120 Valley Court
Oak Ridge, TN 37830
Ph: 865-482-5717
FAX: 865-482-1281
zypcoatings.com

BoNimide

High Performance, High Temperature Boron Nitride with Imide Precursor

BoNimide is an easy-to-apply, nonaqueous, paintable Boron Nitride (BN) coating with an imide precursor that is designed to seal surfaces, prevent reactions, improve tribological properties and provide electrical insulation. Once applied and cured at 100-250 C, BoNimide is usable in any atmosphere to 400-600 C. Higher cure temperatures lead to a higher degree of polymerization. The polymerized coating forms a tough, abrasion-resistant, chemically resistant barrier on almost any substrate: metals (aluminum, stainless and carbon steels), ceramics, graphite or carbon/carbon, specialty textiles (Kevlar, Nextel, Nicalon, fiberglass, metal textiles) and composite materials. Ideal for use where polytetrafluoroethylene (PTFE) and silicone fail due to high use temperature environments or bans on "forever chemicals."

Key Attributes

- Provides an abrasion-resistant, lubricating sealant coating upon drying and curing
- Protects from liquid hydrocarbons, solvents, acids, oil and grease
- Protects from vapor attack and condensation (as liquid) reactions
- High electrical resistivity: 107 megaohms from the PI matrix
- Improves tribological properties
- Easy-to-use: applies like house paint by brushing or dipping
- Contains no CMR (Carcinogenic, Mutagenic, or Reprotoxic) solvents
- Protects from corrosion and wear of metal parts
- Special properties with BN, including neutron absorption

Ideal Use

- Sealing/protecting surfaces (porous or dense) from harsh, aggressive chemicals, including sulfuric acid liquid and vapors as well as protecting from water and steam attack
- Electronic applications to prevent electrical breakthrough
- Tribological applications for lubricity and wear/erosion resistance
- Highly corrosive environments, such as with papermaking processes
- For aiding extrusion and processing of problematic polymers [Nylons (Polyamides), Polycarbonates, Santoprene ThermoPlastic Vulcanizate (TPV), Ultra-High-Molecular-Weight Polyethylene (UHMWPE)]
- Where higher use-temperatures [i.e., above 400 C or 752 F] are required – beyond that of PTFE or silicones

Safety Information

- Consult SDS before use.
- Avoid breathing of spray/vapors.
- For Industrial Use only.

Specifications

Active Ingredients	BN, PI-precursor
Max Use Temperature	1112 F / 600 C
Use Atmosphere	All
Liquid Carrier	Solvent Blend
Brookfield Viscosity (cps)	300 @3/60
Specific Gravity	1.09
Color	Tan
Shelf Life (months)	>12
Coverage (ft^2/gal)	200 to 400
H F R Ratings	2-3-0
Substrate Use	All

Use Notes

1. Clean surfaces to be painted of any oils, dirt, scale, etc.
2. Apply one layer by bristle-brush. Apply other layers if needed, drying after prior layer(s). Avoid thick layers. Spraying, dipping, flow coating, or spin coating can be considered with this coating.
3. At a minimum, cure the coating at 100 C in air for one hour. A highly polymerized layer can be formed by curing at 250 C for 2-4 hours in air.
4. Once dried, or preferably cured, the coated part can be placed into service.

Sizes and colors

BoNimide is a tan-colored paint
Standard Size: 1 pint, 1 quart, 1 gallon Nalgene