

GRAYSTAR LLC
*A Manufacturer and Distributor of
Abrasive Materials and Specialty Products*

Headquarters
9 Simmonsville Rd
PO Box 1670
Bluffton, SC 29910

Phone: 843-815-5600
Fax: 843-815-5601
www.graystarllc.com

Technical Data Sheet

Product: GARNET – Blasting Grade and Waterjet Cutting Grade

Average Chemical Composition (Typical)

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

* Refers to SiO₂ bound within the lattice of the homogeneous garnet crystal (no free silica)

Physical Characteristics (Typical)

Bulk Density	2.3T/m ³	Specific Gravity	4.1
Hardness (moh)	7.50-8.0	Melting Point	1250°C
Shape of natural grains	sub-angular		

Other Characteristics (Typical)

Conductivity	10-15ms/m (max 25ms/m)
Radioactivity	Not detectable above background
Moisture Absorption	Non-hygroscopic, Inert
Total Chlorides	10-15ppm (max 25ppm)
Ferrite (free iron)	less than 0.01%*
Lead	less than 0.002%*
Copper	less than 0.005%*
Other Heavy Metals	less than 0.01%*
Sulphur	less than 0.01%*

* Generally below detectable levels.

Mineral Composition (Typical)

Garnet (Almandite)	97-98%
Ilmenite	1-2%
Zircon	0.20%
Quartz (free silica).....	<0.5%
Others	0.25%

Blast Grade - Product Range

<u>Typical Results</u>	<u>New Steel</u>	<u>Speed Blast</u>	<u>Premium Blast</u>
Profile (microns)	45 – 55	50 – 70	50 – 85
Consumption (kg/m ²)	7 – 10	8 – 10	10 – 12
Cleaning Rate (m ² /hour)	20 – 25	15 – 25	15 - 20

Waterjet Cutting Grade - Product Range:

		(Typical weight % Retained)			
US Mesh	Microns	50 mesh (600-200)	60 mesh (400-200)	80 mesh (300-150)	120 mesh (200-100)
30	600	-	-	-	-
35	500	2	-	-	-
40	425	14	0.2	-	-
45	355	45	10	2	-
50	300	85	45	20	-
60	250	96	78	50	0.01
70	212	95	96	85	25
80	180	99.9	99	95	70
90	150	-	99.8	99	93
115	125	-	-	-	99
150	106	-	-	-	99.9
170	90	-	-	-	-
Pan	-90	-	-	-	-

Standard Packing

- * 80 x 25kg multilayer paper bags shrink-wrapped to 2 MT pallets, or
- * 80 x 25kg multilayer paper bags packed into 2 T bulk bags or
- * 2,000kg top and bottom spouted bulk bags with internal PVC liner, or
- * Loose bulk.