

Rigid Carbon Insulation CBCF 25-2000

GENERAL

Homogeneous carbon rigid insulation made from carbonised short rayon fibres and designed as high temperature insulation. Carbon Bonded Carbon Fibre(CBCF)

TYPICAL APPLICATIONS

Industrial, photovoltaic and CZ furnaces working under vacuum or inert gas upto 3000°C, dependant on system pressure.

Higher in density than CBCF 18-2000, this material is used where low levels of oxygen and other reactive gases are present, or a degree of mechanical handling is required.

CBCF 25-2000 can be provided in a purified form.

Contact sales.hlt@mersen.com for further information.

PROPERTIES

	TYPICAL CHARACTERISTICS	
	English Units	SI Units
Bulk Density	15.5 +/- 1.87 lbs/ft ³	0.25 +/- 0.03 g/cm ³
Flexural Strength	392.0 psi	2.70 MPa
Compressive Strength		
// to fiber orientation	304.5 psi	2.10 MPa
⊥ to fiber orientation	155.2 psi	1.07 MPa
Electrical Resistivity	1.60 Ω.in	59,000 μΩ.cm
Coefficient of Thermal Expansion (0 to 1000°C)	1.7+/- 0.2 x 10 ⁻⁶ /°F	3.0 +/- 0.3 x 10 ⁻⁶ /°C
Expansion (1000 to 2000°C)	1.5 +/- 0.2 x 10 ⁻⁶ /°F	2.6 +/- 0.3 x 10 ⁻⁶ /°C
Water absorption after 6 months in standard conditions	<0.1%	<0.1%
Thermal Conductivity	BTU-Ft/Ft ² Hr°F	W/mK
	Nitrogen / Vacuum	Nitrogen / Vacuum
400°C (750°F)	0.40 / 0.22	0.70 / 0.38
800°C (1470°F)	0.54 / 0.30	0.94 / 0.52
1200°C (2190°F)	0.66 / 0.38	1.14 / 0.66
1600°C (2910°F)	0.87 / 0.52	1.50 / 0.90
2000°C (3630°F)	1.03 / 0.71	1.79 / 1.23
Porosity	83%	83%
Carbon content	>99%	>99%
Standard purity on 34 elements	<150ppm	<150ppm
Purified on 34 elements	<20 ppm	<20 ppm
Standard purity on Al, Cu, Fe, Cr, Ni	<5ppm	<5ppm
Temperature treatment	3630°F	2000°C

Standard sizes:

Boards up to 1500 x 1500 x 160 mm

Cylinders up to 500 mm OD

Additional shapes & sizes on request

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