



BALAJI GROUP

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# **MATERIAL SAFETY DATA SHEET**

## **BALAJI™ GARNET SAND**

Date of Issue: February 2013

Revision 8

### **SECTION 1 - IDENTIFICATION**

Product Name : Balaji Garnet

Other Names : Garnet Sand, 20/60 Mesh, 30/60 Mesh, 50 Mesh, 60 Mesh, 80 Mesh,  
120 Mesh, 600/250 Mesh.

Recommended Use : Blast Cleaning Abrasive, Water Jet Cutting Abrasive, Water  
Filtration Media.

Supplier : Supplied By SHRI BALAJI MINERALS

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### **SECTION 2 - HAZARDS IDENTIFICATION**

**Non Dangerous** but **Hazardous** according to NOHSC: 1008(2004)

The product as supplied contains traces of quartz (crystalline silica) which when used as an abrasive can break down to respirable dust size (particles small enough to go into deep parts of the lung when breathed in). Respirable crystalline silica is a listed carcinogenic substance which may cause silicosis and cancer.

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

**Risk Phrase:** T R49 – contains crystalline silica which may cause cancer by inhalation.

**Safety Phrase:** S22 – do not breathe dust librated from used product.

### SECTION 3 - HAZARDS IDENTIFICATION

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

Chemical Name	CAS Number	Proportion (weight %)
Almandine Garnet $\text{Fe}_3\text{Al}_2(\text{SiO}_4)_3$	1302-62-1	Greater than 97%
Iimenite $\text{FeTiO}_3$	103170-20-1	Less Than 2.0%
Calcium Carbonate $\text{CaCO}_3$	471-34-1	Less Than 1.5%
Zircon $\text{ZrSiO}_4$	149040-68-2	Less Than 0.2%
Quartz $\text{SiO}_2$ (Crystalline Silica)	14808-60-7	Less Than 0.2%

### SECTION 4 – FIRST AID MEASURES

No acute or chronic health effects known in workers arising from short or long term exposure to this product. Note that crystalline silica is present at low levels and chronic exposure, by way of dust inhalation, may cause silicosis and cancer.

- Swallowed Non toxic. There are no known health affects resulting from accidental Ingestion of small amounts that may occur during normal handling. Ingestion of larger amounts may cause irritation due to abrasiveness. Seek Medical attention if symptoms develop.
- Eye Particle and dust exposure may cause eye irritation due to abrasiveness. Flush with plenty of clean water for at least 15 minutes or until particles are removed. Seek medical attention if irritation or soreness persists.
- Skin 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 wound and seek medical attention. Inhaled: 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.

It is recommended that eyewash facilities are available in the workplace.

### SECTION 5 – FIRE FIGHTING MEASURES

Flammability	: Non Flammable
Flashpoint	: Non Explosive
General Hazard	: This product is non flammable and does not support combustion
Extinguishing Media	: Use media Suitable for the material that is burning.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

No special precautions necessary. Wear safety equipment as for normal handling. If possible, vacuum the material to avoid generating unnecessary dust, otherwise, sweep any spillages.

## SECTION 7 – HANDLING AND STORAGE

No special precautions necessary. Storage areas should be ventilated and dust generation minimized when handling loose bulk product. Use good housekeeping practices to keep dust to a minimum.

## SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standard	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 (respirable dust is ≤ 7 microns particle equivalent aerodynamic diameter) <b>Total Dust (Inspirable):</b> 10 mg/m <sup>3</sup> TWA
Engineering Controls	Maintain ventilation and/or dust collection to reduce exposure to dust generated during handling, use and clean up. Maintain a clean and safe work environment and monitor effectiveness.
Personal Protection	Follow local, state or federal guidelines for the use of personal protection equipment. Blast cleaning operations should use an air fed abrasive blast hood as well as leather (or equivalent) gloves and apron when in use. Hearing protection should also be worn when blast cleaning.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Pink to red colored free flowing sand.
Odour	: Odourless.
pH	: 8.0 to 9.0
Vapour Pressure	: Not Applicable.
Boiling Point	: Not Applicable.
Melting Point	: Approximately 1250 <sup>0</sup> C
Radioactivity	: Not detectable above background levels.
Solubility in water	: Insoluble.
Specific Gravity	: 4.1
Flammability	: Non-flammable.
Hardness	: 7.5 – 8.0 Mohs
Bulk Density	: Approximately 2.3 t/m <sup>3</sup>
Particle Size	: Average range between 0.1 – 0.6mm, depending on grade.

## **SECTION 10 – STABILITY AND REACTIVITY**

Chemical Stability	: Stable and inert material under normal and anticipated storage, handling and use conditions.
Conditions to Avoid	: None Known.
Incompatible Materials	: None Known
Decomposition	: Not Applicable.
Hazardous Reactions	: None Known.

## **SECTION 11 – STABILITY AND REACTIVITY**

Note that crystalline silica is present at low levels, typically less than 0.1% and chronic exposure to crystalline silica dust through inhalation may cause silicosis and cancer.

## **SECTION 12 – ECOLOGICAL INFORMATION**

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

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

Follow local, state or federal guidelines for disposal of inert solid waste, e.g., for landfill.

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.

## **SECTION 14 – TRANSPORT INFORMATION**

No special precautions necessary. It is recommended to keep bags closed and dry bulk loads covered to prevent dust generation and moisture incursion.

Garnet is not classified as marine pollutant as it does not meet the criteria of 2.9.3.3.1 "environmentally hazardous substances (aquatic environment)".

Garnet is not listed as a hazardous good.

## **SECTION 15 – OTHER INFORMATION**

This MSDS has been prepared by SHRI BALAJI MINERALS in accordance with the National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(200300)].

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