

BARTON

TECHNICAL DATA & PHYSICAL CHARACTERISTICS FOR GARNET ABRASIVES

Average Chemical Composition (wt %)

SiO ₂	36%
Al ₂ O ₃	20%
FeO.....	30%
Fe ₂ O ₃	2%
TiO ₂	2%
MnO.....	1%
CaO.....	2%
MgO.....	6%

Recommended Blasting Conditions

Nozzle pressure.....	90+ psi
Material flow.....	400-600 lbs/hr
Nozzle size.....	#6 or larger
Work distance.....	18-24 inches

Mineral Composition (Warranted Limit)

Garnet (Almandite).....	+97.0%
Ilmenite.....	<2.0%
Zircon.....	<0.2%
Quartz.....	<0.1%
Others.....	<0.25%

Physical Characteristics

Bulk density.....	140-150 lbs/ft ³
Specific gravity.....	4.1
Hardness (Mohs).....	7.5—8.5
Melting point.....	1,250°C
Particle shape.....	Sub-rounded to sub-angular
Reactivity.....	Inert

Other Characteristics

Conductivity.....	10-15ms/m (max 25 ms/m)
Radioactivity.....	Not detectable above background
Moisture Absorption.....	Non-hydroscopic
Total Chlorides.....	Less than 50 ppm
Free Iron.....	Less than 0.01%
Copper.....	Less than 0.01%
Other Heavy Metals.....	Less than 0.01%

Results of solubility and environment leach testing under federal (EPA toxicity) and state (California Title 22) are available upon request.

For More Information Contact:



Material Safety Data Sheet

(This MSDS Complies with 29 CFR 1910.1200)

Date of Issue: December 2006

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Garnet Abrasive Grains and Powders
 Chemical Formula: $(\text{Fe, Mg})_3 \text{Al}_2(\text{SiO}_4)_3$
 CAS Number: 1302-62-1
 Other Designations: Almandite and Pyrope Garnet
 General Use: Industrial Abrasives
 Manufacturer/Distributor: Barton Mines Company, L.L.C., Six Warren Street, Glens Falls, NY 12801
 Phone: (518) 798-5462 (7:30 AM - 5:30 PM EST), FAX: (518) 798-5728
 Emergency Phone: (518) 798-5462 or (518) 251-2296 or (518) 798-5510

Section 2 - Composition / Information on Ingredients

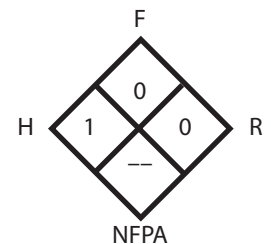
	Ingredient Name	ACGIH TLV TWA	CAS Number	% Wt
Primary Ingredient:	Almandite and Pyrope Garnet	10 mg/m ³ Total Dust	1302-62-1	94 - 99.6%
Trace Impurities:	0.4 - 6% misc. trace minerals consisting of Hornblende, Magnetite, and Feldspar.			

Section 3 - Physical and Chemical Properties

Physical State:	Solid	Water Solubility:	Not soluble in water
Appearance and Odor:	Red, Pink, Whitish Grains or Powders	Other Solubilities:	Not Relevant
Odor Threshold:	No odor	Boiling Point:	Not Relevant
Vapor Pressure:	Not Relevant	Melting Point:	1,315° C (2,399° F)
Vapor Density (Air = 1):	Not Relevant	Viscosity:	Not Relevant
Specific Gravity (H ₂ O = 1):	3.9 - 4.1	Mean Refractive Index:	1.77 - 1.79
pH:	Not Relevant	Evaporation Rate:	Not Relevant

Section 4 - Fire Fighting Measures

Flash Point: Non-flammable solid
 Flash Point Method: Not Relevant
 LEL: Not Relevant
 UEL: Not Relevant
 Flammability Classification: Not Relevant
 Extinguishing Media: Use appropriate extinguishing media for surrounding fire.
 Unusual Fire or Explosion Hazards: None



Section 5 - Stability and Reactivity

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

Section 6 - Health Hazard Information

Acute Effects: (Effects of overexposure)
Inhalation: Dust may cause irritation of nasal and respiratory tract.
Eye: Dust may cause irritation.
Skin: May cause abrasions.
Ingestion: No known effects, however ingestion not recommended.

Medical Conditions Aggravated by Long-Term Exposure:
Chronic respiratory disease may be aggravated by exposure to nuisance dust.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air, if breathing is difficult administer oxygen, obtain medical assistance, if needed.
Eye Contact: Flush with large amounts of water, obtain medical assistance, if needed.
Skin Contact: Thoroughly wash exposed area with soap and water.
Ingestion: Obtain first aid or medical assistance, if needed.

Primary route(s)
of entry: Inhalation, Skin Contact

Section 7 - Spill, Leak, and Disposal Procedures

Spill / Leak Procedures

Spills: Sweep or vacuum up material for disposal or recovery.
Disposal: Dispose of in accordance with local, state and federal regulations. Material contaminated in use may require special disposal requirements.

Section 8 - Exposure Controls / Personal Protection

Ventilation: Provide sufficient mechanical (General and/or Local Exhaust) ventilation to maintain dust exposure below threshold limit value (TLV).
Respiratory Protection: If needed use a NIOSH/MSHA approved dust respirator, cartridge, or mask.
Eye Protection: Recommend federally approved safety eyeglasses.
Protective Gloves: As desired by user.

Section 9 - Special Precautions and Comments

No special precautions necessary for normal handling and storage of the material.

The information set forth herein is believed to be accurate but is not warranted with respect to the accuracy of the information or recommendations. Recipients are advised to confirm in advance of need that the information is current and applicable to their circumstances and usage.

Prepared By: R. Strain