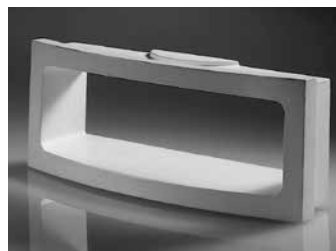


General Properties

HATEMIT™ is a high purity, hot isostatically pressed boron nitride material. This advanced material has excellent thermal shock resistance and very low thermo cycling behavior combined with low thermal expansion. HATEMIT™ has a high chemical resistance to glass and molten metals and maintains its low frictional properties even at high temperatures.

HATEMIT™ also has high dielectric strength and excellent electrical resistivity. It exhibits low-thermal expansion and high-thermal conductivity. It is easily machined and is available in dimensions up to 270mm diameter by 400mm high. Alternatively, Kennametal offers made-to-order parts to customers' drawings and requirements.



Product Information

Property	Data	
HATEMIT-P		
Density	g/cm ³	2,20
Hardness Knoop	200g load	36,8
Flexural Strength	MPa	25 °C
		1500 °C
Compressive Strength	MPa	25 °C
		142
Coefficient of Thermal Expansion	10 ⁻⁶ K ⁻¹	5.85
Thermal Conductivity	W/mK	20 °C
		900 °C
Max Operating Temp	°C	Air
		Inert Gas or Vacuum
Dielectric Strength	KV/mm	19.6
Volume Resistivity	Ω cm	25 °C
		500 °C
		1000 °C
		3,0 x 10 ²¹
		2,0 x 10 ¹²
		7,0 x 10 ⁹

NOTE: This data shows typical values and does not represent a specification.

Applications

- Electrical insulators for high temperatures, high voltages, and high-power transistors and thyristors.
- Electrical insulators and vacuum feed-throughs in high-temperature furnaces.
- Thermocouple protection tubes.
- Crucibles and rollers for molten glass and metals.
- Breakrings for horizontal casting.
- Nozzles for non-ferrous metals.
- Channel and pump components for molten metals.
- Evaporator boats.
- Linings in plasma chambers.
- Soldering supports.

Chemical Composition

Component	Composition
HATEMIT-P	
Boron + Nitrogen	>99.0%
Boron	>42.6%
Nitrogen	>55.9%
Oxygen	<0.5%
Boric Oxides	<0.2%
Carbon	<0.05%
Other Elements	<0.1%

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