

# The Surface Finishing Equipment Group Ltd



Surface Finishing  
Equipment Group

## TECHNICAL & MATERIAL

### SAFETY DATA SHEET

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## GARNET - AUSTRALIAN

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Garnet is a high performance, maintenance grade abrasive that delivers efficient and cost-effective blast cleaning for surfaces. It is used in dry blast cleaning, wet blast cleaning, and waterjet cutting. Known for its hardness and durability, it is a chemically inert, natural mineral. Where conditions allow recycling the material can be used as a cheaper alternative to Aluminium Oxide, Chilled Iron or Steel Grit.

The product is dominantly garnet (almandine variety) which is a Non-Hazardous substance. Traces of dust in the unused product are from calcium carbonate which is also Non-Hazardous.

### COMPOSITION INFORMATION

This material is a natural mixture of almandine garnet and other trace minerals

Chemical Identity	Common Name	CAS Number	Proportion (weight %)
Fe <sub>3</sub> Al <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub>	Almandine Garnet	1302-62-1	Greater than 97%
FeTiO <sub>3</sub>	Ilmenite	103170-28-1	Less than 2.0%
CaCO <sub>3</sub>	Calcium Carbonate	471-34-1	Less than 1.5%
ZrSiO <sub>4</sub>	Zircon	149040-68-2	Less than 0.1%
SiO <sub>2</sub>	Crystalline Silica	14808-60-7	Less than 0.1%

Packaging :

25 kilo sacks loaded on 1 Tonne pallets and shrink wrapped. Equivalent to International Standard ISO11126 and BS 7079.



## HEALTH AND SAFETY DATA SHEET

### GARNET - AUSTRALIAN

**Product and Reference:** Garnet Natural Mineral

**Date of Issue:** 07/10/2016

#### 1. IDENTIFICATION OF THE PREPARATION AND COMPANY

**Company:** The Surface Finishing Equipment Group Ltd

**Product Code:** Garnet – Australian

**Intended Use:** Abrasive blasting media.

**Distributor name & address:** The Surface Finishing Equipment Group Ltd

Comprising :

Hogg Blasting & Finishing Equipment Ltd  
Unit 10 Armstrong Road, Armstrong Industrial Estate, Washington,  
Tyne & Wear, United Kingdom, NE37 1PR.  
Tel. (0191) 415 3030 Fax (0191) 415 5345

AND

Abraclean Ltd  
Ann Street, Stockport, Cheshire. SK5 7PP  
Tel: (0161) 480 8087 Fax: (0161) 480 4424

#### 2. HAZARD IDENTIFICATION

GHS Classification of the substance: **Not Classified**

GHS label elements, including precautionary statements:

**The product is dominantly garnet (almandine variety) which is a Non-Hazardous substance.** Traces of dust in the unused product are from calcium carbonate which is also Non-Hazardous.

Main Hazards Dust from handling operations

Do not breathe dust liberated from used / blasted product. May have become contaminated by use.

Health Effects - Eyes	Dust may cause slight transient irritation.
Health Effects – Skin	Repeated or prolonged contact may produce irritation.
Health Effects - Ingestion	None known
Health Effects - Inhalation	Exposure to dust may have the following effects:- irritation of nose, throat and respiratory tract,

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### 3. COMPOSITION / INFORMATION ON COMPONENTS

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### 4. FIRST AID MEASURES

No acute or chronic health effects known in workers arising exposure to this product.

#### Description of first aid measures:

**Ingestion:** Non-toxic. There are no known health effects resulting from accidental ingestion of small amounts that may occur during normal handling. Ingestions of large amounts may cause abdominal discomfort due to abrasiveness. Seek medical attention if symptoms develop.

**Eye contact:** Particle and dust exposure may cause eye irritation due to abrasiveness. Flush with plenty of sterile water for at least 15 minutes or until particles are removed. Seek medical attention if irritation or soreness persists.

**Skin contact:** There are no known health effects from skin contact that may occur during normal handling. Seek medical attention if symptoms develop. Contact with material under pressure will damage skin by abrasion. Clean and dress any open wounds and seek medical attention.

**Inhalation:** Exposure to dust created by use as a blast cleaning media may cause throat and lung irritation, coughing or shortness of breath. Move to fresh air and blow nose to remove particulates from nasal passages. Seek medical attention if symptoms persist.

#### Most important symptoms and effects, both acute and delayed.

Ingestion	No specific symptoms noted.
Eye contact	No specific symptoms noted.
Skin contact	No specific symptoms noted.
Inhalation	No specific symptoms noted.

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## 5. FIRE FIGHTING MEASURES

**This product is non-flammable and does not support combustion.**

Extinguishing media:	Non-flammable. Use media suitable for the surrounding material
Specific hazards arising from the chemical	None known
Special protective equipment and precautions:	No specific procedures given.

