HATEMIT® P

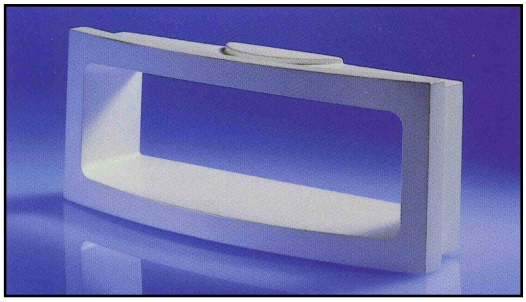
Properties

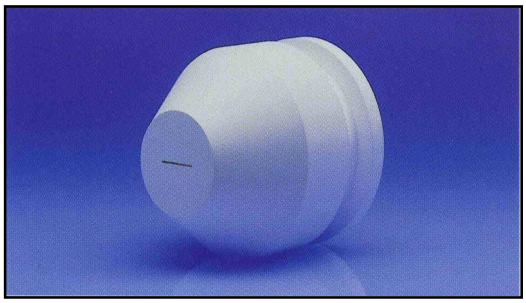
Hatemit P is a high purity, hot isostatically pressed Boron Nitride material. This advanced material has excellent thermal shock resistance and very low thermo cycling behavior combined with low thermal expansion.

Hatemit P has a high chemical resistance to glass and molten metals and maintains its low frictional properties even at high temperatures.

Hatemit P 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 Sintec can offer made to order parts to the customers drawings and requirements.





Chemical composition

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

Applications

- Electrical insulators for high power transistors and thyristors.
- Electrical insulators for high temperatures and high voltages.
- 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.

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Product Information

Property		Data
HATEMIT®		
Density	g/cm^3	2.20
Hardness Knoop	200g load	36.8
Flexural strength 25℃ 1500℃	MPa	 45 84
Compressive strength 25℃	MPa	 142
Coefficient of thermal expansion 20°C- 1000°C	10^{-6} K^{-1}	 5.85
Thermal conductivity 20°C 900°C	W/mK	 47 21
Max. operating temp Air Inert Gas or Vacuum	°C	 850 1400
Dielectric strength	KV/mm	19.6
Volume resistivity 25°C 500°C 1000°C	Ω cm	 $3.0x10^{21}$ $2.0x10^{12}$ $7.0x10^{9}$

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

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