BMA 3D EPOXY HIGH CLEAR

Code: BMA-3DE

Code of its hardener: BMA-HPE901

Color: Clear

PROPERTIES

A two-component solvent free 3D Epoxy cycloaliphatic amine with high gloss, high durability, outstanding chemical resistance and is not afraid of heavy mechanical loads. BMA-3DE is safe for both the applicator and the environment, due to the fact that it is solvent free. It is used as a decorative topcoat for concrete, metal or gypsum board structures.

RECOMMENDED USES

BMA 3D Epoxy Topcoat can be used in:

- ✓ Industrial and commercial plants
- ✓ Warehouses and walkways
- ✓ Hotels and shopping centers
- ✓ Houses

PERFORMANCE BENEFITS

- ✓ Solvent free epoxy
- ✓ Excellent chemical (Acids, alkalis, oils, sewage water, etc.…) and mechanical resistance (impact, abrasion and heavy carrying loads)
- ✓ High durability (Minimum 15 years) without color change
- ✓ Excellent resistance to high temperature and to accelerated UV light
- ✓ Easy cleanability and maintenance
- ✓ Impermeability to water and other liquids
- ✓ Safe for human health (no odor and corrosive fumes)
- ✓ Nice visual effect
- ✓ Easy to apply

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CHARACTERISTIC PHYSICO-CHEMICAL DATA

*Data corresponding to **BMA 3D Epoxy High Clear**, cross-linked with its **hardener BMA-HPE901***

Tests	Norms	Results
Total solids, by weight	ASTM D2369	99.9%
Consistency, at 25 ºC (Part A)	ASTM D562	20 KU
Specific Gravity (g/cm^3)	ASTM D1475	1.08
Spreading Rate at 1000µm DFT [1] *(3D Epoxy + Hardener)*	-	1 m²/L
Hardener Code	-	HPE901
Hardener percentage by volume		50%
Pot Life	-	45 minutes
Impact Resistance (kg/cm)	ASTM D2794	97.4
Hardness Test Pencil	ASTM D3363	7 H
Washability And Scrubbability	ASTM D2486	More than 500 cycles
Adhesion Strength	ASTM D4541	No cracking or flaking
Resistance to accelerated UV light	Solar box	No discoloration, no appearance change and no chalking observed

[1)]DFT: Dry Film Thickness

APPLICATIONS GUIDE

Surface Preparation

Before applying BMA 3D Epoxy, all necessary pretreatment must be done. Surface should be clean, dry and free of all contaminants (oils, agents, dust, dirt, etc…) in order to avoid the risk of surface failing.

Concrete surfaces:

Concrete substrate must be well prepared in order to avoid any coating defects.

For new surface, ensure that concrete is completely cured at least 30 days.

For both fresh and old concrete, decontamination is required to remove any dust, oil, grease, laitance, fatty acids or any additional contaminants. Acid etching is recommended

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using Eksen Kimya Hydrochloric Acid Solution. Decontamination could be also done using detergent scrubbing, low pressure water cleaning, or steam.
After cleaning, fill and repair any surface irregularities (cracks, holes and pores) with the cementitious mixture.
Cementitious mixture preparation: first, prepare a SBR Solution by mixing BMA SBR with water (1:5 by volume). Then, add the SBR Solution to the cement and sand until reaching the desired cementitious mixture.
Allow concrete substrate to dry then check the moisture and the pH of the substrate. Ensure that the pH is between 6 and 9 since alkalinity can affect and destroy paint adhesion. For the moisture content, make sure that it does not exceed 4% (by weight). Otherwise, the concrete surface is not a good candidate for painting.

Steel surfaces:
For new steel, clean the surface from any oil or grease residues using 1 L of EKSEN KIMYA DL50 dissolved in 10 L of water. Sand the substrate to Sa 2½ until smoothing then remove all sanding dust and let it dry before any primer application.

For painted steel, remove loose and peeling paint using mechanical methods such as sanding and sandblasting of the entire surface until smoothing so the new coating can adhere properly. When the old paint is compatible with the new one, only light sanding is required. Then, remove persistent dirt and sanding residues with a detergent solution.

For non-ferrous metal (galvanized steel, aluminum, stainless steel, iron, etc…), use BMA Wash Primer BMA-WPU in order to etch the substrate, remove any corrosion residues and promote adhesion to the subsequently applied coatings. In case of unweathered surface or when weathering is not possible, apply a sweep or brush blast cleaning using a non-metallic abrasive in order to lightly roughen the surface. Let the surface dry before coating application.

Gypsum board surfaces:
Remove all dirt, oil, grease or foreign materials using detergents followed by a rinse with clean water. Solvent cleaning can be used on areas highly contaminated.
Sand and smooth the substrate. Let it dry than check the moisture and the pH. Moisture content should not exceed 12%
Fill and repair all pinholes, cracks or any type of surface imperfections using an NC Putty BMA-PUN. Then sand again until smoothing. Remove all powdery residues before primer application.

Priming

Apply the self-leveling epoxy primer after preparing, cleaning and drying the surface.

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Mixing

Mix slowly for 2 to 3 minutes BMA Hardener BMA- HPE901 with BMA 3D Epoxy BMA-3DE with a ratio of 50% by volume. Use appropriate automatic mixing equipment in order to avoid the entry of excessive air. Let the mixture rest for 5 minutes before application to allow a complete chemical reaction between the components. Apply the mixture within its pot lifetime (45 min) at ambient temperature. Otherwise, the pot lifetime will be reduced and the mixture becomes unusable.

Application

BMA 3D Epoxy should not be applied when the relative humidity exceeds 85%. The required temperature for optimum performance is maximum 35ºC. The topcoat should not be exposed to chemicals or mechanical loads before being fully cured.

BMA 3D Epoxy must be applied on a clean and dry surface after stirring, mixing and within its pot lifetime (45 min) using brush or roller.
After applying the primer, install 3D floor mural. Make sure bonding to the surface was nowhere folds or creases. The image must be a vinyl derivative with high quality resolution. Apply two layers (minimum) of BMA 3D Epoxy, polyurethane in order to build a transparent layer of epoxy coating over the 3D image. This layer will provide the desired perception of depth as well as the protection of the 3D floor mural.

Drying Time

Surface (Touch) dry: 7 hours
Dry to overcoat: 24 hours
Full cured: 1 week

AVAILABLE PACKAGING

US Gallon kit

SHELF LIFE

BMA 3D Epoxy should be stored dry, cool and frost-free conditions in original containers where the temperature does not exceed 35°C. Exposure to direct sunlight should be avoided.
Under the above-mentioned storage conditions, the shelf life of BMA 3D Epoxy will be 2 years. After this period, the paint quality is subjected to re-inspection. Proper handling is essential to maintain good quality.

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HEALTH & SAFETY

Before using this product, please consult our Safety Data Sheet (SDS) for complete information on Hazards Identification, First-Aid and Fire-Fighting Measures, Accidental Release Measures, Handling and Storage, Exposure Control and Personal Protection, Stability and Reactivity, Toxicological Information, and Transport Information.

QUALITY ASSURANCE

BMA Commercial & Industrial s.a.l is a holder of the ISO 9001:2015 and ISO 45001:2018 certificates, which guarantees that all operations are conducted in compliance with International Standards.

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