

## ALCOM 90

| CLASSIFICATION       | Alumina-Chrome Ultra Low Cement Castable         |                    |         |
|----------------------|--------------------------------------------------|--------------------|---------|
| PHYSICAL PROPERTIES  | Max. Service Temperature                         | °C                 | 1750    |
|                      | Max. Grain Size of Aggregates                    | mm                 | 12.5    |
|                      | Approx. Weight Required for Casting              | kg/m <sup>3</sup>  | 3200    |
|                      | Approx. Amount of Water Required for Casting     | %                  | 4.0-4.5 |
|                      | Bulk Density After Drying at 110 °C              | kg/m <sup>3</sup>  | 3250    |
|                      | Modulus of Rupture After Drying at 110 °C        | kg/cm <sup>2</sup> | 45      |
|                      | Cold Crushing Strength After Drying at 110 °C    | kg/cm <sup>2</sup> | 250     |
|                      | Permanent Linear Change After Heating at 1400 °C | %                  | -0.20   |
| CHEMICAL COMPOSITION | Alumina (Al <sub>2</sub> O <sub>3</sub> )        | %                  | 90.0    |
|                      | Silica (SiO <sub>2</sub> )                       | %                  | 5.0     |
|                      | Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )     | %                  | 1.0     |
|                      | Lime (CaO)                                       | %                  | 1.0     |
|                      | Chromic Oxide (Cr <sub>2</sub> O <sub>3</sub> )  | %                  | 0.5     |
| THERMAL EXPANSION    | 400 °C                                           | %                  | 0.35    |
|                      | 800 °C                                           | %                  | 0.55    |
|                      | 1000 °C                                          | %                  | 0.75    |
|                      | 1200 °C                                          | %                  | 0.95    |
|                      | 1400 °C                                          | %                  | 1.15    |
| THERMAL CONDUCTIVITY | 400 °C                                           | (W/m.K)            | 2.95    |
|                      | 500 °C                                           | (W/m.K)            | 2.78    |
|                      | 600 °C                                           | (W/m.K)            | 2.62    |
|                      | 800 °C                                           | (W/m.K)            | 2.55    |
|                      | 1000 °C                                          | (W/m.K)            | 2.57    |
|                      | 1200 °C                                          | (W/m.K)            | 2.65    |
|                      |                                                  |                    |         |

The above data are typical values of which the properties of the samples tested according to the internal procedure and standard of Siam Refractory generally accepted by our customers for many years. The above data can not be used for specification or guarantee purpose. Siam Refractory reserves the right to update the above data and change our internal procedure and standard without any prior notice.

