



**V.V. MINERAL - INDIA**

**CENTRAL LABORATORY**



**Quality Certificate**

P.O.No : 002/2011 Certificate No. : 7233/11-12  
 Customer Name : AL KULAIP INT'L TRADE CO Dated : 06-04-2011  
 Product Name : GARNET Invoice No. : L023/11-12  
 Grade&Size : C(0.600-0.250 mm) Sample Qty : 100 gms  
 Qty for this Lot : 01 M.Ton. Marking : Grade -C  
 Date of shipment : 06-04-2011 Packing : 1 ton loose bags.

We hereby Certify that the Garnet shipped for the P.O.No: 002/2011 is having the following results from our Lab Analysis. It was determined by X-ray Fluorescence.

**Chemical Analysis :**

Elements	%
SiO <sub>2</sub>	35.47
Al <sub>2</sub> O <sub>3</sub>	21.73
Fe <sub>2</sub> O <sub>3</sub>	30.51
MgO	7.44
CaO	1.15
TiO <sub>2</sub>	1.85

**Sieve Analysis Report :**

MM	ASTM	Standard%	Actual%	Cum %
0.600	30	-	0.24	0.24
0.425	40	-	17.04	17.28
0.300	50	-	58.50	75.78
0.250	60	-	17.00	92.78
0.180	80	-	7.22	100

**Mineral Composition: % by Weight**

Garnet : 99.51 %  
 Imenite : 00.37 %  
 Others : 00.12 %

**Physical Characteristics:**

Specific Gravity : 4.1  
 Conductivity : 11.59 mS/m at 25.7°C  
 Chloride : 17.78 ppm  
 Hardness : > 7 moh scale  
 Acid Solubility(Hcl) : < 1.0 %  
 Colour : red - pink  
 Grain Shape : Subangular  
 Toxic substances : None  
 Moisture : 0.17 %  
 Bulk Density : 2.58 g/cm<sup>3</sup>

Sample Taken by: A. Kannan.

Sieve Analysis conducted by : T.Ravikumar

Signature *A. Kannan*



Signature *T. Ravikumar*

\*\*Sample taken and Sieve Analysis under the reference of IS: 11127-2\*\*  
\*\*Chemical Analysis has been determined by Lab XRF\*\*

\*\*Conductivity and Moisture Analyzed by Mettler\*\*  
\*\*Chloride Content Analyzed by Spectro Photometer\*\*