



PROPERTIES OF CALCARB®

RIGID CARBON INSULATION CBCF 18-2000

GENERAL

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

PROPERTIES

	English Units	Typical Values	SI Units
Bulk Density	11.2 +/- 1.87 lbs/ft ³		0,18 +/- 0,03 g/cm ³
Electrical Resistivity	0.30 ohm.in		110,000 µohm.cm
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
Coefficient of Thermal Expansion (0 to 1000 °C)	1.7 +/-0.2 x 10E-6/°F		3,0 +/-0,3 x 10E-6/°C
Expansion (1000 to 2000 °C)	1.5 +/-0.2 x 10E-6/°F		2,6 +/-0,3 x 10E-6/°C
Water absorption after 6 months in standard conditions	< 0.1%		< 0,1%
Thermal Conductivity	BTU-Ft/Ft ² Hr°F		W/m ² K
	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%
Residual metallic content:			
Standard	< 500 ppm		< 500 ppm
Purified	< 20 ppm		< 20 ppm
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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