



Rigid Carbon Insulation CBCF 14VF-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 14VF-2000 grade is the optimum thermal insulation material produced by Mersen Scotland Holytown Ltd.

CBCF 14VF-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	8.7 +/- 1.87 lbs/ft ³	0.14 +/- 0.03 g/cm ³
Flexural Strength	239.3 psi	1.65 MPa
Compressive Strength		
// to fiber orientation	158.1 psi	1.09 MPa
⊥ to fiber orientation	33.4 psi	0.23 MPa
Electrical Resistivity	0.30 Ω.in	125,000 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)	0.06 / 0.03	0.11 / 0.06
800°C (1470°F)	0.13 / 0.06	0.22 / 0.11
1200°C (2190°F)	0.23 / 0.13	0.40 / 0.23
1600°C (2910°F)	0.40 / 0.23	0.70 / 0.41
2000°C (3630°F)	0.56 / 0.35	0.97 / 0.61
Porosity	93%	93%
Carbon content	>99%	>99%
Standard purity 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 1100 mm OD

Additional shapes & sizes on request

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Our materials are in conformity with the RoHS-Directive (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment). Besides Mersen guarantees the application of the European Community REACH-Regulation (Registration, Evaluation, Authorization and Restriction of Chemical substances) to all its plants located in Europe.

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