



# Vulcasil S

Combining one of the hardest substances known, with mullite, oxide or silicon nitride bonding makes a range of materials with high hot strength and good wear properties. Available as both pressed and cast materials, allowing special shapes to be produced. Operating temperatures up to 1450°C.

## VULCASIL S - SILICON CARBIDE: Silicon nitride bonded

Product Reference	Description	Chemical Analysis %			Bulk Density g/cm <sup>3</sup>
		SiC	Si <sub>3</sub> N <sub>4</sub>	Other	
		Wt %	Wt %	Wt %	
SRP46	A premium grade pressed silicon nitride bonded SiC material.	75	24	1	2.6
SRP66	A silicon nitride bonded SiC pressed refractory with excellent wear resistance.	70	20	10	2.5
SRP79	A fine grained general purpose silicon nitride bonded SiC pressed refractory.	75	24	1	2.6
SRP84	Fine grained, oxidation resistant silicon nitride bonded SiC pressed refractory.	83	17	1	2.5
SSC08	A cast silicon nitride bonded SiC with exceptional wear resistance and high resistance to thermal shock and chemical attack.	73	22	5	2.6
SSC15	Slip cast, high strength silicon nitride bonded SiC for setter applications.	77	22	-	2.5
STC08	Cast wear resistant silicon nitride bonded SiC.	77	22	-	2.5

Product Reference	Apparent Porosity	Cold Crushing Strength	Thermal Conductivity @1200 C	Maximum Service Temperature	Typical applications	Comments
	%	MPa	W/m <sup>2</sup> K	°C		
SRP46	16	150	16	1450	Mixed fuel burner quarls, high temperature kiln furniture (batts, saggars), aluminium reduction cell linings, blast furnace tuyere zones, EFW boiler tiles and applications requiring exceptional hot strength, abrasion resistance and chemical stability.	Pressed
SRP66	18	-	15	1450	Tuyere protection tiles, wear resistance and other intricate shapes.	Pressed - Very fine
SRP79	16	150	16	1450	Mixed fuel burner quarls, high temperature kiln furniture (batts, saggars), Energy from Waste tiles and other applications requiring exceptional hot strength, abrasion resistance and chemical stability.	Pressed - Fine
SRP84	16	150	16	1450	Mixed fuel burner quarls, high temperature kiln furniture (batts, saggars), Energy from Waste tiles and other applications requiring exceptional hot strength, abrasion resistance and chemical stability.	Pressed - Fine
SSC08	16	-	15	1450	Wear resistant linings and special shapes for contact with non-ferrous metals.	Cast
SSC15	6	-	11	1450	Thin kiln batts requiring exceptional strength and thermal shock resistance.	Cast
STC08	18	-	11	500	Wear resistant linings and special shapes for contact with non-ferrous metals.	Cast

**VULCASIL S - SILICON CARBIDE: Mullite and oxide bonded**

Product Reference	Description	Chemical Analysis %			Bulk Density g/cm <sup>3</sup>
		SiC	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	
		Wt %	Wt %	Wt %	
STC02	A cast mullite bonded 93% SiC material with good hot strength and abrasion resistance.	93	5	2	2.6
SRP04	A general purpose pressed mullite bonded 93% SiC material with good hot strength and abrasion resistance.	93	4	2	2.6
SRP49	A special refractory glass bonded 91% SiC for excellent oxidation resistance in the range 850° to 1250°C.	91	5	1	2.6
SRP61	A high purity oxide bonded 90% SiC with good strength at high temperatures.	90	9	1	2.6
SRP64	A high purity oxide bonded 89% SiC with good strength at high temperatures.	89	10	-	2.6
SRP67	A 90% SiC with a special refractory oxide bond, exhibiting excellent hot strength.	90	10	-	2.7

Product Reference	Apparent Porosity	Cold Crushing Strength	Thermal Conductivity @1200 C	Maximum Service Temperature	Typical applications	Comments
	%	MPa	W/m <sup>2</sup> K	°C		
STC02	18	90	15	1450	Saggars and muffles. Tap holes blocks, launders in the aluminium industry. Special shapes for the copper and zinc industries.	Cast
SRP04	18	95	15	1450	Skid rails, hearth tiles, pulverised fuel burner quarls and kiln furniture.	Pressed
SRP49	15	120	15	1400	Boiler wall protection tiles and shapes for Energy from Waste incinerators. Muffle bricks for ceramic and enamelling furnaces.	Pressed
SRP61	16	90	11	1450	High temperature kiln furniture tiles and props. Linings of copper shaft and melting furnaces.	Pressed
SRP64	16	90	11	1450	High temperature kiln furniture, sandwich tile construction.	Pressed - Fine
SRP67	12	120	12	1450	Tiles and kiln furniture.	Pressed

