

MATERIAL SAFETY DATA SHEET

Description: 'Supreme Garnet' abrasive grit

'Supreme Garnet' is a natural mineral from the almandine garnet family.

Substance : wt Nuisance dust : nil Respirable dust : nil Crystalline silica : nil

Physical And Chemical Characteristics

Melting point : 1315° C Specific gravity : 4.1 Solubility in water : Insoluble

Appearance : Deep red, reddish brown Odor : No odor

Fire And Explosion Hazard Data

Flash point : Material is a non-flammable solid

Extinguishing media

Use extinguishing media appropriate for the surrounding fire.

Special fire fighting procedures

As appropriate to surrounding fire. Fire fighters should be protected from nuisance dust.

Unusual fire and explosion hazards : None

Reactivity Data

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

Incompatibility : None known

Hazardous decomposition or byproducts : None known

Hazardous Polymerization

May occur () Will not occur (x) Conditions to avoid : None known

Health Hazard Data

Route (s) of entry

Inhalation? : Possible Skin? : None Ingestion? : None

Health hazards (acute and chronic)

None known. Use care to limit possible exposure to nuisance dust during blast cleaning.

Signs and symptoms of exposure

Exposure to nuisance dust may cause eye, throat or lung irritation, coughing, or shortness to breath.

Medical conditions generally aggravated by exposure

Chronic bronchitis, emphysema and other lung diseases may be aggravated by exposure to nuisance dust.

Emergency and first aid procedures

Eye contact : Wash eyes with water to flush out dust particles.

Skin contact : Wash affected area with soap and water.

Precautions For safe Handling And Use

Steps to be taken in case material is released or spilled

No special precautions are necessary. Sweep or vacuum material for disposal prevent generation of dust during clean up.

Waste disposal methods

Follow local, state and federal guidelines for disposal of inert solid waste.

Material contaminated in use may require special handling.

Precautions to be take in handling and storing

None – Use good housekeeping practices to reduce dust; use approved hand eye and respiratory protection when handling material.

Other precautions

Use material only for the purposes intended, and incorporate methods of dust control to maintain airborne dust within statutory limits.

Control Measures

Respiratory protection (specify type)

NIOSH/MSHA approved filters and air supplied hoods for blasters.

Ventilation : yes **Local exhaust :** Use when blast cleaning **Special :** None

Mechanical (general) : Meet dust TLV **Other :** None

Protection gloves : Leather or equivalent – in use **Eye protection :** safety glasses with side shields

Other protective clothing or equipment

Hearing protection when working near blast cleaning operation.

Work/hygienic practices

Maintain a clean and safe work environment and monitor work practices.

TECHNICAL DETAILS

PHYSICAL CHARACTERISTICS :

Specific Weight	:	4.1 g/cm ³
Average Bulk	:	2.4 g/cm ³
Hardness	:	8 (Mohs Scale)

OTHER CHARACTERISTICS :

Crystal System	:	Cubic
Habit	:	Dodecahedron with occasional Trapezohedron
Fracture	:	Sub-Conchoidal
Durability	:	Very good
Free Flow	:	90% Minimum
Susceptibility to Acid	:	None
Moisture Absorption	:	Non Hygroscopic, Inert.
Magnetism	:	Very Slightly Magnetic
Conductivity	:	10 Microsiemens per Meter
Radio Activity	:	Not Detectable above background
Pathological Effects	:	None
Free Silica Content	:	None

ANALYSIS & CHARACTERISTICS

ALUMINA	[as Al ₂ O ₃]	:	21%
IRON	[as Fe ₂ O ₃]	:	31%
SILICA	[as Si O ₂]	:	35%
MAGNESIUM	[as Mg O]	:	8%
CALCIUM	[as Ca O]	:	1.5%
TITANIUM	[as Ti O ₂]	:	1.0%
LEAD	[as P ₂ O ₅]	:	0.05%
MANGANESE	[as Mn O]	:	0.5%
ZIRCON	[as Zr O ₂]	:	Traces
CHLORIDE CONTENT		:	Less than 50 ppm
SOLUBLE SALTS		:	Less than 100 ppm
PH OF AQUEOUS MEDIUM		:	6.93
GYPSUM CONTENT		:	Nil
MOISTURE CONTENT		:	Less than 0.5%
CARBONATE CONTENT		:	Traces
LOSS ON IGNITION		:	Nil
METAL CONTENT		:	Traces

[Specifically Free Iron, Free Copper and Other Heavy Metals]

MINERALOGICAL COMPOSITION

Garnet (Almandite)	:	97 - 98%
Ilmenite	:	1-2%
Quartz	:	½ %
Others	:	½ %