

# 高纯BN，六方氮化硼粉末

产品名称	高纯BN，六方氮化硼粉末
公司名称	辽宁硼达科技有限公司
价格	.00/个
规格参数	
公司地址	辽宁省营口市沿海产业基地
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## 产品详情

特性：氮化硼是由氮原子和硼原子构成的晶体，该晶体结构分为：六方氮化硼（hbn）、密排六方氮化硼（wbn）和立方氮化硼，其中六方氮化硼的晶体结构具有类似的石墨层状结构,呈现松散、润滑、易吸潮、质轻等性状的白色粉末，所以又称“白色石墨”。理论密度2.27g/cm<sup>3</sup>,比重：2.43，莫氏硬度为2.六方氮化硼是具有良好的电绝缘性，导热性，化学稳定性，无明显熔点，在0.1mpa氮气中3000，在中性还原气氛中，耐热到2000，在氮和氩中使用温度可达到2800，在氧气气氛中稳定性较差，使用温度1000以下。六方氮化硼的膨胀系数相当于石英，但导热率是石英的十倍。在高温时 also 具有良好的润滑性，是一种优良的高温固体润滑剂，有很强的中子吸收能力，化学性质稳定，对几乎所有熔融金属都具化学惰性。

六方氮化硼不溶冷水，水煮沸时水解非常缓慢并产生少量的硼酸和氨，与弱酸和强碱在室温下均不起反应，微溶于热酸，用熔融的氢氧化钠，氢氧化钾处理才能分解。对各种无机酸、碱、盐溶液及有机溶剂均有相当的抗腐能力。

characteristic : amorphous boron is a kind of black or brown powder. active in chemicl property, boron is odourless with the density of 1.73. in the air and normal temperature, it is stable. when heated to 300, amorphous boron can be oxidized. when heated to 700, it can be combustibile, and the flame takes on the color of red. however, the flame looks green when boron is slighely gasified boron does not dissolve in water, hydrochloric acid, ethyl alcohol, ether, sulphuric acid, nitric acid and moltten metales. at high temperature, boron interacts with oxygen, nitrigen, sulphur, halogen and carbon. it also combines with nany metals directly to form metal compounds. in addition, it nteracts with organic compounds to form organic boron synthesis.

产品等级	主含量	游离氧化硼	粒度 (d50) (μm)
特级品	99%	0.4%	0.5—3.0
一级品	98%	0.5%	0.5—3.0
二级品	97%	0.5%	0.5—3.0

包装：1公斤/铝铂纸袋10公斤/纸箱20公斤/纸箱

technical batch standard :

contents of bn	b 2 o3	granularity ( d50 ) ( $\mu m$ )
99%	0.4%	0.5—3.0
98%	0.5%	0.5—3.0
97%	0.5%	0.5—3.0

packing : 1kg/bag

10kg/carton

20kg/carton

氮化硼参数：1、高耐热性：3000 升华，其强度1800 为室温的2倍，1500 空冷至室温数十次不破裂，在惰性气体中2800 不软化。2、高导热系数：热压制品为33w/m.k和纯铁一样，在530 以上是陶瓷材料中导热最大的材料。3、低热膨胀系数： $2 \times 10^{-6}$ 的膨胀系数仅次于石英玻璃，是陶瓷中最小的，加上它具有高导热性，所以抗热震性能很好。4、优良的电性能：高温绝缘性好，25 为1014 -cm,2000 还可以达到103 -cm,是陶瓷中最好的高温绝缘材料，击穿电压3kv/mv,低介电损耗108hz时为 $2.5 \times 10^{-4}$ ，介电常数为4，可透微波和红外线。5、良好的耐腐蚀性：与一般金属（铁、铜、铝、铅等）、稀土金属，贵金属，半导体材料（锗、硅、砷化钾），玻璃，熔盐（水晶石、氟化物、炉渣）、无机酸、碱不反应。6、低的摩擦系数：u为0.16，高温下不增大，比二硫化钼，石墨耐高温，氧化气氛可用到900 ，真空下可用到2000 。7、高纯度含硼高：其杂质含量小于10ppm，而含硼大于43.6%。8、可机械加工性：其硬度为莫氏2，所以可用一般机械加工方法加工成精度很高的零部件制品。

