BMA EPOXY PAINT

TECHNICAL DATA SHEET

Product Code: 1BM-PEP
Hardener Code (if applicable): 1BM-HPE0800

I. Product Description

A two-component epoxy designed for excellent resistance to chemical attack, abrasion, and mechanical stress. It can be applied on concrete floors and various types of metallic substrates.

II. Product Performance Characteristics

- Provides corrosion and oxidation protection
- Resistant to heat, saltwater, and a wide range of chemicals
- Offers strong protection against abrasion, impact, and scratches
- Withstands heavy-duty conditions
- High durability
- Easy to apply and clean

III. Areas of Application

BMA Epoxy Paint can be used for:

- Concrete floors
- Chemical and power plants
- Pipelines and storage tanks
- Marine applications, aquariums and swimming pools
- Warehouses, hospitals and hotels

IV. Technical Specifications

Data for BMA Epoxy Paint cross-linked with 25% by volume of its hardener:

Parameter	Norm/Standard	Result
Total Solids, by weight (%)	ASTM D1259	71.26
Total Solids, by volume (%)	ISO 3233	64
Viscosity at 25°C (Poises)	ASTM D562	20

Specific Gravity (g/cm^3)	ASTM D1475	1.3
Total Volatile Organic Compound (VOC) (g/L)	ASTM D3960	363.92
Hardener ratio by volume (%)	-	25
Pot life (hours)	-	2
Induction time (minutes)	-	10
Gloss Level (%)	-	80
Appropriate solvent	-	BMA Thinner Epoxy
Solvent ratio by volume (%)	-	20

Film Thickness & Coverage

Parameter	Norm/Standard	Result
Recommended WFT [1] (µm)	-	80-120
Recommended DFT [2] (µm)	-	50-60
Theoretical Spreading Rate (m^2/L)	-	10.66-12.8

[1] WFT: Wet Film Thickness

[2] DFT: Dry Film Thickness

V. Application Procedure

Surface Preparation

Before applying BMA Epoxy Paint, 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.

Metal Surfaces

For new steel, clean the surface from any oil or grease residues using SAMA chemical 3 in 1 phosphating additive (1L:35L 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 or 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, sanding residues, and zinc salts with a detergent solution and water.

For non-ferrous metal (galvanized steel, aluminum, stainless steel, etc…), remove corrosion residues and promote adhesion to the subsequently applied coatings, use a thin layer (8-10 µm) of BMA Wash Primer in order to etch the substrate. In case of unetched surface or when etching 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.

To adjust the surface unevenness, BMA putty polyester should be applied.

For corrosion prevention, the cleaned surface should directly be primed.

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 using Acid Solution. Decontamination could be also done using detergent scrubbing, low pressure water cleaning, or steam. A good water rinsing should follow the acid etching.

After cleaning, fill and repair any surface irregularities (cracks, holes and pores) with the cementitious mixture.

Cementitious mixture preparation: first, prepare an 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.

BMA puttypoxy could be used to repair light scratches. 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.

Priming

Metal Surfaces

Steel surface should be primed to ensure corrosion protection, preferably with BMA Zincopoxy Primer or BMA Zincphosphatopoxy Primer or BMA Primopoxy for metal.

Concrete Surfaces

Concrete surface should be primed with BMA Primopoxy for Concrete.

Mixing

Mix thoroughly 25% by volume of 1BM-HPE0800 Hardener with BMA Epoxy Paint. Allow the mixture to stand for 10 minutes to ensure complete chemical activation. Apply the product within its pot life (2 hours) at ambient temperature.

Thinning

If thinning is required, use a maximum of 10–15% (for brush or roller application) and 15–20% (for air spraying) of BMA Epoxy Thinner or BMA Thinner 050 to achieve the desired viscosity.

Application

BMA Epoxy Paint should be applied in a well-ventilated area where the humidity does not exceed 75% and the temperature varies between 5°C and 35°C.

Application Method	Details

Spray	Application must be carried out on a clean, dry surface using an airless spraying system within 2 hours
Brush	Application must be carried out on a clean, dry surface using a brush within 2 hours
Roller	Application must be carried out on a clean, dry surface using a roller within 2 hours

Two coats of BMA Enamopoxy Economic are typically required for indoor and outdoor applications on steel, galvanized steel, and concrete substrates. For outdoor use, it is recommended to finish with a PU Acrylic Topcoat for added durability and UV resistance.

VI. Drying Conditions

Condition	Time
Surface Touch Dry	2 hours
Dry to over coat	10 to 24 hours
Full Cure Time	1 week

VII. Color Range

According to BMA standard colors and RAL shades. Custom colors are available upon request.

VIII. Packaging

Available in:
Gallon & Pail kits.

IX. Shelf Life & Storage Conditions

Shelf Life	Storage Temperature & Humidity	Storage Conditions
▪ 2 years from the manufacturing date. ▪ The hardener has a shelf life of 1 year.	▪ **Temperature:** Between 5°C and 35°C ▪ **Humidity:** Should not exceed 85%	Store in undamaged, unopened containers. The product must be kept away from direct sunlight and any sources of heat or flame.

X. Safety, Health, and Environmental Compliance

Aspect	Details
Environmental Impact	Contains volatile organic compounds (VOCs); avoid release into the environment. Dispose of in accordance with local environmental regulations. Prevent contamination of soil and waterways.
Health Hazards	Harmful by inhalation, skin contact, and if swallowed. May cause allergic skin reactions, respiratory irritation, or eye damage. Prolonged exposure may affect the central nervous system.
Safety Precautions	Use only in well-ventilated areas. Wear appropriate personal protective equipment (PPE) including gloves, goggles, and a respirator. Avoid direct contact with skin and eyes. Do not eat, drink, or smoke while using the product.
First Aid Measures	**Inhalation:** Move to fresh air; seek medical attention if symptoms persist. **Skin Contact:** Wash immediately with soap and water. Remove contaminated clothing. **Eye Contact:** Rinse cautiously with water for several minutes. Seek medical advice. **Ingestion:** Do not induce vomiting. Rinse mouth and seek immediate medical assistance.

XI. Certifications and Test Reports

BMA Commercial & Industrial s.a.l holds ISO 9001:2015, ISO 45001:2018, and ISO 14001:2015 certifications, ensuring that all operations are conducted in compliance with international standards.

XII. Disclaimer

The statements, technical information, and recommendations contained herein are believed to be accurate. However, as the conditions and methods of use of the product and the information provided are beyond our control, BMA Commercial & Industrial s.a.l expressly disclaims any and all liability for any results obtained or consequences arising from the use of the product or reliance on this information.