


Safety Data Sheet

Section 1 – Material Identification and Supplier

Product name(s) > Other common names	CleanCut™ Garnet garnet; almandine and pyrope garnet
Recommended Use	industrial abrasive for blast cleaning and water jet cutting; water filtration media
Manufacturer/Supplier	Industrial Mineral Company (USA) 13610 Imperial Hwy, Suite 2 Santa Fe Springs, CA 90670 http://www.imcgarnet.com (website) info@imcminerals.com (email) U.S. +1 (562) 553-5203 (telephone)
Emergency Telephone	U.S. +1 (562) 553-5203 (Mon-Fri 8:00 a.m. – 5:00 p.m. Pacific Time Zone)

Section 2 – Hazard(s) Identification

Hazard Classification (OSHA HCS 2012 / GHS)	Carcinogenicity 1A (H350)
Signal Word	DANGER 
Hazard Statement	May cause cancer if particles are inhaled (H350) This product as supplied contains predominantly naturally occurring almandine garnet, which is Not Classified as a hazardous substance. It may also contain trace amounts ($\leq 1\%$) crystalline silica (quartz). Crystalline silica dust of respirable size is considered a carcinogenic substance that may cause silicosis and cancer when inhaled. The product, as supplied, does not contain respirable dust but product break down during use may liberate respirable dust. Exposure to crystalline silica dust along with total dust is regulated by OSHA and ACGIH limits (see Section 8):

	<u>Limit in Use (OSHA)</u>
Total Dust	15 mg/m ³
Respirable Dust	5 mg/m ³
Respirable Silica Dust	0.10 mg/m ³

If these levels are exceeded, adequate respiratory protection must be employed.

Precautionary Statements

Prevention

Obtain special instructions before use (P201).
Do not handle until all safety precautions have been read and understood (P202).

Response

Use personal protective equipment as required (P281).
IF exposed or concerned: Get medical advice/attention (P308 + P313).

Storage

Store locked up (P405).

Disposal

Dispose of contents and /or container in accordance with local/ regional/ national/ international regulations (P501). Material contaminated during use may require special handling.

Other Hazards

Product is abrasive. Protect eyes and skin from exposure to abrasion.

Section 3 – Composition/ Information on Ingredients

This material is a mixture of naturally occurring minerals.

Chemical Identity	Common Name	CAS Identifier	Weight %
Fe ₃ Al ₂ (SiO ₄) ₃	Almandine Garnet	1302-62-1	> 97%
FeTiO ₃	Ilmenite	103170-28-1	< 2.0%
SiO ₂	Quartz (Crystalline Silica)	14808-60-7	< 1.0%

Section 4 – First-Aid Measures

Description of First-Aid Measures

Ingestion

Ingestion is not recommended. There are no known health effects from accidental ingestion but seek medical assistance if symptoms occur.

Skin

No known health effects are known from skin contact during normal handling. In case of contact, wash affected areas with soap and water and seek medical attention if symptoms occur. If abrasion results from contact, clean and dress open wounds and seek medical assistance if required.

Eye In case of contact with particles or dust, immediately flush with clean water to remove particles. If eye irritation persists, obtain medical advice and/ or attention.

Inhalation If breakdown during use of the product into dust occurs, inhalation exposure may occur. Remove the person from dust to fresh air. Blow nose to clear nasal passages. If difficulty in breathing persists, seek medical attention.

Most Important Symptoms & Effects, both Acute and Delayed

Ingestion No known effects, either acute or delayed. Ingestion not recommended.

Skin Abrasions (acute effect). No known delayed effects.

Eye Exposure to particles and/or dust may cause irritation (acute effect). No known delayed effects once particles and/or dust is removed.

Inhalation (Acute effects): Dust inhalation may cause irritation of the nasal and respiratory tract, including coughing and shortness of breath. Chronic bronchitis, emphysema, and other lung diseases may be aggravated by exposure to dust.
(Chronic effects): Respirable dusts containing crystalline silica may cause lung injury or disease including silicosis and cancer.

Indication of Immediate Medical Attention and Special Treatment Needed

Indication : None beyond observed symptoms.

Section 5 – Fire-Fighting Measures

The product is made up of non-flammable, inert minerals that do not support combustion.

Extinguishing Media : Use extinguishing media suitable for the surrounding materials.

Specific Hazards : None known.

Special Equipment or Precautions : None. Address surrounding fire.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures

Wear appropriate Personal Protective Equipment (PPE) consistent with normal handling. Isolate and contain spill during cleanup.

Environmental Precautions

No special precautions. Dispose of material in accordance with local, state, and federal guidelines. Isolate and contain spill during cleanup.

Methods and Materials for Containment and Cleanup

Avoid generating unnecessary dust. Vacuum (preferred) or shovel/ sweep the spilled material for recovery or disposal.

Section 7 – Handling and Storage

Precautions for Safe Handling

: No special precautions are necessary. Avoid breathing dust. Wear appropriate personal protective equipment.

Conditions for Safe Storage

: No special precautions are necessary for normal storage in original packaging. Use good housekeeping practices to minimize dust generation from damaged packages or when product is in loose bulk form. Keep storage area well-ventilated and locked.

