

## TECHNICAL DATA SHEET

| PRODUCT                  |                                                                                                                                                                                                                                                                                             |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nepheline Syenite</b> | A lower temperature flux with a more fusible and vigorous fluxing action than Feldspar. It has lower silica and higher soda and potassium levels, so may be used when a lower melting temperature is required. It has a fairly narrow vitrification band typically used in vitreous bodies. |

| ANALYTICAL CHEMISTRY |                                |         |      |      |     |        |
|----------------------|--------------------------------|---------|------|------|-----|--------|
|                      |                                | AVERAGE | MIN  | MAX  | UOM | METHOD |
| Silicon Oxide        | SiO <sub>2</sub>               | 55.4    | 54.0 | 57.0 | %   | XRF    |
| Aluminium Oxide      | Al <sub>2</sub> O <sub>3</sub> | 24.6    | 23.3 | 25.1 | %   | XRF    |
| Sodium Oxide         | Na <sub>2</sub> O              | 8.1     | 7.6  | 8.8  | %   | XRF    |
| Potassium Oxide      | K <sub>2</sub> O               | 8.8     | 8.4  | 9.4  | %   | XRF    |
| Calcium Oxide        | CaO                            | 1.1     | 0.8  | 1.4  | %   | XRF    |
| Magnesium Oxide      | MgO                            | 0.04    | 0.0  | 0.1  | %   | XRF    |
| Titanium Oxide       | TiO <sub>2</sub>               | 0.07    | 0.03 | 0.11 | %   | XRF    |
| Iron Oxide           | Fe <sub>2</sub> O <sub>3</sub> | 0.13    | 0.09 | 0.15 | %   | XRF    |
| Loss on Ignition     | L.O.I                          | 0.9     | 0.6  | 1.3  | %   |        |

| ANALYTICAL PHYSICAL  |         |      |      |     |                   |
|----------------------|---------|------|------|-----|-------------------|
|                      | AVERAGE | MIN  | MAX  | UOM | METHOD            |
| <3 µm Percent Finer  | 6.9     | 4.0  | 8.5  | %   | Laser Diffraction |
| <10 µm Percent Finer | 38.0    | 30.0 | 46.0 | %   | Laser Diffraction |
| <30 µm Percent Finer | 86.7    | 80.0 | 93.0 | %   | Laser Diffraction |
| 45 µm Retained       | 0.09    | 0.00 | 2.00 | %   | Air Jet Sieving   |
| 75 µm Retained       | 0.00    | 0.00 | 0.05 | %   | Air Jet Sieving   |
| Moisture             |         |      | 1.5  | %   | Moisture Analyzer |

|                      |                          |     |      |
|----------------------|--------------------------|-----|------|
| Median Particle Size | Malvern Mastersizer 2000 | 6.5 | 13.0 |
|----------------------|--------------------------|-----|------|

|                         |                             |                                                                                                       |
|-------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------|
| Melting Range           | 1250 to 1300°C              | *The nepheline syenite reacts with quartz at much lower temperatures than the melting range indicates |
| Density                 | 2.61 g/cm <sup>3</sup>      |                                                                                                       |
| Ph                      | 10.0 – 10.3                 | ISO 787-9                                                                                             |
| Bulk Density, compacted | 0.9 – 1.3 g/cm <sup>3</sup> | EN 1097-3 (milled products)                                                                           |
| Bulk Density, Loose     | 0.7 – 0.9 g/cm <sup>3</sup> | EN 1097-3 (milled products)                                                                           |

| PRODUCT SIZE                                                      |
|-------------------------------------------------------------------|
| The products are available in 25kg Paper Bags, big bags and bulk. |