AZ Garnet

MATERIAL SAFETY DATA SHEET (MSDS)

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Section 1 – Identification of Material and Supplier

Product Name: AZ Garnet

Other Names: Almandine Garnet, Garnet sand, alluvial garnet, 12/20 mesh, 20/40 mesh, 30/60 mesh, 80 mesh

- **Recommended Use**: Abrasive blasting, waterjet cutting, filtration media, Production of abrasive papers and stones

Supplier Information:

- **Company**: Abar Zodayesh Garnet
- **Address**: Jokar, Malayer, Hamedan, Iran
- **Phone Numbers**:
  +98 918 217 7789
  +98 939 718 7789
  +98 903 709 7789
- **Email Address:** info@azgarnet.ir
- **Emergency Contact Numbers**:
  +98 918 217 7789
  +98 902 006 6632

Section 2 – Hazards Identification

Classification: Non-Hazardous
Labeling: No hazard pictograms required
Hazards:

- This material is non-toxic, non-metallic, and natural.
- Free from crystalline free silica (Free Silica).
- Mechanical hazards may occur if dust is inhaled or if it comes into direct contact with eyes.
- Prolonged skin contact may cause minor irritation.

Section 3 – Composition / Information on Ingredients

Approximate Chemical Composition:

- **Mineral Formula:** $Fe_3Al_2(SiO_4)_3$
- **Main Elements:** Iron (Fe), Aluminum (Al), Silicon (Si), Oxygen (O)
- **Purity:** >97%

Mineral Composition:

- Almandine: 94%
- Pyrope: 3.8%
- Quartz: 0.2%
- Others: 2.0 %

Chemical Analysis:

Chemical Name	CAS Number	%
SiO_2 (no free silica)	14808-60-7	36.2
Fe_2O_3	1309-37-1	40.4
Al_2O_3	1344-28-1	20.9
MgO	1309-48-4	0.90
MnO	1344-43-0	0.75
CaO	1305-78-8	0.85

Section 4 – First Aid Measures

Inhalation: Move to fresh air, seek help if needed
Eye Contact: Flush with clean water for 15 minutes
Skin Contact: Wash with water, treat abrasions
Ingestion: Not harmful in small quantities

Section 5 – Fire Fighting Measures

Flash Point: Not applicable
Flammability Limits: Not applicable

- Non-flammable and does not support combustion.

Section 6 – Accidental Release Measures

Precautions: Avoid dust generation.
Clean-up: Collect material using a vacuum or broom and recycle if possible.
Disposal: Otherwise, transfer to an approved landfill site in accordance with local regulations, preventing dust dispersion.
Personal Protection: Use a respirator and gloves.

Section 7 – Handling and Storage

- Avoid inhaling dust.
- Wash hands thoroughly after handling.
- Store in a dry, well-ventilated area.
- No special precautions or specific handling measures are required.

Section 8 – Exposure Controls / Personal Protection

- Adequate workplace ventilation is essential.
- Use safety goggles and a dust mask.
- During sandblasting operations, a compressed-air respirator must be used.

Occupational Exposure Limits:

- General dust: 10 mg/m^3
- Respirable silica dust: 0.1 mg/m^3

Section 9 – Physical and Chemical Properties

Physical State: Solid
Color: Cherry red
Odor: Odorless
Taste: Tasteless
pH: 6–9 (depending on source)
Melting Point: ~1250–1315 °C
Specific Gravity: 4.0–4.2 g/cm^3
Solubility: Insoluble in water
Flammability: Non-flammable

Section 10 – Stability and Reactivity

Reactivity: Inert, does not react with other materials
Stability: Stable under normal use conditions
Decomposition: Does not decompose

Section 11 – Toxicological Information

- Non-toxic
- No known health effects from normal use

Section 12 – Ecological Information

- Does not cause environmental harm
- Insoluble in water and does not enter the food chain

Section 13 – Disposal Considerations

- Can be safely landfilled or recycled.
- No special disposal methods are required.

Section 14 – Transport Information

- Not regulated for transport
- Non-hazardous and can be transported as bulk material.
- For bulk transport, it must be covered to prevent dust generation.

Section 15 – Regulatory Information

- Not classified as hazardous under REACH
- No PBT/vPvB concerns

Section 16 – Other Information

- Prepared in accordance with GHS and local SDS standards
- Prepared by: Safety, Health, and Environment Unit of Abar Zodayesh Garnet CO.