Section 8 – Exposure Controls/ Personal Protection

Control Parameters/ Exposure Limits

OSHA (PEL) ACGIH (TLV)

Total Dust (TWA)	15 mg/m ³	10 mg/m ³
Respirable Dust (TWA)	5 mg/m ³	3 mg/m ³
Respirable Quartz (TWA) (CAS No. 14808-60-7)	0.1 mg/m ³	0.025 mg/m ³

Appropriate Engineering Controls

: Provide ventilation and/or dust collection sufficient to reduce exposure to airborne dust generated during handling, use, and cleanup below recommended exposure limits.

Personal Protective Equipment

Respiratory

: Use an N95 filter (or better) dust mask or respirator for limited dust exposure. Use NIOSH/MSHA approved filters, respirators, or masks if required and air supplied abrasive blast hoods for dry abrasive blasting. Follow

recommendations in 29 CFR 1910.134 (OSHA) or EN 149 (European Standard).

Eyes/Face : Wear approved safety glasses. If blasting, wear appropriate face shield or blasting hood to protect against abrasive particles.

Skin/Body : Wear protective clothing and leather (or equivalent) gloves to protect against abrasive particles.

Hearing : Hearing protection should be worn during blast cleaning operations.

Section 9 – Physical and Chemical Properties (as supplied)

Appearance : Solid. Free-flowing sand grains of various screen mesh sizes. Deep red to pink to reddish brown in color.

Odor : None. Odor threshold data is not available.

Volatility : Not Applicable (N/A).

(vapor pressure/vapor density)

VOC Content : Not Applicable (N/A)

Evaporation Rate : Not Applicable (N/A)

Flammability : Non-flammable solid.

Explosivity : Non-explosive solid.

Flash Point : Not Applicable (N/A).

Melting Point : Circa 1315° C

Freezing Point : Not Applicable (N/A)

Relative Density/Sp. Gravity : 4.0-4.1 (H₂O = 1.0)

Water Solubility : Insoluble

pH : Not Applicable (N/A)

Bulk Density : Approximately 2.3g/cm³

Hardness : 7.5-8.0 Mohs

Partition Coefficient: n octanol/water : Not Applicable (N/A)

Auto Ignition Temperature : Not Applicable (N/A)

Decomposition Temperature : Not Applicable (N/A)

Viscosity : Not Applicable (N/A)

Section 10 – Stability and Reactivity

Reactivity : Inert solid. No dangerous reactions known in normal storage, handling, and use.

Chemical Stability : Stable under conditions of normal storage, handling, and use.

Possibility of Hazardous Reactions : None known.

Conditions to Avoid : None known.

Incompatible Materials : None known.

Hazardous Decomposition Products : None known.

Section 11 – Toxicological Information

Information on Toxicological Effects

Quartz (14808-60-7)

: This product contains < 1.0% quartz (crystalline silica) which IARC (International Agency for Research on Cancer) considers “carcinogenic to humans”. Classified as a known carcinogen by NTP.

Likely Routes of Exposure

Inhalation

Symptoms

: The product as sold is not of a respirable size. However, during use the material may break down to respirable size and may enter the respiratory system. Exposure to large amounts of dust may primarily cause irritation to the respiratory system, coughing, shortness of breath, and may aggravate existing conditions such as bronchitis. Inhalation of respirable dust containing crystalline silica may cause lung injury and/or disease including silicosis and cancer. Silicosis is classified into three types:

Chronic – after years of moderate to low exposure there may be shortness of breath, fatigue, chest pain, and respiratory failure.

Accelerated – after several years of high exposure there may be severe shortness of breath, weakness, weight loss, and respiratory failure.

Acute – after months of extremely high exposure symptoms may include disabling shortness of breath, weakness, weight loss, and death.

Since crystalline silica is present, inhalation exposure may cause cancer.

Skin

: The material can cause abrasions to the skin during unprotected contact.

Eyes

: Dust and abrasive particles may cause acute irritation until removed.

Ingestion

: No known effects. Ingestion not recommended.

Numerical Measures

Data Unknown for human LD50. Most common health effects are chronic as a result of ongoing exposure to dust.

Section 12 – Ecological Information

Toxicity

: The product is a naturally occurring, insoluble mineral that often is present in river systems and beaches. Ecotoxicity data is not available.

Persistence and Degradability	: Material is inert in the natural environment. Persistence and degradability data is not available.
Bioaccumulative Potential	: Data is not available.
Mobility in Soil	: Data is not available.
Other Adverse Effects	: None known. Data is not available.

Section 13 – Disposal Considerations

Disposal Methods	: Dispose of material and packaging waste in accordance with local, state, federal, and/or international guidelines for inert solid waste. Material contaminated in use may require special handling and disposal.
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Section 14 – Transport Information

UN Number	: Not Available
UN Proper Shipping Name	: Not Regulated
Transport Hazard Class(es)	: Not Classified
Packing Group	: Not Classified
Environmental Hazards	: Not Classified
Special Precautions for User	: None
Hazchem Code	: Not Allocated

Section 15 – Regulatory Information

Safety, Health, and Environmental Regulations/ Legislation Specific for the Substance/ Mixture

Component	CAS Number	TSCA Inventory
Almandine Garnet	1302-62-1	N
Ilmenite	103170-28-1	N
Quartz	14808-60-7	Y

Section 16 – Other Information

The information provided is believed to be accurate and represents the best information currently available to the supplier. However, supplier makes no warranty of merchantability or other warranties, express or implied, with respect to such information and assumes no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

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