

## Rigid Carbon Insulation CVI 24-2000

### 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 24-2000 is Calcarb® CBCF 18-2000 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.

CVI 24 -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	14.9 +/- 1.87 lbs/ft <sup>3</sup>	0.24 +/- 0.03 g/cm <sup>3</sup>
Flexural Strength	522.2 psi	3.60 MPa
Compressive Strength		
// to fiber orientation	377.1 psi	2.60 MPa
⊥ to fiber orientation	181.3 psi	1.25 MPa
Electrical Resistivity	0.20 Ω.in	88,000 μΩ.cm
Coefficient of Thermal Expansion (0 to 2000°C)	1.7+/- 0.2 x 10 <sup>-6</sup> /°F	3.0 +/- 0.3 x 10 <sup>-6</sup> /°C
Water absorption after 6 months in standard conditions	<0.1%	<0.1%
Thermal Conductivity	BTU-Ft/Ft <sup>2</sup> Hr°F	W/m <sup>2</sup> K
	Vacuum	Vacuum
400°C (750°F)	0.21	0.37
800°C (1470°F)	0.27	0.47
1200°C (2190°F)	0.34	0.59
1600°C (2910°F)	0.45	0.78
2000°C (3630°F)	0.65	1.13
Porosity	80%	80%
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 1000 x 500 x 100 mm

Cylinders up to 750 mm OD

Additional shapes & sizes on request

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