high heat resistance: bn ' s sublimation is 3000 ; its intensity is 1800 which is twice as room temperature; dcade times of non-rupture from 1500 air-cooled to room temperature; non-soften at 2800 in inert gas.high thermal conductivity: its thermal conductivity as hot embossing products is 33w/m.k, which is same as pure iron. among ceramic materials whose thermal conductivity are above 530 , boronnitride is the best material in terms of thermal conductivity.low coefficient of thermal expansion: the coefficient of thermal expansion of bn is  $2 \times 10^{-6}$  , which is only preceded by quartz glass. bn ' s thermal expansion is the lowest among ceramic materials. the thermal shock resistance of bn is also brilliant as the results of its high thermal conductivity and low thermal expansion.excellent electrical properties: its high-temperature insulation is excellent; its insulation are 1014 -cm at 25 and 103 -cm at 2000 . bn is the best high temperature insulation material among ceramic materials; its breakdown voltage is 3kv/mm; its insulation is  $2.5 \times 10^{-4}$  when the low dielectric loss is 108hz; its permittivity is 4. bn also can pass through microwave and infrared.high corrosion resistance: bn does not react with general metals (iron, copper, aluminum, lead and so on), rare earth metals, precious metals, semiconductor materials (germanium, silicon, potassium arsenide), glass, molten salt (crytal stone, fluoride, slag), inorganic acid and alkali.low coefficient of friction: the u of bn is 0.16, which will not further enlarge in high temperature, and it is much better than molybdenum disulfide and graphite. bn can be used at 900 in oxidation atmosphere and at 2000 in vacuum.high purity with high b: its impurity conten < 10ppm, and its content of b > 43.6%.machinery processing: its mohs hardness is 2. therefore, bn can be used to process high precision parts and components by normal processing skill

应用范围：氮化硼是一种无毒、耐高温、耐腐蚀、高导热、高绝缘，润滑性能优良的材料。既是电绝缘体又是热导体，高温状态下的特殊电解、电阻材料，高压高频电及等离子弧的绝缘体。可作为半导体的固相掺杂材料、抗氧化或抗水的润滑脂。高温润滑剂和模型的脱模剂，氮化硼粉末还可以作为玻璃微珠的防粘剂，玻璃和金属成型的脱模剂。由氮化硼加工制成的超硬材料，可制成高速切割工具和地质勘探、石油钻探的钻头。原子反应堆的结构材料，飞机、火箭发动机的喷，防止中子辐射的包装材料，航天航空中的热屏蔽材料。无毒无害又具有润滑性，可用作化妆品的填料。在触媒参与下，经高温高压处理可转化为坚硬如金刚石的立方氮化硼。做各种电容器薄膜镀铝、显像管镀铝、显示器镀铝等的蒸发舟。晶体管的热封干燥剂和塑料树脂等聚合物的添加剂。各种激光防伪镀铝、商标

烫金材料，各种烟标，啤酒标、包装盒，香烟包装盒镀铝等等。

product applications:boron nitride is an excellent material of high—temperature resistance, corrosion resistance, thermal conducting, insulating and lubrication. it is widely used in petroleum, chemicals, machinery, electronics, electric power, textile, nuclear industry, space technology and many other industry fields. as a multifunctional material, it is also applied to the insulator of high voltage, high frequency and plasma arc insulator, solid doping material of semi—conductor, structural material of nuclear reactor, packing material of neutral radiant resistance, lubricant of high temperature resistance, drawing pattern agent of moulds,and grease of anti—oxidization.in addition, the powder of boron nitride can be used as the anti—adhesive agent of glass beads,the drawing pattern agent of glass and metal moulds. the last but not the least, the superhard material made of boron nitride can also be applied as the high speed cutting tools, the drill heads for geographic exploration and petroleum exploitation.