8.0%
Calcium (as CaO)	: 1.5%
Titanium (as TiO <sub>2</sub> )	: 1.0%
Lead (as PbO <sub>2</sub> )	: 0.05%
Manganese (as MnO)	: 0.5%
Chloride Content	: Less than 50 ppm

*Note: The above Chemical Composition readings serve as a guideline only.*

### STANDARD SIZES AVAILABLE:

Grade Size	Nominal Size	Normal Application	Average Anchor Pattern Range
G 2040	0.425 – 0.850mm, +/-8%	Removal of rusting mill scales & removal of old coatings	40 – 80 μm
G 3060	0.25 – 0.60mm, +/-8%	Removal Of Rusting Mill Scales & Preparation of New Steel	30 – 60 μm

*Note: Anchor Pattern is affected by other factors other than the abrasive. E.g. nozzle air pressure, surface distance, work surface hardness & degree of rusting.*

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