Overview

Hexagonal boron nitride suspension has a high thermal conductivity. It is not impregnated with molten metals and can be applied directly to the surface requiring protection, even if the surface is already hot. It remains consistent at high temperatures and inert to metals, glass or molten salts.

This system is unique in its properties, making it an ideal lubricant for hot parts and tools. It is a release agent and an effective coating for all very hot materials. Boron nitride remains effective up to 800 °C in air and 1950 °C in inert gas, making it a very good dry lubricant.

Its amazing features and ease of use have earned it the nickname "white graphite".

Specifications

- High-temperature lubricant (1950 °C)
- High-temperature release agent
- Protective coating for metals, ceramics, ceramic fibres and graphites
- Facilitates casting of molten metals (aluminium, magnesium, zinc and lead)
- Facilitates sliding of press tools at very high temperatures
- Aerosol packaging for easy and universal use
- Boron nitride (BN) is a semiconductor at high temperatures and an insulation at room temperature.

Usage

- Clean the surfaces being coated, removing all splashes from melting or welding work
- Shake the aerosol well
- Spray about 70 cm from the surface being treated
- Move the spray slowly and evenly
- Apply in thin layers; if they are too thick the coat may crack
- It is advisable to overlay several thin layers, waiting for each one to dry before applying the next

Applications

- Thermocouple and probe protection

For pricing information or general queries, please email: info@final-materials.com
• Protection for casting tools
• High-temperature lubricant: foundry moulds, gasket wire drawing and more
• Electrical insulation
• Additive for silicone and resin to improve thermal conductivity
• Release agent (metallurgy, metallisation industry, plastic injection moulds and more)
• Protective layer for sintering and other applications
• Coating to reduce friction and increase chemical inertness
• BN 10 12 is available as an aerosol or in a plastic bottle (5 and 10 litres)

<table>
<thead>
<tr>
<th>Reference</th>
<th>Bottle</th>
<th>Aerosol</th>
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<tbody>
<tr>
<td>Composition</td>
<td>BN powder dispersed in water - Additives 2 to 4% -</td>
<td>BN powder dispersed in ethanol - Additives 3% - CFC-free propellant</td>
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<tr>
<td>Colour</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Electrical resistivity</td>
<td>$2 \times 10^{14} \Omega$</td>
<td></td>
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<tr>
<td>Friction coefficient</td>
<td>BN/BN (air) 0.18</td>
<td>BN/Steel (air) 0.18</td>
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<td></td>
<td>BN/Stainless Steel 0.2-0.4</td>
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<tr>
<td>Density</td>
<td>1.12 to 1.14 g/cm²</td>
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<tr>
<td>Max. usage temperature</td>
<td>800°C in air</td>
<td>1950 °C in inert gas</td>
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<tr>
<td>Viscosity</td>
<td>11 to 13 seconds (cut Ford No. 4)</td>
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<tr>
<td>Flame resistant</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Water resistant</td>
<td>Yes</td>
<td>Yes</td>
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