

3M™ Boron Nitride Suspension WS

3M™ Boron Nitride Suspension WS is a waterbased boron nitride coating. The use of inorganic binders ensures good adhesion at high temperatures.

Properties

3M™ Boron Nitride Suspension WS is a water-based boron nitride coating with small quantities of inorganic binders. This suspension is primarily used in metallising plant, where it serves as a brushed-on release agent to control the deposition of metal and allow metallic deposits to be easily removed from components where this may be detrimental to the process.

Despite the minimal use of binders, 3M™ Boron Nitride Suspension WS has sufficiently high adhesive properties to maintain coating integrity during the metallising process.

Coatings with boron nitride are temperature resistant up to around 900 °C in air and to around 2,000 °C in an inert atmosphere. The coating exhibits good thermal conductivity and is electrically insulating.

Typical Application

- Protective coating in high vacuum metallising equipment
- As a release agent and protective coating in galvanising plants

Advantages

- Improved protection of the equipment
- Ease of cleaning of the plant results in time savings
- Economical in use
- Excellent release properties
- Odourless and free of additives detrimental to health

Health and Safety

Due to its make-up, this product is not classed as hazardous by the relevant regulations. However, normal safety and industrial hygiene precautions in the use of chemical products should be applied.

For further information please refer to the applicable health and safety data sheet.

Specification

Product data	3M™ Boron Nitride Suspension WS
Color	white
Powder constituent (BN)	≤ 12%
Liquid phase	water
pH value	6
Bonding agent	inorganic binder
Density	1.03–1.07 g/cm ³
Viscosity	high viscosity
Application temperature	900 °C in air 1,400 °C vacuum 2,000 °C inert
Grating test	4B*

* DIN ISO 2409 less than 5 percent detached area

Processing

3M™ Boron Nitride Suspension WS is applied by brushing. The drying time is temperature dependant and can be considerably shortened by heating of the to be coated components either before or after coating.

It is not necessary to burn the coating.

Tools and equipment can be cleaned with water. Should the 3M™ Boron Nitride Suspension WS remain unused for a period of time, the container should be briefly shaken to counter the effects of settling.

These recommendations are intended to act as a guide only, and are given in good faith to our best knowledge and belief. Process conditions can vary depending on the application.

Storage

Containers should be kept tightly closed and, due to the water base, should be protected from frost.

Availability

3M™ Boron Nitride Suspension WS is available in polyethylene canisters of 10 kg capacity.

Larger quantities can be supplied in agreed batches.

Product is manufactured and sold by 3M Technical Ceramics, Zweigniederlassung der 3M Deutschland GmbH.

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