

Datasheet - Vulcasil ZEROX (Patent pending)

VULCASIL ZEROX

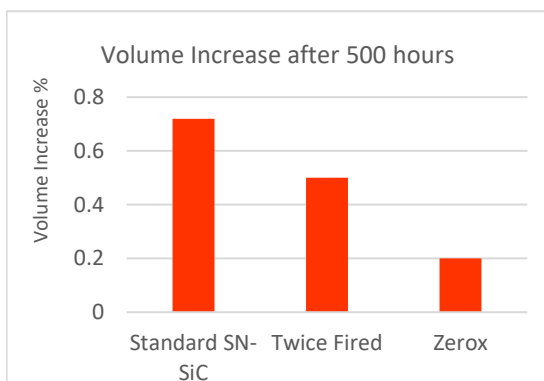
Vulcasil 'ZEROX' is a new industry leading silicon nitride bonded silicon carbide refractory. It has been developed to have significantly superior oxidation resistance than standard products.

Benefits to the user from the increased resistance to oxidation include longer refractory life and so longer time between maintenance; allowing the user to keep their process running for longer, reducing refractory material costs and reducing maintenance costs.

Applications benefitting from this premium product include refractories for waste to energy, kiln furniture and other applications where oxidation limits the life and performance of silicon carbide refractories.



Oxidation Resistance.
Change in volume of ZEROX versus standard and twice fired silicon-nitride bonded silicon carbide in ASTM C863 steam oxidation test.



Property	Typical	Units	Method
Bulk density	2.6	g/cm ³	ASTM C20
Apparent porosity	14	%	ASTM C20
Cold crushing strength	170	MPa	ASTM C133
Modulus of rupture (3 point)	40	MPa	ASTM C133
Oxidation resistance by steam oxidation at 900°C for 500 hours	0.2	% volume change	ASTM C863
Thermal conductivity at 900°C	16	W/m/°C	ASTM E1461
Specific heat capacity at 900°C	1340	J/kg/°C	ASTM E1461
Composition			
Silicon carbide	73	Wt.%	XRD
Silicon nitride phases	24		XRF
Fe ₂ O ₃	<0.4		LECO
Other	<3.0		

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