

Updated 7/1/2012

MATERIAL SAFETY DATA SHEET

Identity: Garnet Abrasive Grains and Powders

SECTION I

Name

CEI

Address

28205 Scippo Creek Rd
Circleville, OH 43113

Telephone: 800-344-5770

Fax: 888-204-9656

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components:

Specific Chemical Identity: OSHA PEL ACGIH TLV Other Limits Recommended % (optional)

A natural mixture of almandite garnet – $Fe_3Al_2(SiO_4)_3$ with Mg and Mn in partial substitution for Fe in the formula, and other minerals. The following substances are present and regulated by OSHA or ACGIH Limits: CAS #1302-62-1

Substance	WT. %	OSHA/ACGIH	Limit In Use*
Nuisance dust	N/A	15mg/cu.m	*If these levels are
Respirable dust	N/A	5mb/cu.m	exceeded respiratory
Crystalline silica	<0.5%	0.10mb/cu.m	protection must be employed.

SECTION III – PHYSICAL AND CHEMICAL CHARACTERISTICS

Melting point: Circa 1315 **Specific Gravity (H₂O = 1.0):** 4.0 – 4.1

Solubility in water: Insoluble **Appearance and odor:** Deep red to pink color, no odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): Material is a non-flammable solid.

Flammable Limits: N/A **LEL:** N/A **UEL:** N/A

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: N/A

SECTION V – REACTIVITY DATA

Stability: Stable **Unstable:** **Stable:** X

Conditions to Avoid: Almandite garnet is an inert, stable solid needing no special handling in normal use.

Incompatibility (materials to avoid): None Known

Hazardous May occur: **Polymerization** **Will not occur:** X

Conditions to avoid: None Known

SECTION VI – 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.

Carcinogenicity	NTP	IARC Monographs	OSHA regulations
Crystalline silica (quartz) Contains less than 0.5%		No. 42 N/A	0.1 mg/m ³

Signs and symptoms of exposure:

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

SECTION VII – 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 taken 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 federal or local TLV limits.

SECTION VIII – CONTROL MEASURES

Respiratory protection (specify type):

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

Ventilations: 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.

Updated 7/1/2012

MATERIAL SAFETY DATA SHEET

Identity: Manganese Greensand

SECTION I

Name

CEI

Address

28205 Scippo Creek Rd
Circleville, OH 43113

Telephone: 800-344-5770

Fax: 888-204-9656

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Specific Chemical Identity: Common Name(s)):

Manganese oxide (as Mn)

OSHA PEL: N/A ACGIH TLV: N/A Other Limits Recommended: N/A % (ocasional): 0.5%

SECTION III – PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: N/A Specific Gravity (H₂O = 1): 2.4

Vapor Pressure (mm Hg.): N/A Melting Point: N/A

Vapor Density (AIR = 1): N/A Evaporation Rate (Butyl Acetate = 1): 0%

Solubility in Water: 0% Appearance and Odor: Black nodular granules, sand-like in appearance: no odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): N/A

Flammable Limits: N/A LEL: N/A UEL: N/A

Extinguishing Media:

N/A (no fire hazard)

Special fire fighting procedures:

N/A

Unusual Fire and Explosion Hazards:

N/A

SECTION V – REACTIVITY DATA

Stability: Stable Unstable: Stable: X

Conditions to Avoid: None

Hazardous Decomposition or Byproducts: None

Hazardous Polymerizations:

May Occur: Will Not Occur: X Conditions to Avoid: N/A

SECTION VI – HEALTH HAZARD DATA

Route(s) of entry: **Inhalation:** Yes **Skin:** Yes **Ingestion:** Yes

Health hazards (acute and chronic):

Inhalation-normal dust symptoms
Ingestion-NOT TOXIC
Eye contact-will act as irritant
Skin contact-no acute effects

Carcinogenicity **NTP** **IARC Monographs** **OSHA regulations**
No No No

Signs and symptoms of exposure:

Inhalation-normal dust symptoms
Ingestion-NOT TOXIC
Eye contact-will act as irritant
Kin Contact-no acute effects

Medical conditions generally aggravated by exposure:

N/A

Emergency and first aid procedures:

EYE CONTACT: Flush eye with running water; seek medical attention if required.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Sweep up. See below for waste disposal.

Waste disposal methods:

Bury in licensed landfill according to local, state, and federal regulations.

Precautions to be taken in handling and storing:

Keep away from HCl

Other precautions:

None

SECTION VIII – CONTROL MEASURES

Respiratory protection (specify type):

"Dust and mist not more toxic than lead" USBM 21B-23, 21B-92, 21B-63, T.C. 21-132

Ventilations: **Local Exhaust:** **Special:**

Mechanical (general): **Other:** None required other than for dust

Protection gloves: None required

Eye protection: Conventional dust protection

Other protective clothing or equipment:

None required

Work/hygienic practices:

Conventional dust protection