

Rigid Carbon Insulation CBCF 18-2000

GENERAL

Homogeneous carbon rigid insulation made from carbonised short rayon fibres and designed for 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.

CBCF 18-2000 can be provided in a purified form.

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

PROPERTIES

	TYPICAL CHARACTERISTICS	
	English Units	SI Units
Bulk Density	11.2 +/- 1.87 lbs/ft ³	0.18 +/- 0.03 g/cm ³
Flexural Strength	149.4 psi	1.03 MPa
Compressive Strength		
// to fiber orientation	159.5 psi	1.10 MPa
⊥ to fiber orientation	110.2 psi	0.76 MPa
Electrical Resistivity	0.30 Ω.in	110,000 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)	0.26 / 0.14	0.45 / 0.25
800°C (1470°F)	0.37 / 0.20	0.64 / 0.35
1200°C (2190°F)	0.48 / 0.28	0.84 / 0.48
1600°C (2910°F)	0.66 / 0.40	1.15 / 0.69
2000°C (3630°F)	0.85 / 0.58	1.47 / 1.00
Porosity	89%	89%
Carbon content	>99%	>99%
Standard purity 34 elements	<150ppm	<150ppm
Purified on 34 elements	<20 ppm	<20 ppm
Standard purity 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 1100 mm OD Additional shapes & sizes on request	

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