



EKamold® WP BORON NITRIDE SUSPENSION

EKamold® WP is a water-based Boron Nitride coating. The use of refractory binders ensures good adhesion at high temperatures.



EKamold® WP Suspension

Typical Application

Applied to Metals

- For tools (ladles, skimmers)
- For thermocouple protection tubes
- For measuring probes

Applied to Refractory Materials

- For hot top rings
- For slide and float valves
- For nozzles, stoppers and runners

Applied to Graphite Materials

- For crucibles
- For pouring equipment
- For impellers, etc.

Properties

EKamold® WP is particularly suitable for the coating of dense metallic, graphite, refractory and insulating materials. Due to the use of Boron Nitride of high chemical purity it is possible to achieve temperature resistant, stable coatings with excellent release and lubricating properties. These properties are retained even when in direct contact with molten metal and slag, especially for non ferrous applications. The coating can therefore be seen to protect the coated surface by reducing wear and improving sliding properties.

Coatings with Boron Nitride are temperature resistant to around 1000 °C in air. The coating shows good thermal conductivity and is electrically insulating.



Advantages

- Excellent adhesion
- Excellent release agent, especially in applications with non ferrous melts
- Lubricating medium between moulds and ingots
- Reduction of erosion by the melt and therefore
- Reduced carryover of ferrous contaminants into the melt
- Improvement of ingot surface quality
- Improvement in life of hot top rings as well as slide and float valves
- Extension of maintenance and lubrication intervals
- Free of additives detrimental to health

Health and Safety

Due to its chemical composition, this product is not classified 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.

Processing

EKamold® WP can be applied by brushing, rolling, dipping or spraying.

The parts to be coated should be dry and free from dust, oil and grease as well as any residues of paints and lacquers.

To prevent the formation of cracks, it is recommended that a thin coating giving full coverage be applied. The drying

time is temperature dependant and can be considerably shortened by heating of the components to be coated either before or after coating. It is essential that the coating has fully dried prior to use.

Should more than one coat be required (by brush or roller application), it is recommended that the component be preheated to ensure correct adhesion, especially of the base coat. It is not necessary to burn the coating.

Porous surfaces with higher absorption characteristics, such as refractory materials, are best coated by brushing, roller or spraying. Smooth and dense materials, such as metals and glass, are best coated by spraying, which has the additional benefit of achieving the best surface finish.

Tools and equipment can be cleaned in water.

Should the BN-Suspension WP 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.

Specifications

Product Data	EKamold® WP
Color	white
Powder Constituent (BN)	≤ 12 %
Liquid Phase	water
pH value	6
Bonding agent	inorganic binder
Density	1.03 - 1.06 g/cm ³
Viscosity	mean viscosity
Application Temperature	1400 °C vacuum 1000 °C in air
Grating test	4B*

* DIN ISO 2409 less than 5 percent detached Area

Storage

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

Availability

EKamold® WP is available in Polyethylene canisters of 10 kg capacity.

Larger quantities can be supplied in agreed batches.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to DIN EN ISO 9001, DIN EN ISO 14001. EKamold® is a registered trademark of ESK Ceramics GmbH Co. KG

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