



**GMA GARNET GROUP**

*when your abrasive matters!*

# **GMA GARNET™**

BLAST CLEANING ABRASIVE



Superior Abrasive Cleaning Performance

Totally Natural Almandine Garnet

Recyclable, Environment & Health Friendly

Responsible Disposal at GMA's Recycling Facilities

# Superior Performance Abrasive



GMA Garnet™ consists of totally natural almandine garnet known for its natural hardness, durability and abrasive characteristics. It is free of any heavy metals or toxic components and meets all Occupational Health & Safety requirements.

GMA Garnet™ provides a perfect symbiosis of grain size, density and hardness/durability. This ensures optimum abrasive efficiency in terms of lowest abrasive consumption and highest production rates at safe environmental and health conditions.

It is a cost effective alternative to silica sand, mineral slags and steel grits and shot because of its low consumption ( $\text{kg/m}^2$ ) and high productivity ( $\text{m}^2/\text{hr}$ ) and can be recycled 5 -10 times depending on the application due to its superior toughness and low friability.

GMA Garnet™ is mined and processed by the world's largest producer of industrial garnet situated in Western Australia. It is processed to the highest standard of quality in respect of mineral purity and meets the stringent requirements of ISO 11126-10:2000 for chloride and free silica content.

It is free of metallic iron, making it suitable for all areas of surface preparation including stainless steel, anti-magnetic steel and all special alloys.

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

GMA Garnet™ is certified with ISO 9001:2000 Quality Management System, demonstrating our commitment to quality and customer satisfaction, as well as continual improvement of our quality systems. Furthermore, GMA Garnet™ is certified with ISO 14001 for Environment Management Systems, demonstrating our commitment to producing an environmentally-friendly garnet abrasive delivered in a socially responsible manner.

GMA Garnet™ is used and approved by major oil companies, shipyards and other large and small clients around the world and approved by major paint manufacturers. It is available through an extensive network of dedicated and professional distributors with strategic stockpiles located around the world.

GMA Garnet™ complies with the requirements of:

Australian Standards  
European Standards  
Other international standards  
Military specifications worldwide  
Californian Air Resources Board (CARB)

Oil & Gas companies worldwide  
HSE Authorities worldwide  
U.S. Navy specification MIL-A-22262 B(SH)  
ISO 11126-10:2000 (silica & chlorides)  
All major protective coatings manufacturers



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## Surface Preparation Applications

GMA 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 fibreglass hulls
- ♦ Oil & 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
- ♦ Construction and maintenance of containers and tanks, tank trucks and rail tanks as well as wagons and coaches
- ♦ Bridge and weir locks, stainless steel
- ♦ Building industry and structural steel
- ♦ Stone building facades and monuments
- ♦ Non-ferrous surfaces and turbine blades (special mesh)

## Surface Cleanliness

The ability of a paint system to adhere to the substrate and resist corrosion is determined by the cleanliness and profile of the substrate. Use of GMA Garnet™ as recommended provides the highest quality because:

**Even Profile** The shape and size of GMA Garnet™ grains ensure an even profile of 50 - 75 microns (controlled by blast pressure and air flow). This ensures maximum surface area plus maximum number of peaks (reactive sites) for enhanced bonding. The use of GMA Garnet™ totally eliminates rogue peaks and troughs leading to a direct reduction in the amount of paint needed.

**Low Dust** GMA Garnet™ lowers dust emissions and the incidence of dust on the workpiece, meaning reduced cleaning after blasting and less contamination of the work area.

**Improved Surface Cleanliness** There is almost no embedment on the substrate. The scouring action of the natural GMA Garnet™ grains removes all salts, corrosion and contaminants from within deeply corroded and pitted areas. It meets all international specifications for chlorides and silica (ISO 11126-10:2000).

## Advantages Over Other Abrasives

GMA Garnet™ is a totally natural product, chemically inert and free of any toxic metals or crystalline silica. In practice, the use of GMA Garnet™ results in:

### Cost-effective Blast Cleaning

You can quickly calculate the cost benefits of GMA Garnet™ over other abrasives by using our Abrasive Blasting Calculator.

