

■ **Introduction of High hardness reaction bonded silicon carbide rods:**

Reaction bonded silicon carbide rods are a type of ceramic material that is known for its exceptional hardness and strength. These rods are made by combining silicon carbide powder with a small amount of carbon, forming a mixture that is then heated to high temperatures in a controlled environment. During this process, the carbon reacts with the silicon to form silicon carbide, creating a dense and durable ceramic material.

■ **Technical data sheet of High hardness reaction bonded silicon carbide rods:**

Item	Unit	Data
Temperature of application	°C	1380°C
Density	G/cm3	>3.02
Open porosity	%	<0.1
Bending strength	Mpa	250 (20°C)
	MPa	280 (1200°C )
Modulus of elasticity	GPa	330 (20°C)
	GPa	300 ( 1200°C )
Thermal conductivity	W/m.k	45 (1200°C )
Coefficient of thermal expansion	K-1 ×10-6	4.5
Rigidity	/	13
Acid-proof alkaline	/	excellent

■ **Advantages of High hardness reaction bonded silicon carbide rods:**

(1) The resulting High temperature resistant rods have a hardness that is comparable to diamond, making them ideal for use in applications that require high wear resistance and durability. They are commonly used in high-temperature environments, such as in furnaces and kilns, where they can withstand extreme temperatures and thermal shock without cracking or degrading.

(2) In addition to their high hardness, Reaction bonded silicon carbide ceramic rods also have excellent thermal conductivity and chemical resistance, making them well-suited for use in harsh chemical environments. They are also lightweight and have a low coefficient of thermal expansion, making them ideal for use in applications that require precise and stable dimensions.

(3) High hardness silicon carbide rods are a versatile and durable material that can be used in a wide range of industrial applications. Their exceptional hardness and strength make them a popular choice for use in high-temperature environments, while their thermal conductivity and chemical resistance make them well-suited for use in harsh chemical environments.

