



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
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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 ³	n/a
Respirable Dust	n/a	5 mg/m ³	n/a
Crystalline Silica	<0.5%	0.10 mg/m ³	n/a

III. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Reddish brown to pink grains	Avg. Bulk Density:	2.4g/cm ³ (150 lbs/ft ³)
Particle Shape:	Sub-rounded to angular	Specific Gravity:	4.1 g/cm ³ (H ₂ O = 1.0)
Odor:	Not applicable	Melting Point:	1,250°C (2,282°F)
Water Solubility:	Insoluble	Reactivity:	Inert
Hardness:	7.5 – 8.0 Mohs		

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

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

NFPA Rating



V. STABILITY AND REACTIVITY

Stability:	Stable
Polymerization:	Will not occur
Chemical Incompatibilities:	None known
Hazardous Decomposition Products:	None known

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

VI. HEALTH HAZARD INFORMATION

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

EMERGENCY FIRST AID PROCEDURES

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

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL / LEAK PROCEDURES

Spills:	Sweep or vacuum material for disposal or recovery.
Disposal:	Follow local, state and federal guidelines for disposal of inert solid waste. MATERIAL CONTAMINATED IN USE MAY REQUIRE SPECIAL HANDLING.
Handling / Storage Precautions:	None – use good housekeeping practices to reduce dust; use approved hand, eye and respiratory protection when handling.
Other Precautions:	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

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

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