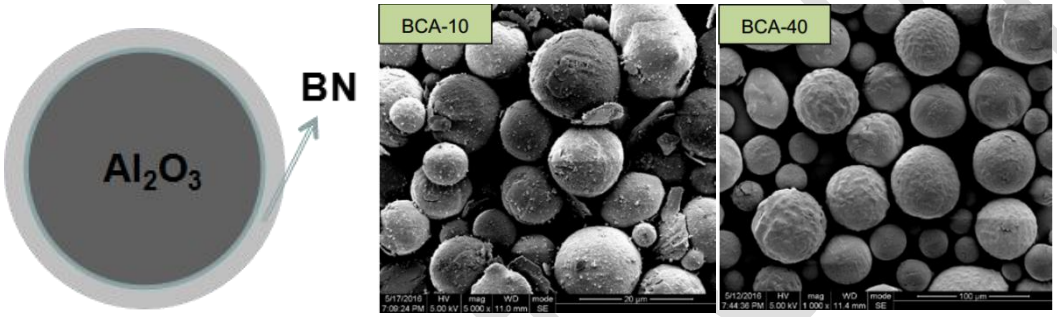
BN 包覆型球形氧化铝 BCA

BN Coating Spherical Alumina

产品介绍

氮化硼（BN）包覆球型氧化铝 BCA 系列产品是采用我司拥有自主知识产权的特殊加工工艺技术，实现球型氧化铝表层被一层致密的氮化硼包裹（如上图所示），该产品内芯球铝、外层 BN 和复合物整体的颗粒尺寸能够实现有效控制。氧化铝表层包覆的 BN 分布均一，且整体球形度达到 90%以上。



Product Introduction

The product of Boron Nitride (BN) coating spherical alumina- BCA series is prepared by adopted our own independent intellectual property rights of special processing technology, to achieve that outer surface of spherical alumina is covered by compact boron nitride (as shown in pictures above). The particle sizes of the inner core spherical alumina, the outer layer of BN and the whole composite can be effectively controlled. The distribution of BN on the surface of alumina is uniform, and the sphericity of BCA is much higher than 90%.

产品特点

BN 单晶的导热系数为 125 W/(m·k)，而氧化铝为 30 W/(m·k)，远高于氧化铝，导热性能十分优异。此外，它的密度小，莫氏硬度低，很多性质跟石墨相似，俗称白石墨。但是 BN 常以片状的形式存在，不利于热传导的多向进行，并且颗粒较小，单位质量的比表面积大，限制了 BN 填充量的增加。而本产品以球型氧化铝为基底，既能实现复合产品的高填充率，又能有效利用 BN 高导热性能，此外，因为 BN 莫氏硬度低，有助于产品应用中降低对生产设备的损耗，尤其对精密仪器具有一定的保护作用。

1.降低生产设备磨损，延长设备寿命

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2.产品内外层厚度可控

3.高填充性及高流动性

4.高导热率，低离子杂质含量

Features

The thermal conductivity of single crystal BN is 125 W / (m·k), while the alumina is 30 W / (m·k), much higher than the alumina, so the nature of its thermal conductivity is excellent. Besides, both the density and Mohs hardness are relatively low, commonly known as white graphite. However, BN often exists in the form of flakes, which is not conducive to multi-direction thermal conduction. More seriously, the smaller particles leads to larger specific surface area, limiting the increase of filling in BN. Based on spherical alumina, one side, the composite products can achieve a high filling rate, another side, High thermal conductivity of BN can be used effectively. in addition, the low Mohs hardness of BN is beneficial to protect the production equipment to avoid equipment loss, especially for precision instruments.

1. Reduce the wear and tear of production equipment, extend life of equipment

2. The control of inner and outer layer thickness for the product is available

3. High filling and high mobility

4. High thermal conductivity, low ion impurity content

关键应用

1.热界面材料：导热硅胶垫、导热硅脂、导热灌封胶、导热双面胶、导热相变化材料等；

2.导热工程塑料：LED 灯罩、开关外壳，笔记本外壳，手机壳体、马达线圈骨架等；

3.高导热铝基覆铜板（Al Based Copper Clad Laminates -CCL）：大功率 LED 灯、电源电路、LED 灯线路板等。

Applications

1. Thermal Interface Materials: thermal silica pads, thermal grease, thermal conductivity potting, thermal double-sided adhesive, thermal conductivity phase change materials;

2. Thermal Engineering Plastics: LED lamp cover, switch shell, laptop shell, phone shell, the motor coil skeleton, and so on;

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3. High thermal conductivity Aluminum based CCL: High-power LED lights, power supply circuit, LED lamp circuit boards.

产品技术指标

技术指标		单位	BCA-10 典型值	BCA-40 典型值
粒度分布	D10	μm	4.90	23.00
	D50	μm	8.18	42.67
	D90	μm	14.73	70.76
比表面积		m^2/g	0.44	0.66
电导率		μS/cm	97.20	71.20
pH		--	8.87	8.42
含水率		%	0.05	0.04
真实密度		g/cm^3	3.78	3.73
球化率		%	90	95

Product Specifications

Technique Date		Unit	BCA-10 Typical Value	BCA-40 Typical Value
Particle Size	D10	μm	4.90	23.00
	D50	μm	8.18	42.67
	D90	μm	14.73	70.76
Specific Surface Area		m^2/g	0.44	0.66
Electrical Conductivity		μS/cm	97.20	71.20
pH		--	8.87	8.42
Moisture		%	0.05	0.04
Density		g/cm^3	3.78	3.73
Spheroidization		%	90	95

Remarks: The characteristic values recorded in the table are typical for reference not the highest specification unless specified. Please contact your sales representatives for specifications if you encounter any question.

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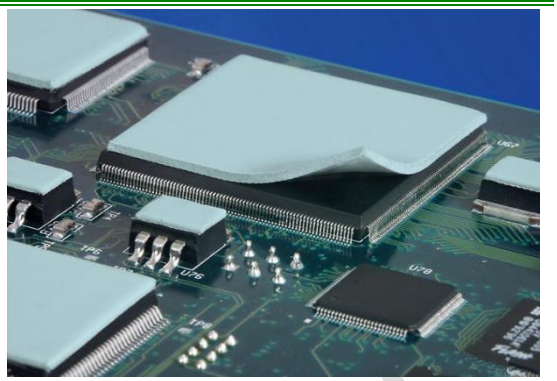

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