



## MATERIAL SAFETY DATA SHEET (MSDS)

(This MSDS Complies with 29CFR 1910.1200)

### I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer/Supplier:** Universal Minerals, Inc.  
6319 Brookhill Drive, Houston, Texas 77087  
Tel: 713.797.0054 / 1.800.528.7086 Fax: 713.797.1014  
www.universalminerals.com

**Trade Names:** SharpJet Garnet, Red River Garnet, Syntex Garnet  
**Product/Chemical Name:** Garnet Abrasive Grains  
**Chemical Formula:**  $\text{Fe}_3\text{Al}_2(\text{SiO}_2)$  with Mg & Mn in partial substitution for Fe in the formula  
**CAS Number:** 1302-62-1  
**Other Designations:** Almandite, Pyrope and Spessartine Garnet  
**General Use:** Industrial; not limited to abrasives, non-skid components, water filtration

### II. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

This material is a natural mixture of almandine garnet -  $\text{Fe}_3\text{Al}_2(\text{SiO}_2)$  with Mg and Mn in partial substitution for Fe in the formula, and other trace minerals. The following substances are present and regulated by OSHA or ACGIH limits:

Substance	WT. %	ACGIH TLV TWA	CAS NUMBER
Nuisance Dust	n/a	15 mg/m <sup>3</sup>	n/a
Respirable Dust	n/a	5 mg/m <sup>3</sup>	n/a
Crystalline Silica	<0.5%	0.10 mg/m <sup>3</sup>	n/a

### III. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Reddish brown to pink grains  
**Particle Shape:** Sub-rounded to angular  
**Odor:** Not applicable  
**Water Solubility:** Insoluble  
**Hardness:** 7.5 – 8.0 Mohs

**Avg. Bulk Density:** 2.4g/cm<sup>3</sup> (150 lbs/ft<sup>3</sup>)  
**Specific Gravity:** 4.1 g/cm<sup>3</sup> (H<sub>2</sub>O = 1.0)  
**Melting Point:** 1,250°C (2,282°F)  
**Reactivity:** Inert

### IV. SECTION 4 – FIRE AND EXPLOSION HAZARD

**Flash Point:** Material is a non-flammable solid  
**Flash Point Method:** Not applicable  
**Flammable Limits:** Not applicable  
**LEL:** Not applicable  
**UEL:** Not applicable  
**Flammability Classification:** Not applicable

NFPA Rating



**Extinguishing Media:** Use extinguishing media appropriate for the surrounding fire.  
**Special Fire Fighting Procedures:** As appropriate to surrounding, fire fighters should be protected from nuisance dust.  
**Unusual Fire and Explosion Hazards:** None

## V. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Polymerization:</b>	Will not occur
<b>Chemical Incompatibilities:</b>	None known
<b>Hazardous Decomposition Products:</b>	None known

**Almandine garnet is an inert, stable solid needing no special handling in normal use.**

## VI. HEALTH HAZARD INFORMATION

<b>Health Hazards (acute and chronic):</b>	None known. Use care to limit possible exposure to nuisance dust during blast cleaning.
<b>Carcinogenicity:</b>	Crystalline silica (quartz) – contains less than 0.5%.
<b>Inhalation:</b>	Dust may cause irritation of the nasal and respiratory tract.
<b>Skin:</b>	May cause abrasions.
<b>Ingestion:</b>	None known; however, ingestion is not recommended.
<b>Medical Conditions Generally Aggravated by Exposure:</b>	Chronic bronchitis, emphysema and other lung diseases may be aggravated by exposure to nuisance dust.

### EMERGENCY FIRST AID PROCEDURES

<b>Inhalation:</b>	Remove to fresh air; administer oxygen if breathing is difficult.
<b>Eye Contact:</b>	Wash eyes with water to flush out dust particles; obtain medical assistance if needed.
<b>Skin Contact:</b>	Wash affected area with soap and water.
<b>Ingestion:</b>	Obtain first aid or medical assistance, if needed.

## VII. PRECAUTIONS FOR SAFE HANDLING AND USE

### SPILL / LEAK PROCEDURES

<b>Spills:</b>	Sweep or vacuum material for disposal or recovery.
<b>Disposal:</b>	Follow local, state and federal guidelines for disposal of inert solid waste. <b>MATERIAL CONTAMINATED IN USE MAY REQUIRE SPECIAL HANDLING.</b>

<b>Handling / Storage Precautions:</b>	None – use good housekeeping practices to reduce dust; use approved hand, eye and respiratory protection when handling.
<b>Other Precautions:</b>	Use materials only for the purposes intended, and incorporate methods of dust Control to maintain airborne dust within federal or local TLV limits.

## VIII. CONTROL MEASURES

<b>Ventilation:</b>	Provide sufficient local exhaust or mechanical (general) ventilation to maintain dust exposure limit below threshold limit value (TLV).
<b>Respiratory Protection:</b>	NIOSH/MSHA approved filters and air supplied hoods / helmets for blasters.
<b>Eye Protection:</b>	Safety glasses with side shields, goggles or face shield.
<b>Protective Gloves:</b>	Leather or equivalent – in use.
<b>Other Protective Clothing or Equipment:</b>	Normal safety protection is adopted.
<b>Work / Hygienic Practices:</b>	Maintain a clean and safe work environment and monitor work practices.

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