

Rigid Carbon Insulation CVI 20-2000

GENERAL

Homogeneous carbon rigid insulation enhanced with a pyrocarbon deposit on the 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.

CVI 20-2000 is Calcarb® CBCF 15-2000 enhanced with pyrocarbon to give improved mechanical properties and resistance to chemical attack.

Ideal for applications with silicon monoxide or hydrogen concentrations in the hot zones.

This grade is only available in cylinder form.

CVI 20 - 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	12.4 +/- 1.87 lbs/ft ³	0.20 +/- 0.03 g/cm ³
Flexural Strength	507.7 psi	3.50 MPa
Compressive Strength		
// to fiber orientation	435.2 psi	3.00 MPa
⊥ to fiber orientation	217.5 psi	1.50 MPa
Electrical Resistivity	0.16 Ω.in	59,000 μΩ.cm
Coefficient of Thermal Expansion (0 to 2000°C)	1.7+/- 0.2 x 10 ⁻⁶ /°F	3.0 +/- 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
	Vacuum	Vacuum
400°C (750°F)	0.14	0.24
800°C (1470°F)	0.18	0.31
1200°C (2190°F)	0.25	0.44
1600°C (2910°F)	0.36	0.62
2000°C (3630°F)	0.51	0.88
Porosity	85%	85%
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:

Cylinders up to 1000 mm OD

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