

# KB 70

|  |  |   |       |
|--|--|---|-------|
| <b>Classification</b>                        | High-Alumina Brick ASTM C 27, 70% Alumina        |   |       |
| <b>Physical Properties</b>                   | Refractoriness                                   | Orton Cone                                | 36-37 |
|  | Bulk Density                                     | kg/m <sup>3</sup>                         | 2550  |
|  | Apparent Porosity                                | %   | 18.0  |
|  | Cold Crushing Strength                           | kg/cm <sup>2</sup>                        | 530   |
|  | Modulus of Rupture                               | kg/cm <sup>2</sup>                        | 110   |
|  | Permanent Linear Change After Heating at 1600 °C | %   | 1.50  |
|  | <b>Chemical Composition</b>                      | Alumina (Al <sub>2</sub> O <sub>3</sub> ) | %     |
| Silica (SiO <sub>2</sub> )                   |  | %   | 25.0  |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ) |  | %   | 1.4   |
| Titania (TiO <sub>2</sub> )                  |  | %   | 2.4   |
| <b>Thermal Expansion</b>                     | 400 °C   | %   | 0.30  |
|  | 800 °C   | %   | 0.49  |
|  | 1000 °C  | %   | 0.67  |
|  | 1200 °C  | %   | 0.82  |
|  | 1400 °C  | %   | 1.00  |
| <b>Thermal Conductivity</b>                  | 400 °C   | (W/m.K)                                   | 1.85  |
|  | 600 °C   | (W/m.K)                                   | 1.85  |
|  | 800 °C   | (W/m.K)                                   | 1.85  |
|  | 1000 °C  | (W/m.K)                                   | 1.87  |

The above data are typical properties of 9" commercial straight brick. The data are subjected to reasonable variations and should not be used for specification purposes.

ASTM test methods, and SRIC's written procedure, where applicable, used for determination of data.

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