Data sheet

Cerablanket®, Cerachem® Blankets

ENGLISH

Description

All three grades of blanket have the same excellent chemical stability compared with their raw materials: Cerafiber and Cerachem Fiber are spun bulk fibres.

They have excellent strength before and after heating. They have superior acoustic as well as thermal insulation characteristics. Available in a wide range of densities and thicknesses allow for the most effective deployment of the superior thermal characteristics in a wide variety of applications.

Type

Blanket made from high temperature refractory ceramic fibre insulation wool.

Classification temperature

Cerablanket blanket: 1315°C (2400°F)
Cerachem blanket: 1425°C (2600°F)

The maximum continuous use temperature depends on the application. Unaffected by most chemicals except strong alkalis, phosphoric acid and molybdenum. For further advise please contact your local Morgan Advanced Materials partner.

Typical applications

- Furnace and kiln linings
- Boiler insulations
- Heat treatment temperature control
- Glass furnace crown insulation
- Furnace door seals
- Duct linings
- Pipe insulations
- Thermal barriers for automotive industry
- Insulation for field stress relieving of welds
- High temperature filter media
- Nuclear insulation applications
- Steam and gas turbines insulation

Benefits

- Excellent insulating performance
- Unaffected by most chemicals except hydrofluoric and phosphoric acids and strong alkalies
- Excellent thermal stability: fibers have good resistance to devitrification
- Low heat storage
- The combination of long spun fibres and the needling operation produce tough, resilient and strong blankets, which resist tearing both before and after heating
- Resistance to thermal shock
- Good sound absorption

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	Cerablanket	Cerachem
Color	white	white
Continuous Use Temperature, °C (°F)	1177 (2150)	1315 (2400)
Classification Temperature, °C (°F)	1315 (2400)	1425 (2600)
Density, kg/m³ (pcf)	64, 96, 128, 160 (4, 6, 8, 10)	64, 96, 128, 160 (4, 6, 8, 10)
Linear shrinkage, %, EN 1094-1, After 24 hrs, isothermal heating		
1000°C (1832°F)	1.5	-
1100°C (2012°F)	2.2	-
1200°C (2192°F)	3	1.0
1300°C (2372°F)	-	2.0
1400°C (2552°F)	-	3.5
Specific Heat Capacity, kj/kg•K (BTU/lb•F)		
1090°C (1994°F)	1.13 (0.27)	1.13 (0.27)
Tensile Strength, kPa (psi), EN 1094-1		
Measured Density,kg/m³ (pcf), 64 (4)	30 (4.35)	30 (4.35)
96 (6)	70 (10.15)	70 (10.15)
128 (8)	90 (13.05)	90 (13.05)
160 (10)	110 (15.95)	110 (15.95)
Chemical Analysis, % weight basis after firing		
Alumina, Al_2O_3	46	35
Silica, SiO_2	54	50
Zirconia, ZrO_2	-	15
Other	trace	trace
Thermal Conductivity, W/m•K (BTU•in/hr•ft²), per ASTM C201		
Measured Density,kg/m³ (pcf)	128 (8)	128 (8)
200°C (300°F)	0.05 (0.35)	0.06 (0.42)
400°C (752°F)	0.08 (0.56)	0.1 (0.63)
600°C (1112°F)	0.19 (0.90)	0.15 (1.04)
800°C (1472°F)	0.20 (1.4)	0.2 (1.33)
1000°C (1832°F)	0.28 (1.94)	0.27 (1.87)
1200°C (2000°F)	0.39 (2.71)	0.34 (2.34)

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