

# Material Data Sheet

## Forceram<sup>®</sup>

Silicon Carbide (SiC)

Technical data					
<b>Chemical analysis</b>		%	68	%	68
<b>SiC</b>					
<b>Bond</b>		%	25	%	25
<b>Bulk density</b>		kg/dm <sup>3</sup>	2.8	g/cc	2.8
<b>Fracture Toughness</b>		MPam <sup>1/2</sup>	3.6	MPa m <sup>1/2</sup>	3.6
<b>Rockwell Hardness</b>		RHA	77	RHA	77
<b>Modulus of rupture</b>					
	<b>RT</b>	MPa	160	psi	23,200
	<b>1400°C</b>	MPa	180	psi	26,100
<b>Modulus of elasticity</b>	<b>RT</b>	GPa	250	GPa	250
<b>Thermal conductivity</b>		W/(m*K)	20	BTU-in.	140
<b>1000°C</b>				hr.ft. <sup>2</sup> °F	
<b>Thermal expansion</b>	$\alpha$ (RT...1100°C)	K <sup>-1</sup> *10 <sup>-6</sup>	4.4	K <sup>-1</sup> *10 <sup>-6</sup>	4.4

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