



17AS.003 Coatings in boron nitride

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Boron nitride coatings have surprising characteristics and are easy to use. Final Advanced Materials provides this product in two forms: in suspensions in container with a water solvent and aerosol with ethanol solvent.

Boron nitride with a hexagonal structure has a high thermal conductivity. It is semi-conductor at high temperatures and insulator at room temperature. A boron nitride coating reduces a lot of frictions, what makes a perfect dry lubricant. It is efficient up to 1,800 °C under inert gas.

Storage

- Close correctly containers and store in a cool and dry place.
- Protect from freezing.

Security

- No toxic
- Cleaning tools with water

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Products

Boron nitride suspension

Boron nitride suspension is made of BN powder, water and stabilizing agent to enables the suspension of the powder. This product can be applied with a brush, as a spray or by soaking. Applied in layers, it enables to strengthen the friction resistance, chemical products resistance, oxidizing and corrosion resistance. Furthermore, the suspension presents a high thermal conductivity and a good electrical insulation.

Applications

- Coating in glass, steel and ceramic industries
- High temperature lubricant
- Protecting coating for metals flow, molding, thermal treatments and ceramic production
- Electrical insulator in sintering furnaces and curing

Technical data

Properties		Unit	BN Suspension
Item N°			200-0040
Color			White
Cristal structure			Hexagonal
Area density		g/m ²	1,12 – 1,14
Viscosity		Seconds/Flow cups No 4	11 – 14
Peak temperature	Oxidizing temperature	°C	900
	Inert atmosphere		1,800
Friction coefficient			0.25 – 0.50
Solid content		%	13,5 – 15,5
Liquid			Water

Instructions for use

- Use on clean, dry and degreased surfaces.
- Shake or mix before use.
- For an optimal result:
 - Porous surfaces: apply with a brush
 - Smooth surfaces (metal, glass): apply with spray
- Apply in thin layers. If the film is too thick, it may break.
- Wait the complete curing before any contact with a molten metal.
- The product can be diluted with water until obtain the wanted viscosity.

Dimensions

- Container of 5 kg



Boron nitride aerosol

The boron nitride aerosol doesn't react in contact neither with aluminum, copper, iron, precious metals, salts or glass. Its lubricant properties make the demolding easier. It is also used as protective coating to avoid surface contamination of a piece. It does offer an excellent electrical insulation and chemical stability.

Applications

- Surface protection
- Demolding agent
- Lubricant additive at high temperature

Technical data

Properties		Unit	Aerosol
Item N°			200-0010
Solvent			ethanol
Non organic additive		%	3
Density		g/m ³	1.16
Color			White
Cristal structure			Hexagonal
Solid content		%	13 – 17
Peak temperature	Oxidizing temperature	°C	900
	Inert atmosphere		1,800
Friction coefficient	BN/BN (air)		0.18
	BN/steel (air)		0.10
	BN/inox		0.2-0.4

Dimensions

- Aerosol of 500 ml

Instructions for use

- Clean surfaces to be coated, remove melting or welding spatter.
- Shake hard the aerosol
- Spray while standing about 70 cm away from the piece.
- The movement of the spurt has to be slow and regular.
- Apply in thin layer. If the film is too thick, it may break.
- It is recommended to overlay several thin cured layers.

Physical variables included in this documentation are provided by way of indication only and do not, under any circumstances, constitute a contractual undertaking. Please contact our technical service if you require any additional information.