

## Rigid Carbon Insulation CVI 40-2000

### 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 40-2000 is Calcarb® CBCF 25-2000 enhanced with pyrocarbon to give improved mechanical properties and resistance to chemical attack.

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

CVI 40-2000 can be provided in a purified form.

Contact [sales.hlt@mersen.com](mailto:sales.hlt@mersen.com) for further information.

### PROPERTIES

	TYPICAL CHARACTERISTICS	
	English Units	SI Units
Bulk Density	24.9 +/- 2.49 lbs/ft <sup>3</sup>	0.40 +/- 0.04 g/cm <sup>3</sup>
Flexural Strength	1.17 kpsi	8.10 MPa
Compressive Strength		
// to fiber orientation	1.39 kpsi	9.6 MPa
⊥ to fiber orientation	551.2 psi	3.8 MPa
Electrical Resistivity	0.15 Ω.in	55,000 μΩ.cm
Coefficient of Thermal Expansion (0 to 2000°C)	1.98+/- 0.11 x 10 <sup>-6</sup> /°F	3.5 +/- 0.2 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/mK
	Vacuum	Vacuum
400°C (750°F)	2.22	3.85
800°C (1470°F)	2.32	4.02
1200°C (2190°F)	2.36	4.08
1600°C (2910°F)	2.45	4.24
2000°C (3630°F)	2.65	4.6
Porosity	75%	75%
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 50 mm

Cylinders up to 750 mm OD

Additional shapes & sizes on request

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**Contact:** Mersen Scotland Holytown Ltd.  
11 Woodside  
Eurocentral  
Holytown ML1 4XL - UK  
Tel.: +44 (0) 1698 838710  
Fax: +44 (0) 1698 838711  
[sales.hlt@mersen.com](mailto:sales.hlt@mersen.com)

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