Visit : [www.garnetsales.com/gmacalc](http://www.garnetsales.com/gmacalc)

### Low Dusting

Blast cleaning with GMA Garnet™ means significantly lower dust emissions because of the incoherent toughness of the material and rapid settling due to its high specific gravity. This ensures minimum disruption and danger to adjoining operations and improved operator visibility and safety.

### High Productivity

GMA Garnet™ is very fast cutting due to the large number, speed and shape of grains impacting on the surface. The acceleration and speed of a grain in an air stream is a function of the inertia and hence the size of the grain. Smaller grains accelerate much more readily, thus imparting higher impact energy to the surfaces resulting in a superior cleaning rate - usually twice the m<sup>2</sup>/hr of conventional abrasives.

### Low Consumption

Its unique grain size ensures that there are many more active grains impacting on the surface resulting in greatly reduced abrasive consumption.

### Superior Surface Quality

GMA Garnet™ grains clean deep into the cavities and pitted areas down to the bare metal, thoroughly removing all rust, soluble salts and other contaminations. The blasted surface is free of embedments and free of rogue peaks and troughs. SA3 White Metal is effortlessly achieved. A surface profile of 50 - 75 microns is easily achieved along with a much greater number of peaks per unit area.

### Improved Health & Safety

It is non-toxic. There is no silicosis hazard, leachable heavy metals or radioactive contaminants. Lower consumption and recyclability result in greatly reduced disposal volumes of non-toxic product.

### Recycling

It is suitable for multiple usage. It can be recycled 5 times or more without losing its superior cutting ability. Special GMA Garnet™ recycling systems are available upon request. All of which adds up to natural, clean and cost-effective blasting.

## Maximising the Performance of GMA Garnet™

GMA Garnet™ does not need costly special equipment. To maximise the performance of your GMA Garnet™, simply give attention to:

### Control Of Abrasive Flow Rate

As less than half the amount of GMA Garnet™ is needed to clean a unit area and as it is also dense and free flowing, the normal abrasive flow and valve setting must be cut well back. This can be achieved by the use of a good quality abrasive valve or by a simple GMA abrasive ball valve with fixed orifice size matched to the size of the nozzle.

### Adequate Pressure, Volume & Quality Of Air

This is achieved by ensuring that the compressor, couplings and the diameter of hoses used are able to supply the required minimum pressure at, and airflow through, the nozzle. High pressure with maximum airflow consistent with pressure and nozzle diameter give maximum productivity, particularly on heavier coatings. It is recommended that air pressure at the nozzle should not drop below 100 psi. The air must be dry and free of oil. 'I' whip hoses severely restrict air flow through and pressure at the nozzle thereby appreciably reducing productivity.

### Venturi Nozzles

The use of Long Venturi Blast Nozzles is strongly recommended as these further enhance the velocity of the GMA Garnet™ grains thereby increasing exponentially their impact energy on the steel surface. Nozzles should be checked regularly for wear and replaced as required in order to avoid pressure drops and abrasive wastage.

### Recycling

Normal use of GMA Garnet™ will not lead to excessive material breakdown of the tough, dense grains. Independent tests confirm that the average level of breakdown will result in approximately 10-15% of the abrasive being removed by a standard recycling unit. Recycling units specially designed to handle GMA Garnet™ are available through your GMA distributor. The number of recycles obtained will be determined by the blast equipment and its setting, the coating to be removed, the profile required and the ability to constantly add new GMA Garnet™ to the blasting cycle. Consult your GMA distributor.

**Best efficiency is achieved with good controlled blasting practice  
- not expensive equipment.**

For more information, write to  
[sales@garnetsales.com](mailto:sales@garnetsales.com) or visit [www.garnetsales.com](http://www.garnetsales.com)

## Packaging

- ♦ 25kg (55lb) paper bags shrink wrapped onto a 1000kg (2200lb) or 2000kg (4400lb) pallet.
- ♦ Loose bulk form in 1000kg (2200lb) or 2000kg (4400lbs) bulk bag with an inner plastic liner on a pallet.

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