# V-1100 (700)

## for hot-face and back-up insulation up to 1100°C (2012°F)

| Grade | | | | V-1100 (700) |
|---|---|---|---|---|
| **Maximum service temperature** | | | °C<br>°F | 1100<br>2012 |
| **Bulk density, dry** | | | kg/m³<br>lbs/cu.ft. | 700<br>44 |
| **Cold compressive strength** (EN 1094-5:1995) | | | MPa<br>lbs/sq.in. | 4.5<br>653 |
| **Modulus of rupture** (EN 993-6:1995) | | | MPa<br>lbs/sq.in. | 2.0<br>290 |
| **Linear reheat shrinkage** (EN 1094-6:1999)<br>12h @ 1000°C (1832°F) | | | % | 1.0 |
| **Total porosity** (EN 1094-4:1995) | | | % | 74 |
| **Specific heat** | | | kJ/(kg×K)<br>BTU/(lb×°F) | 0.94<br>0.22 |
| **Coefficient of reversible thermal expansion**<br>@ 20°C-750°C (68°F-1382°F) | | | x10$^{-6}$ K$^{-1}$<br>x10$^{-6}$ °F$^{-1}$ | 11.0<br>6.1 |
| **Resistance to thermal shock** (EN 993-11:1999) | | | Cycles | > 30 |
| **Pyrometric Cone Equivalent** (ASTM C24-89 Orton cones) | | | °C<br>°F | 1300<br>2372 |
| **Thermal conductivity** (ASTM C-182)<br>Measured perpendicular to large faces | mean temp. | @ 200°C<br>@ 400°C<br>@ 600°C<br>@ 800°C | W/(m×K) | 0.19<br>0.20<br>0.21<br>0.22 |
| | | @ 392°F<br>@ 752°F<br>@ 1112°F<br>@ 1472°F | BTU/(sq.ft.×h×°F/in.) | 1.32<br>1.39<br>1.46<br>1.53 |
| **Chemical analysis, typical** | | | % | |
| Silica | | | $SiO_2$ | 46 |
| Titanium dioxide | | | $TiO_2$ | 0.7 |
| Ferric oxide | | | $Fe_2O_3$ | 5.5 |
| Alumina | | | $Al_2O_3$ | 7.0 |
| Magnesium oxide | | | MgO | 19.0 |
| Calcium oxide | | | CaO | 3.5 |
| Sodium oxide | | | $Na_2O$ | 0.2 |
| Potassium oxide | | | $K_2O$ | 10.0 |
| Loss on ignition 1025°C (1877°F) | | | LOI | 7.0 |
| **HS Tariff number** (Harmonized Commodity Description and Coding System) | | | | 6806.90.00 |
| **Colour** | | | | SAND |

Data are average results of tests conducted under standard procedures and are subject to variation. Data contained in this data sheet are supplied in good faith as a technical service and are subject to change without notice. Misprint and errors excepted.

Skamol A/S - 2015-01-12