

# GMA Garnet Group

The Natural Abrasive



## Waterjet Cutting Grade Product Data Sheet

### Average Chemical Composition (Typical)

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

\* Refers to SiO<sub>2</sub> bound within the lattice of the homogeneous garnet crystal (no free silica)

### Physical Characteristics (Typical)

Bulk Density	2.3T/m <sup>3</sup>
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)
Free Iron	..... less than 0.01%*
Copper	..... less than 0.01%*
Other Heavy Metals	..... less than 0.01%*
Sulphur	..... less than 0.01%*
Lead	..... less than 20ppm

\* Generally below detectable levels.

### Mineral Composition (Typical)

Garnet (Almandite)	97-98%
Ilmenite	1-3%
Zircon	0.20%
Quartz (free silica)	<0.5%
Others	0.25%

### Waterjet Grade Sizings (Typical)

Grade:	50 Mesh	80 Mesh	120 Mesh	
US Mesh	Microns	(Cumulative Wt% Retained)		
30	600	0		
35	500	1		
40	425	14	0	
45	355	40	2	
50	300	75	18	0
60	250	90	40	0.01
70	212	96	70	16
80	180	99	90	75
90	150	100	97	90
115	125		99	99
150	106		100	99.5
170	90			100

### Standard Packing

- \* 80 x 25kg multilayer paper bags shrinkwrapped 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

