

ATTN: IAN BRYER

BEACH MINERALS (SANDS) COMPANY

Garnet Technical Data

Average Chemical Composition (wt%)

SiO ₂	36%
Fe ₂ O ₃	33%
Al ₂ O ₃	23%
MgO	6%
MnO	1%
CaO	1%
TiO ₂	<1%
Sol.Cl	<25 ppm

Mineralogical Content

Almandite garnet	98 - 99 %
Ilmenite	0.5 - 1.0%
Quartz (free silica)	<0.5%*
Others	traces

* <0.5% quartz guaranteed
<0.1% quartz typical

Physical Characteristics

Specific Gravity	4.1
Mohs Hardness	7.5+
Acid Solubility (HCL)	<1.0%
Bulk density	145 lb/ft ³
Colour	red-pink
Grain shape	sub angular
Toxic substances	none
Conductivity	<125 M/cm

Recommended Blasting Conditions

Pressure at nozzle	> 90 psi
Air capacity	> 350 cfm/blast
Material flow	300-500 lb/hr
Nozzle type/size	> #6 venturi Working
distance	18 ~ 24 inches (50 ~ 60 cm)

SIEVE ANALYSIS

Mesh	MM	PERCENTAGE RETENTION				
		Mesh 12 ~ 24	Mesh 20 ~ 40	Mesh 30 ~ 60	Mesh 50 ~ 80	Mesh 120
8	2.360	0		×		
12	1.400	0 ~ 3				
20	0.850	35 ~ 45	0 ~ 3			
24	0.710	40 ~ 60	0 ~ 15	0		
30	0.600	0 ~ 15	45 ~ 60	0 ~ 3		
40	0.425		25 ~ 40	20 ~ 40		
50	0.300		0 ~ 5	40 ~ 60	10 ~ 30	
60	0.250			5 ~ 20	20 ~ 40	0 ~ 5
80	0.180			0 ~ 10	20 ~ 50	10 ~ 40
120	0.125				0 ~ 15	50 ~ 80
Pan					0	0 ~ 10

A = 10-20 MESH 12-25
 B = 20-40 MESH
 C = 30-60 MESH
 D = 50-80 MESH

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