

Hexagonal Boron Nitride (HBN)

Exceeds or Meets Standard Industrial Specifications
 Economical and Competitive Alternative for Saint-Gobain

Benefits

- Low Thermal Expansion Coefficient
- Relatively Low Density
- High Thermal Conductivity
- Extremely Hard

Applications

- Automobile Industry
- Aviation & Space
- Machine Manufacturing
- Electronics

Hexagonal Boron Nitride (HBN) Products

Shapes: Tube | Crucible | Rod
 Plate | Sheet | Nozzle | Custom part



| Grade | BN99 (Grade AX05) | BN-BO (Grade A) | BNCB (Grade HP) | BNSIO (M&M26) | BN-AIN | ZSBN |
|------------------------|--|--------------------|--|---|---|---|
| Composition | hBN > 99.5% | hBN > 98% | hBN > 90% Calcium Borate | hBN 40%, SiO2 60% (M) hBN 60%, SiO2 40% (M26) | BN+AIN AlBO3 | hBN > 45% ZrO2 < 45% Borosilicate < 10% |
| Color | white | white | white | white | white | gray |
| Density (g/cm3) | 1.9 | 2.1 | 2.0 | 2.1-2.3 | 2.5-2.6 | 2.9 |
| Features | ·Excellent corrosion resistance ·High thermal conductivity ·Thermal shock resistance | | ·Excellent moisture resistance ·Low thermal expansion ·Spallation resistance | ·Thermal shock resistance ·High thermal conductivity ·Moisture resistance | ·High thermal conductivity ·High-temperature resistance ·Easy machining | ·Good wear resistance ·Chemical stability ·High thermal shock stability |

Hexagonal Boron Nitride (HBN) Products

Hot Pressed Boron Nitride (HBN) Products

| | | | | | | | |
|----------|-------|-----|------|------|-------|---------------|--------|
| Crucible | Plate | Rod | Tube | Ring | Blank | Machined Part | Powder |
|----------|-------|-----|------|------|-------|---------------|--------|

Specifications of HBN Products

| Product | BN99 | ZSBN |
|--------------------------------------|---------------------------|---------------------------|
| Density g/cm ³ | 1.9 | 2.9 |
| Color | White | Grey |
| Max Working Temp. °C | 800°C in atmosphere | 1000°C in atmosphere |
| | 3000°C in inert gas | 2000°C in inert gas |
| Hardness Knoop (kg/mm ²) | 4 | 105 |
| Flexural Strength | 3000Psi | 21000Psi |
| Heat Conductivity | 63W/mk | 38W/mk |
| Coefficient Thermal Expansion | 0.6(x10 ⁻⁶ /K) | 3.5(x10 ⁻⁶ /K) |
| | RT-1500°C | RT-1500°C |



ADVANCED CERAMIC MATERIALS

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