Thermal Conductive Aluminum Nitride Sheet AIN Ceramic Aluminum Nitride Plate

Our Product Introduction

Basic Information

- Place of Origin: Zhengzhou ,China
- Brand Name: Rongsheng Xinwei
- Certification: ISO9001
- Model Number: Rongsheng
- Minimum Order Quantity: 100 Pieces
- Price: 200-800USD
- Packaging Details: packed on wooden pallets, with water-proof cover, and tightened with plastic/steel bandages
- Delivery Time: 20-30DAYS
- Payment Terms: TT; L/C
- Supply Ability: 2000tons /month

Product Specification

- Availability: High, Medium, Low
- Durability: High, Medium, Low
- Environmental Impact: High, Medium, Low
- Flammability: High, Medium, Low
- Material: Plastic, Metal, Wood, Etc.
- Moisture Resistance: High, Medium, Low
- Name: Other Materials
- Recyclability: High, Medium, Low
- Texture: Smooth, Rough, Etc.
- Toxicity: High, Medium, Low
- Highlight: **Thermal Conductive Aluminum Nitride Sheet**, **Aluminum Nitride Sheet AIN Ceramic**, **AIN Ceramic Aluminum Nitride Plate**

Our Product Introduction

Product Description

Description of High Quality Thermal Conductive AIN Ceramic Aluminum Nitride Plate

Aluminum nitride (AIN) ceramic is a high-performance material that combines high thermal conductivity with high electrical resistivity. It is a covalently-bonded ceramic, meaning that the atoms are held together by strong covalent bonds. This gives AIN ceramic its unique properties, including:

High thermal conductivity: AIN ceramic has a thermal conductivity of up to 321 W/mK, which is higher than many metals. This makes it an ideal material for heat dissipation applications.

High electrical resistivity: AIN ceramic is an excellent electrical insulator. This makes it ideal for use in electrical and electronic applications.

Low thermal expansion: AIN ceramic has a low coefficient of thermal expansion, meaning that it expands and contracts very little with changes in temperature. This makes it a good choice for applications where dimensional stability is important.
Good metallization capacity: AIN ceramic can be easily metallized, which makes it compatible with a variety of manufacturing processes.

Application of High Quality Thermal Conductive AlN Ceramic Aluminum Nitride Plate

(1) Aluminum nitride ceramic substrate, with high thermal conductivity, low expansion coefficient, high strength, high temperature resistance, chemical corrosion resistance, high resistivity and low dielectric loss, is an ideal heat dissipation substrate and packaging material for large-scale integrated circuits.

(2) Aluminum nitride is a new wear-resistant ceramic material with high hardness, which is superior to traditional aluminum oxide. It is used for parts with severe wear.

(3) Using the heat resistance, melt erosion resistance and thermal shock resistance of AlN ceramics, GaAs crystal crucibles, Al evaporating dishes, magnetohydrodynamic power generation devices and corrosion resistant parts of high-temperature turbines can be made, and their optical properties can be used as infrared windows. AlN thin films can be made into high-frequency piezoelectric components, VLSI substrates, etc.

(4) Aluminum nitride is heat-resistant, resistant to corrosion of molten metal, and stable to acid. When the new surface of AlN is exposed to humid air, it will react to form an extremely thin oxide film, which can be used as the crucible for smelting aluminum, copper, silver, lead and other metals, and as the sintering and casting die material.

Parameter of AlN Ceramic Aluminum Nitride Plate

Item	Unit	Property Index		
		AN170	AN200	
Color	-	Gray	Gray	
Water Absorption	%	0	0	
Volume Density	g/cm3	≥3.3	≥3.3	
Surface Roughness	Um	0.1-0.6	0.1-0.6	
Camber	Length‰	≤2	≤2	
Thermal Conductivity(20)	W/m.k	≥170	≥200	
Coefficient of thermal expansion	20 ~300 (*10^{-6}/)	4.6	4.6	
	40 ~800 (*10^{-6}/)	5.2	5.2	
Bending Strength	Mpa	≥450	≥300	
Modulus Strength	Gpa	320	310	
Moh's hardness	-	8	8	
Dielectric Strength	KV/mm	≥17	≥16	
Volume Resistivity	Ω.cm	≥10^{14}	≥10^{14}	
Dielectric constant	-	9	8.6	
Dielectric Loss	X10^{-4}	2.98	2	

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