

Oxide Bonded Silicon Carbide(O-SiC)

O-SiC is used for firing general chinaware and ceramic product (temperature below 1,450°C), is made by SiC bonded by Silicon Oxide (Si_2O_3), and technically called "Oxide Bonded Silicon Carbide".

This SiC refractory has very high thermal conductivity (almost 10 times higher than mullite refractory) and high radiation rate of Long-wavelength infrared that bring very high heat efficiency toward products.

In terms of cost performance for firing general chinaware and ceramic products, this Oxide Bonded SiC is the most valuable and suitable refractory.

Maximum recommended service temperature of our SiC Plate (O-SiC) is 1,450°C. When the application temperature is over 1,450°C, you should choose Recrystallized SiC (Re-SiC) / Max. 1,600°C or Alumina Setter / Max. 1,750°C.

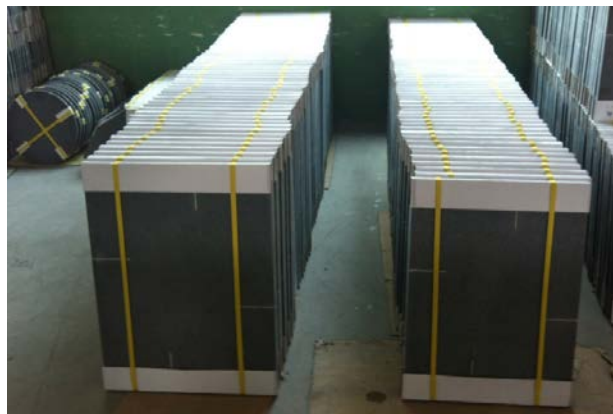
Application

Oxide bonded silicon carbide can be used for ceramics for daily use, Electronic ceramics, sanitary ceramics, Emery wheel, High-pressure electric ceramics, Magnetic material etc.

Applied to ceramics for daily use

Oxide bonded silicon carbide can offer good heat stability, high mechanical strength at high temperature, excellent thermal stability and distortion resistance at high temperature. It can be used in daily ceramics widely, such as reinforced ceramics, white ceramic and high-class ceramics.

Through the burning of 1400°C, its products can it can save the energy and increase the volume of kiln therefore it can increase the efficiency and economy. At the same time, our kiln furniture is harmless to environment.



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Applied to sanitary ceramics

Oxide bonded silicon carbide can offer high mechanical strength at high temperature, excellent heat stability, good distortion resistance at high temperature and oxidization resistance. It can be used in high class washing basin, high-class bow and bowl urinal. Through the burning of 1300°C, it provides high enamel and high abrasion resistance. It can keep gloss and quality for 10 years.



Applied to dishware or tableware

Oxide bonded silicon carbide saves more than 30% energy mainly used for lustration fuel kiln by removing plates from sintering household-ceramic kiln



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Specifications of Oxide bonded silicon carbide

Typical Quality Analysis		Oxide Bonded
		SiC (O-SiC)
	Max. service temperature(°C)	1450
	Chemical CompositionSiC (%)	90
	SiO ₂	8
	Apparent Porosity (%)	7-8
	Bulk Density (g/cm ³)	2.75
	Modulus of Rupture	50
	at RT (Mpa)	
	1400°C	55
	Thermal Expansion	4.2-4.8
	at 1000°C (10 ⁻⁶ K ⁻¹)	
	Thermal Conductivity	13.5-14.5
	at 1000°C (W / mK)	

Product Features

1. Excellent high temperature resistant, intensity.
2. Excellent thermal shock properties.
3. Excellent oxidation resistance.
4. Excellent corrosion resistance at high temperature.
5. High thermal conductivity.
6. High abrasion resistance.

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Precaution to the Users



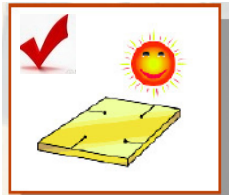
The storage spot of NBSiC kiln furniture should keep dried, away from mist and wet.



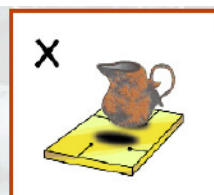
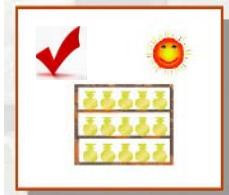
Do not pile the NBSiC kiln furniture on the top of another, it is preferable to put them in a vertical order.



After the NBSiC kiln furniture plate is sprayed with alumina coating, it should be laid dried around the kiln before use.



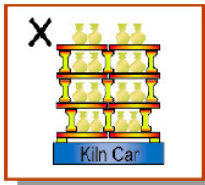
To get longer use and avoid damage, the NBSiC kiln furniture should lay dried before using.



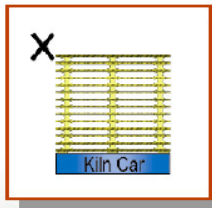
After the product is glazed, the bottom of glazed product should be cleaned.



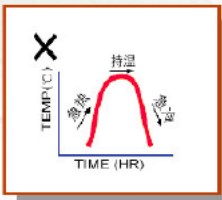
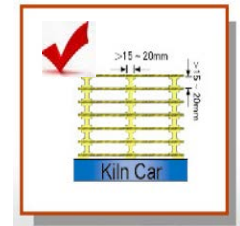
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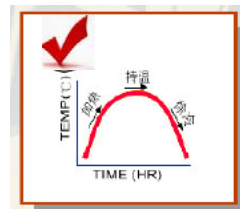
When building NBSiC kiln furniture the supporter should be aligned.



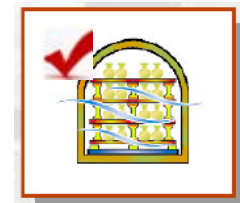
The distance between NBSiC kiln furniture should keep upon 15-20mm



The design of sintering curve should meet the requirement of normal operation. Avoid heating or cooling in a short time.



When cooling takes place, it should be cooled gradually, avoiding exerting cold air to get a fast cooling.



When moving from the kiln, one should avoid carrying it at high temperature or hitting.

