



TECHNICAL DATASHEET

PRODUCT CODE: B-LEAF Coating 11001

DESCRIPTION

Acrylic 2K corrosion-inhibiting paint based on mixed single-/few-layer hexagonal boron nitride flakes acting as physical barrier against corrosive species. The paint can be used in a variety of applications that require long-term corrosion protection in presence of moisture in the air or corrosive liquid environment. The paint can be deposited in form of coatings on metallic and printed circuit board (PCB) substrates with minimal or no surface preparation by means of different techniques, including spray coating, brush and roll painting and doctor blading. This surface-tolerant anticorrosion paint is compatible with a wide variety of primers, including ethyl-silicate based inorganic zinc primers. The paint allows drying at low temperature (20 °C for 48 h or 60 °C for 1 h). It is applicable up to more than 100 microns on a single coat with an excellent levelling and can be even overcoated with a wide variety of polymeric topcoats.

It can adhere to the following substrates: steel, stainless steel, sandblasted steel, zinc-based inorganic primer, galvanized steel, aluminum and aluminum alloys, cast iron and plastics. The product is provided with its hardener (**H-LEAF Coating 11001**).

ADDITIVES:

FEW-LAYER HEXAGONAL BORON NITRIDE

PROPERTIES:

PHYSICAL PROPERTY	METHOD	VALUE	UNITS
UNCURED			
SOLID CONTENT	ASTM D2369-20	75	%wt
DENSITY	ASTM D1475-98/ISO 2811-1	1.4	g/cm ³
VISCOSITY	ASTM D2196	14900 ± 3000	mPa·s
COVERAGE	1 µm dried paint thickness with solid vol% ca. 50%	280-330	m ² /Kg
DRIED			
HARDNESS	ISO 2815 (Shore D hardness)	> 85	-
	ISO 1519 (Buchholz hardness)	> 66	-
ADHESION	ASTM D 3359	5B	-
ANTICORROSION PROPERTIES	ASTM G5-14* (potentiodynamic anodic polarization test)	< 10 ⁻⁴	mmpy
	ASTM B117-18/ISO 9227** salt spray (fog) test	> 1000	hour
	ISO 2812-2*** (5 wt% NaCl water immersion test)	> 6	month

* Test performed on product-coated structural steel (coating thickness ≥ 50 µm)

** Test performed on product-coated ethyl-silicate based inorganic zinc primer-coated structural steel (primer thickness = 10 µm; topcoat thickness = 150 µm)

*** Test performed on product-coated ethyl-silicate based inorganic zinc primer-coated structural steel (primer thickness = 10 µm; topcoat thickness > 50 µm)



RECOMMENDATION FOR USE

Paint preparation (for spray coating)

- Stir before use.
- Avoid contamination during transferring of the paint from its original container.
- Keep the lids of the container tightly sealed to minimize solvent evaporation.
- Add hardener with a proportion 100:20 paint weight:hardener weight.
- The paint can be diluted by diluent for acrylic resins, according to the desired paint viscosity. It is recommended to reach a viscosity at 20 °C FORD 4 of 20 s.
- Recommended spray coating parameters are:
 - Gas carrier pressure: 2 - 3 bar;
 - Nozzle: 1.3 – 1.7 mm;
 - Number of passes: 1 for thickness \leq 100 μm , 2 for thickness $>$ 100 μm

Substrate preparation

The anticorrosion paint performance depends on the preparation of the substrate surface. It is recommended to carefully clean and dry the surface to remove dust, grease or other contaminants. Corroded surfaces with corrosion spots should be cleaned with steel brush or sandpaper to remove rust. Remove residual dust without using water.

The use of ethyl-silicate based inorganic zinc primers is recommended before to apply our topcoat for long-term protection of metals and alloys in highly corrosive atmospheres ($C \geq 4$, ISO 9223).

Paint deposition

The application method can be adjusted to obtain printed film with desired thickness and coverage, according to performance and application needs.

STORAGE AND SHELF-LIFE

The as-received product should be stored at room temperature (10-30°C) in containers, tightly sealing their lids. The paint shelf-life for an unopened container is more than 6 months from date of shipment. BeDimensional cannot take responsibility for a paint that has not been stored in appropriate conditions or has been contaminated during its use.

SAFETY PRECAUTIONS

Comply with all local safety, disposal and transportation regulations. Check the Safety Data Sheet (SDS) and label of the individual products carefully before using the products. The SDS are available on request.

TECHNICAL SUPPORT

Contact us regarding any questions, improvement suggestions, or problems with this product. More information can be found at www.bedimensional.com or upon request.

DISCLAIMER

Data, specifications, directions and recommendations given in this data sheet represent test results or experience obtained under controlled or specially defined circumstances. Their accuracy, completeness or appropriateness under the actual conditions of any intended use is not guaranteed and must be determined by user.

BeDimensional cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with specific requirements. BeDimensional reserves the right to change the given data without further notice.

Users should always consult BeDimensional for specific guidance on the general suitability of this product for their needs and specific application practices.

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