



### INSULATING CASTABLES

### MORAL COOLCAST 100 LW - K



**Moral Coolcast 100 LW – K** is a lightweight insulating castable based on selected lightweight aggregates and high purity calcium aluminate cement. It has a temperature rating of 1100°C and can be either cast or gunned.

Moral Coolcast 100 LW – K is an 1100°C grade insulating castable for back-up linings, or as a hot face insulating lining in mild flame conditions.

| PHYSICAL PROPERTIES               |              | THERMAL PROPERTIES                      |       |
|-----------------------------------|--------------|---|-------|
| Maximum temperature rating (°C)   | 1100         | <u>Approximate Thermal Conductivity</u> |       |
| Bulk Density (kg/m <sup>3</sup> ) |              | Mean Temp (°C)                          | W/m.K |
| @ 110°C                           | 510 – 590    | 250                                     | 0.14  |
| @ 800°C                           | 438 – 512    | 500                                     | 0.16  |
| @ 1000°C                          | 447 – 523    | 750                                     | 0.17  |
| Cold Compressive Strength (MPa)   |              | <b>CHEMICAL PROPERTIES</b>              |       |
| @ 110°C                           | 0.8          | <b>Chemical Analysis %</b>              |       |
| @ 800°C                           | 0.8          | (after firing)                          |       |
| @ 1000°C                          | 0.6          | Al <sub>2</sub> O <sub>3</sub>          | 36    |
| Modulus of Rupture (MPa)          |              | SiO <sub>2</sub>                        | 27    |
| @ 110°C                           | 0.3          | Fe <sub>2</sub> O <sub>3</sub>          | 3.5   |
| @ 800°C                           | 0.4          | TiO <sub>2</sub>                        | 0.7   |
| @ 1000°C                          | 0.2          | CaO                                     | 17    |
| Permanent Linear Change (%)       |              | MgO                                     | 7.6   |
| 24 hrs @ 110°C                    | -0.3 to 0.0  | Alkalies                                | 1.3   |
| 5 hrs @ 800°C                     | -1.0 to -0.5 |   |       |
| 5 hrs @ 1000°C                    | -2.4 to -1.3 |   |       |
| Maximum Grain Size (mm)           | 5            |   |       |

#### MATERIAL PACKAGING

Moral Coolcast 100 LW – K is packaged in 10kg paper sacks.

Nominal Shelf life for Moral Coolcast 100 LW – K is 3 to 6 months when correctly stored.

#### TYPICAL APPLICATIONS

- Petrochemical Furnaces
- Heater Linings, Stacks and Ductwork

#### APPLICATION DATA

##### Casting

Net Quantity of Dry Material required for Placement (kg/m<sup>3</sup>) 460

Water required for mixing (% by weight) 125 – 140