



## Technical Data and Physical Characteristics

**Garnet type:** Western Garnet International produces almandite variety garnet at its mine in northern Idaho, USA.

**General description:** Almandite garnet is a chemically inert nonmetallic mineral that is quite common in the natural environment. It is found in trace amounts in most river and beach sands and is known for its hardness and durability. The high levels of hardness and toughness make almandite garnet ideal for many abrasive applications. Its high specific gravity as well as its chemical and abrasive resistance makes almandite garnet ideal for filtration. Almandite garnet is also a popular semi-precious gem and is the birthstone for January.

**Packaging options:** Packaging is available to customers specifications. Standard packaging includes 50 and 100 lb. bags, 2,000, 3,000 and 4,000 lb. bulk bags.

**Grain shape:** Sharp, angular grains (crushed)  
Blocky, sub-angular to sub-rounded grains (uncrushed)

**Certifications and approvals:** NSF, California Air Resource Board, AWWA-B100 and MIL-22262B

**Water solubility:** Insoluble under standard conditions. (20 C, distilled water)

**Hardness:** 7.5 - 8.0 per Moh's scale

**Specific gravity:** 4.0 - 4.1

**Acid solubility:** < 1%

**Melting point:** 1,315 C

**Free silica content:** < 0.5%

**Color:** Deep red to pink

**Available sizes:** #8 - #150 mesh (U.S. standard screen)

**Typical chemical analysis** (copies available upon request):

silicon dioxide	(SiO <sub>2</sub> )	37%
ferric oxide	(Fe <sub>2</sub> O <sub>3</sub> )	33%
aluminum oxide	(Al <sub>2</sub> O <sub>3</sub> )	25%
magnesium oxide	(MgO)	3%
calcium oxide	(CaO)	1%
manganese oxide	(MnO)	1%