

# sicatec<sup>®</sup> 95

Silicon Carbide Blocks/Bricks,  
Self-bonded



simonsen<sup>®</sup>

<b>Bulk Density:</b> <i>ISO 5017</i>	..... Kg/m <sup>3</sup>	2760
	..... Lbs./cu.ft.	172
<b>Max. Service Temperature:</b>	..... °C	1600
	..... °F	2912
<b>Apparent Porosity:</b> <i>ISO 5017</i>	..... %	13.5
<b>Cold Crushing Strength:</b> <i>ISO 10059/1-92</i>	..... MPa	200
	..... psi	29000
<b>Modulus of Rupture:</b> <i>ISO 5014 &amp; 5013</i>	@ 20°C - 950°C ..... MPa	45-55
	@ 68°F - 1742°F ..... psi	6525-7975
<b>Cryolite Resistance (CRT):</b>	Volume loss (LIRR method) ..... %	3-6
	(Sintef method) ..... %	1-4
<b>Degree of Corrosion</b> <i>LIRR Method</i>	.....	1-2
<b>Oxidation Resistance:</b> 100 H at 950°C (1742°F)	Change in weight (Sintef method) ..... %	1.8
	(ASTM C863) ..... %	2.7
<b>Thermal Expansion:</b> <i>DIN 51045</i>	@ 600°C (1112°F) ..... 4.0 x 10 <sup>-6</sup> /K %	0.23
	@ 800°C (1472°F) ..... 4.3 x 10 <sup>-6</sup> /K %	0.34
	@ 1000°C (1832°F) ..... 4.6 x 10 <sup>-6</sup> /K %	0.45
<b>Reheat Linear Change:</b> <i>ISO 2478</i>	1000°C (1832°F) 8 H ..... %	± 0.1
<b>Specific Heat:</b> Cp J/g·K	@ 600°C ..... 1.16	
	@ 800°C ..... 1.23	
	@ 1000°C ..... 1.26	
<b>Thermal Conductivity:</b> <i>DIN 51936 (laser flash method)</i> W/(m·K)	@ 600°C ..... 33	
	@ 800°C ..... 29	
	@ 1000°C ..... 25	
	Btu/(sq.ft·h·°F/in.) @ 1112°F ..... 229	
	@ 1472°F ..... 201	
	@ 1832°F ..... 173	

<b>Chemical Composition:</b> (Typical average values)	SiC (Silicon Carbide).....%	95
	Si (Silicon).....%	0.6
	Fe <sub>2</sub> O <sub>3</sub> (Ferric Oxide).....%	0.5
	Al <sub>2</sub> O <sub>3</sub> (Aluminium Oxide).....%	0.5
	CaO (Calcium Oxide).....%	0.2
	O (Oxygen) (total bound).....%	1.0

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

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

**HS Tariff Number:** ..... 6902900000

**Sizes:** sicatec 95 is available in all standard sizes within the following max. dimensions:

- Length:** 700 mm
- Width:** 500 mm
- Thickness:** 40 to 150 mm

Special shapes, sizes and thicknesses within the 40 to 150 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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Producer:  
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**An ISO-9001, ISO-14001:2004 and OHSAS 18001:2007 certified company**

