

sicatec[®] 75

Silicon Carbide Blocks/Bricks,
Nitride Bonded



		Guaranteed Value	Average Value	Typical Value
Bulk Density: <i>ISO 5017</i>	 Kg/m ³	2650	2700	2710
	 Lbs./cu.ft.	165	168	169
Max. Service Temperature:	 °C	1500	1550	1600
	 °F	2732	2822	2912
Apparent Porosity: <i>ISO 5017</i>	 %	16.5	14.5	14.3
Cold Crushing Strength: <i>ISO 10059/1-92</i>	 MPa	180	210	220
	 psi	26100	30450	31900
Modulus of Rupture: <i>ISO 5014 & 5013</i>	@ 20°C - 950°C..... MPa	45	50	55
	@ 68°F - 1742°F psi	6525	7250	7975
Cryolite Resistance (CRT): <i>LIRR Method</i>	Volume loss %	12	9.0	8.5
Degree of Corrosion <i>LIRR Method</i>		4	3	3
Oxidation Resistance: 100 H at 950°C (1742°F)	Change in weight..... %	0.65	0.53	0.52
Chemical Composition: (Typical average values)	SiC..... (Silicon Carbide) %	72	73.5	75
	Si ₃ N ₄ (Silicon Nitride) %	18.5	19.5	20
	Si (Silicon) %	0.6	0.55	0.5
	Fe ₂ O ₃ (Ferric Oxide) %	0.7	0.6	0.5
	Al ₂ O ₃ (Aluminium Oxide) %	0.65	0.6	0.5
	CaO (Calcium Oxide) %	0.3	0.22	0.2
	O..... (Oxygen) (total bound) %	0.9	0.7	0.6
Thermal Expansion: <i>DIN 51045</i>	@ 600°C (1112°F)	4.7 x 10 ⁻⁶ /K		
	@ 800°C (1472°F)	4.6 x 10 ⁻⁶ /K		
	@ 1000°C (1832°F)	4.5 x 10 ⁻⁶ /K		
Reheat Linear Change: <i>ISO 2478</i>	1000°C (1832°F) 8 H..... %	0 - 0.1		

p.t.o

Thermal Conductivity:	@ 300°C	36
<i>DIN 51936 (laser flash method)</i>	@ 600°C	27
W/(m·K)	@ 900°C	20
Btu/(sq.ft·h·°F/in.)	@ 572°F	250
	@ 1112°F	187
	@ 1652°F	139

Dimensional Tolerances:	Length	%	± 0.5
<i>ASTM: C 134</i>	Width	%	± 0.5
	Thickness	mm	± 1.0

Warpage:	Length & Width > 300 mm	mm	± 2.0
measured across/along	Length & Width < 300 mm	mm	± 1.5
an individual block	Thickness	mm	± 1.0

HS Tariff Number: 6902900000

Sizes: sicatec 75 is available in all standard sizes within the following max. dimensions:

Length: 900 mm
Width: 650 mm
Thickness: 25 to 130 mm

Special shapes, sizes and thicknesses within the 25 to 130 mm range are available upon request.

Packing: Strong, double deck, export pallets with heavy paper separation between each layer and cardboard separation between each block. Pallets are equipped with 4 vertical and 4 horizontal fibre corners, 2 x 2 nylon straps, 1 shrink film bag covering the entire pallet + finally several layers of shrink wrapping

Storage: Always store under dry conditions

AQL 6.5.

Physical and thermal values are based upon regular, average test results.

No warranty or guarantee is implied on the data, which are given in good faith.

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An ISO-9001, ISO-14001:2004 and OHSAS
18001:2007 certified company