## 6. ACCIDENTAL RELEASE MEASURES

**No special precautions are necessary:**

Personal Precautions:	Wear safety equipment for normal handling
Environment Protection:	The material should not be dumped in nature but collected and disposed of in accordance with local, state or federal guidelines.
Cleaning Up Methods:	If possible vacuum the material to avoid generating unnecessary dust, or sweep and shovel up any spillages.

## 7. HANDLING AND STORAGE

**Handling:** Avoid breathing dust and spillage whilst handling.

The Manual Handling Operations Regulations may apply to the handling of bags when carrying out assessments.

**Storage:**

The storage and use of this product is not subject to any requirements but it should be kept dry where this is important for further process use.

## 8. EXPOSURE CONTROLS /PERSONAL PROTECTION

<b>Control parameters/ Exposure Standards</b>	Crystalline Silica (quartz) respirable dust: 0.1 mg/m <sup>3</sup> TWA (time weighted average) may be exceeded when the product is used for dry blast cleaning, depending on material being blasted (respirable dust is < 7 microns particle equivalent aerodynamic diameter) Total dust (inspirable) 10 mg/m <sup>3</sup> TWA
<b>Engineering Controls</b>	Maintain ventilation and/or dust collection to reduce exposure to dust generated during handling and use. Maintain a clean and safe work environment and monitor effectiveness.
<b>Personal Protection</b>	Follow local, state or federal guidelines for the use of personal protection equipment. Blast cleaning operations should use and air fed abrasive blast hood conforming with Australian standards 1715 and 1716, and European standard EN14594:2005 such as a Nova 2000, as well as leather (or equivalent) gloves and apron when in use. Hearing protection should also be worn when blast cleaning. Wear suitable clothing. All Personal Protective Equipment, include Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pink to red coloured free flowing sand
Odour:	Odourless
pH	8.0 to 9.0
Melting Point:	Approximately 1250 °C
Flash point	Non-combustible
Evaporation rate	N/A
Flammability (solid gas)	Non-flammable
Upper/lower flammability or explosive limits	Non-combustible
Vapour Pressure	N/A
Vapour density	N/A
Specific gravity	4.1
Solubility	Insoluble
Radioactivity	Not detectable above background levels
Hardness	7.5 – 8.0 Mohs
Particle Size	Average range between 0.1 – 0.6mm depending on
Particle shape	Sub-angular
Bulk density	Approximately 2.3 t/m <sup>3</sup>
Volatile Organic Compounds content	Below detectable limits
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A

## 10. STABILITY AND REACTIVITY

Reactivity	Inert solid under normal handling and use conditions.
Chemical Stability	Stable under normal storage handling and use conditions
Possibility of hazardous reactions	None known
Conditions to avoid	None Known
Incompatible materials	None Known
Hazardous Reaction	None Known

## 11. TOXICOLOGICAL INFORMATION

### **Information on toxicological effects:**

No acute or chronic health effects known in workers arising from short or long term exposure to this product. This product does not contain toxic substances above known reportable limits.

### **Symptoms related to physical, chemical and toxicological characteristics:**

None Known

### **Delayed and immediate effects and also chronic effects from short and long term exposure:**

None known

### **Numerical measure of toxicity:**

None known

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## 12. ECOLOGICAL INFORMATION

Ecotoxicity:

This product is a naturally occurring mineral with no known ecotoxicity. It is insoluble in water and unlikely to contaminate waterways or food chains.

Persistence and degradability:	Stable and inert product which is not readily biodegradable
Bioaccumulative potential;	This product is not bioaccumulating
Mobility in soil:	Below detectable limits
Other adverse effects:	None known

## 13. DISPOSAL CONSIDERATIONS

Disposal Methods:

Follow local guidelines for disposal of inert solid waste e.g. for landfill

According to local regulations for used abrasive European Waste Code (EN 12 01 17)

Material contaminated or reduced to dust in use may need special handling and disposal. It is the responsibility of the user to undertake any evaluation classification and disposal of material after use.

## 14. TRANSPORT INFORMATION

UN Number	None allocated
UN Proper shipping name	Not classified for transportation
Transport hazard class(es)	Not classed as Dangerous under the ADG Code.
Packing Group	Not classified for transportation
Environmental hazards	Not classified as a marine pollutant. Does not meet the criteria of 2.9.3.3.1 environmentally hazardous substances (aquatic environment)
Special precautions for user	None necessary. It is recommended to keep bags closed and dry bulk loads covered to prevent dust generation and moisture incursion.
Hazchem Code	None allocated
ECCN Number	EAR99

## 15. REGULATORY INFORMATION

The information contained in this safety data sheet does not constitute the suppliers own assessment of workplace risks as required by other Health and Safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

## 16. OTHER INFORMATION

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications, and we do not accept any liability for any loss or damage, however arising, which may result directly or indirectly from the use of this information.

Further information and relevant advice can be found in:

- Control of Substances Hazardous to Health (COSHH) Regulations 2002 (2005)
- European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation)
- The Manual Handling Operations Regulations 1992 (SI 1992:2793)
- The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992-2839).