



### Cordierite Ceramic Heating Parts

Nextgen Cordierite ceramic heating parts, made of cordierite ceramic, is a type of magnesium aluminum silicate with particularly good thermal shock properties. Nextgen Advanced Materials supplies cordierite ceramic heating parts with high quality and fast delivery and customized products are also available.

#### Product Description

As the professional manufacture, we would like to provide you Nextgen Cordierite Ceramic Heating Parts. Cordierite ceramic heating parts are made of silicate ceramic cordierite ( $Mg_2Al_4Si_5O_{18}$ ). Cordierite is a commonly used structure ceramic material which has the advantage of energy-efficiency and high-temperature resistance. Cordierite heating parts are widely used on barbeque grill, burn oven, convection oven, gas oven, rotary oven, natural gas heater, space heater crucible and various heating equipment, etc.



#### Cordierite Heating Parts Specifications

Properties	Units	Test	Value
<b>Physical</b>			
Chemical Formula	–	–	$2MgO-2Al_2O_3-5SiO_2$
Density, r	g/cm <sup>3</sup>	ASTM C20	2.60
Color	–	–	off-white
Crystal Structure	–	–	orthorhombic
Water Absorption	% @R.T.	ASTM C373	0.02 – 3.2

Hardness	Moh's	—	7
Hardness	knoop (kg/mm <sup>2</sup> )	Knoop 100g	—
<b>Mechanical</b>			
Compressive Strength	MPa @ R.T.	ASTM C773	350
Tensile Strength	MPa @ R.T.	ACMA Test #4	25.5
Modulus of Elasticity (Young's Mod.)	GPa	ASTM C848	70
Flexural Strength (MOR)	MPa @ R.T.	ASTM F417	117
Poisson's Ratio, $\nu$	—	ASTM C818	0.21
Fracture Toughness, $K_{Ic}$	MPa x m <sup>1/2</sup>	Notched Beam Test	—
<b>Thermal</b>			
Max. Use Temperature (* denotes inert atm.)	°C	No load cond.	1371
Thermal Shock Resistance	DT (°C)	Quenching	500
Thermal Conductivity	W/m-K @ R.T.	ASTM C408	3.0
Coefficient of Linear Thermal Expansion, $\alpha_l$	mm/m-°C (~25°C through $\pm 1000^\circ\text{C}$ )	ASTM C372	1.7
Specific Heat, $c_p$	cal/g-°C @ R.T.	ASTM C351	0.35
<b>Electrical</b>			
Dielectric Constant	1MHz @ R.T.	ASTM D150	4.7
Dielectric Strength	kV/mm	ASTM D116	5.11
Electrical Resistivity	Wcm @ R.T.	ASTM D1829	1014