

Product Data Sheet

GARNET

TYPICAL CHEMICAL COMPOSITION

Iron	Fe ₂ O ₃ + FeO	31 %
Silica	SiO ₂	29 %
Alumina	Al ₂ O ₃	17 %
Magnesium	MgO	13 %
Calcium	CaO	8 %
Titanium oxide	TiO ₂	1.1 %
Sodium oxide	Na ₂ O	0 - 1 %
Manganese	MnO	< 0.3 %

PHYSICAL CHARACTERISTICS

Specific weight	3.8 - 4.1 g/cm ³
Bulk density	1.9 - 2.1 g/cm ³
Mohs hardness	7.5 - 8.0
Chloride	< 25 ppm
Acid solubility (HCl)	< 1.0 %
Conductivity	< 83 μS/cm
Melting point	1300 °C
Grain shape	sub angular

TYPICAL MINERAL CONTENT

Almandine Garnet	92 - 96 %
Ilmenite	1.0 %
Omphacite	1.5 %
Rutile	0.5 %
Quartz	< 0.1 %
Hornblende	< 0.5 %
Free Silica	< 1 %

20-40 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+1000	+18	0.00
+850	+20	0.61
+500	+35	69.00
+425	+40	24.11
-425	-40	6.28
Sum		100

30-40 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+600	+30	2.23
+500	+35	35.51
+425	+40	39.33
+300	+50	22.67
+250	+60	0.17
-250	-60	0.09
Sum		100

30-60 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+600	+30	0.00
+500	+35	0.75
+425	+40	16.88
+300	+50	77.76
+250	+60	3.87
-250	-60	0.74
Sum		100

50-80 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+425	+40	0.00
+300	+50	18.53
+250	+60	39.14
+212	+70	32.58
+180	+80	8.09
+150	+100	1.17
-150	-100	0.49
Sum		100

70-100 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+300	+50	0.00
+212	+70	10.54
+180	+80	37.34
+150	+100	34.72
+125	+120	15.13
-125	-120	2.27
Sum		100

100-120 Mesh

Particle distribution		
Size [μm]	Mesh	Weight ratio
+212	+70	0.00
+150	+100	25.00
+125	+120	55.00
+106	+140	15.00
-106	-140	5.00
Sum		100

Country of origin: China

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