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1- **ITEM IDENTITY :**

- NAME : CLEAROPOXY (TOP COAT EPOXY CLEAR) + EPOXY HARDENER
- CODE : BMA-LAE200 + BMA-HPE800
- DESCRIPTION : 2 components ,solvent based , air drying , non porous , relatively high solid epoxy clear top – coat ,based on a modified polyamid epoxy resin , and especially formulated for heavy duty services .

2- **ITEM USE FIELDS :**

BMA clearpoxy is an indoor and outdoor coating for well prepared and primed floor and steel . It's especially designated to be used on any concrete floor which has no moisture problem ; Because of its chemical , weather and impact resistance and non-slip properties , and because it withstands the floors constant beating , prevents the surfaces stripes and leaks , maintains a strong mechanical resistance to the cured floor and gives a smooth and elegant finishing , it's formulated for industrial uses , such as factories , warehouses , showrooms ,hospitals , schools and hotels floors ,as well as for garages , hangars , aquariums , swimming pools, restaurant kitchens , boat-buildings ,... It could be directly used alone on steel as a protective coat , or as a clear primer under the epoxy paint.

3- **ITEM GENERAL CHARACTERISTICS :**

- Great resistance to abrasion , impact and high pressures .
- Durable elegant finish , up to 4 years minimum , according to the environment conditions (long immersion into water and salted water , very high pressure application ,...).
- Remarkable coverage and chemical resistance .
- Good waterproofing and rustproofing properties .

- Excellent heat , salt , acid , corrosion , scratch and scuff resistance .
- Great prevention against surface strips and leaks .
- Very high non-slipping properties if it's mixed with sand or smooth gravel .
- Excellent resistance to floor constant beeting , high traffic ,.... When totally cured .
- Great heavy equipment and vehicles weight withstanding .
- Compatible with various aged coatings .
- Self priming ability .
- Applicable on bitumen , concrete , steel , blasted steel , aluminum , fiberglass , ...
- Generation , during the application , of some relatively medium toxic vapors , evaporated by some solvents used during the production process .
- Heat generation during the mixture of the epoxy resin with its catalyst .
- Easy to be cleaned – up .

#### 4- ITEM STANDARDS @ 25°C :

<b><i>Property</i></b>	<b><i>Standard</i></b>	<b><i>Result</i></b>
Specific gravity	ASTM D1475	1 ± 0.05 g/cm <sup>3</sup>
Viscosity	ASTM D562	46 KU ≈ 1.40 ± 0.10 poises
Solid content	ASTM D1259	60 ± 3 % by volume
V.O.C. content	ASTM D3960	400 g/L
Catalyst %		25 %
Pot life		2 hours
Dry to touch		6 hours
Dry to overcoat	ASTM 1640	12 hours
Full cure		7 days
Theoretical spreading rate		7 ± 0.75 m <sup>2</sup> /L upon the surface
Recommended wet film		40 - 50 μm/layer
Recommended dry film		25 - 30 μm/layer
Best diluent		Thinner epoxy BMA or thinner 050 BMA
Dilution %		7 - 10 % by brush & roller / 10 - 15 % minimum by air spraying / 0 - 2 % maximum by airless spraying
Flash point	ASTM D93 <sub>(PMCC)</sub>	30 °C ( epoxy paint) & 25 °C (catalyst)
Miscibility with water		Not miscible
Color		Clear
Gloss level @ 60°	ASTM D523	75 – 85 %
Shelf life		2 years (clear epoxy) & 1 year (catalyst) in well closed containers

#### 5- APPLICATION :

- Substrate preparation  
BMA clear epoxy should be applied on a well cleaned and primed surface, which should be previously treated with a suitable alkaline detergent or degreasing solution, to remove any oil or grease spot that could interfere with proper adhesion .

➤ Coating preparation

- Stir the clear epoxy and the epoxy hardener cans separately with a wooden or a glass stirrer or with a mechanical stirrer.
- In a deep can, mix the exact needed quantity of clear epoxy, that could be used within the pot life limit, with 25% of hardener epoxy BMA-HPE800 .
- Wait few minutes till evacuating the generated heat, then thin with the suitable quantity of BMA thinner epoxy or BMA thinner 050.

➤ Application on bitumen / concrete surfaces

- Etch the concrete with Muriatic (hydrochloric) acid then rinse it immediately with water ; the surface must seem as a 150 – 180 grit sandpaper , and it must directly absorb few drops of water , otherwise the etching procedure should be repeated.
- When the surface is dry, rub your finger against it and for a white film of dust or powder , if it appears rinse again .
- After full dryness, the epoxy lacquer could be applied by 2 ways :
  - 1<sup>st</sup> application possibility :
    - begin with one or two cross coats (if the surface needs) of primopoxy .
    - allow to dry for at least 6 – 8 hours .
    - follow – up by one cross – coat of enamopoxy .
    - allow to dry for 6 – 8 hours .
    - finish with one cross coat of clear epoxy for a better elegant finish .
    - let dry for 2 days for light foot traffic, 5 days for heavy foot traffic and ten days for vehicle traffic .
  - 2<sup>nd</sup> application possibility :
    - prime the dry concrete directly with one cross - coat of clear epoxy, used as a clear primer .
    - allow to dry for about 12 hours then apply a second cross coat if needed .
    - over-coat the lacquer epoxy with 1 or 2 cross-layers of BMA enamopoxy .
- to apply BMA clear epoxy on a previously coated floor, clean it well, remove any peeling paint or stain , and if it's sealed, grind it to remove the sealer, then scuff it well before the application to ensure proper adhesion.

➤ Application on steel surfaces

- To obtain great results, well clean the steel and pre-treat it with EKSEN KIMYA suitable cleaning solution.
- After preparing the surface, follow the same application steps as for the floor application .
- BMA-LAE200 could also be used as a protective coat directly applied on steel with no need for other coating .

➤ Application tips

- BMA epoxy solvent based could be applied by a brush , a roller or a spraying gun (which is not very recommended for safety issues); although while spraying epoxy, it's recommended to apply the first coat by a brush , this fills the grain better , because epoxy doesn't usually wet out well which could lead , during a non appropriate application to holes and fish eyes into the cured surface .

- It's recommended to mix just the needed quantity of BMA paint epoxy with 25 % of its hardener just before the application and to close hermetically the cans of the remaining 2 components to avoid their solidification .

➤ Cleaning

Clean hands and tools directly with BMA thinner epoxy or 050 ; any residue left in the spraying gun could irreversibly block its nozzle .

6- LIMITATIONS :

It's not recommended to use this product in the following cases :

- When the application area is closed and not well ventilated .
- When one of the 2 components is expired .
- When the temperature is below 5°C or above 40°C .
- When the substrate temperature is not at least 3°C above the dew point .
- When the humidity overstep 85 % .
- When rain is forecasted within 72 hours after application on an outdoor substrate .
- When the mixture of the 2 components oversteps the pot life limit .
- When the coating will be applied over a rusty steel , unless it's well treated and prepared .
- When the coating will be applied over a wet floor .

7- AVAILABLE PACKAGES :

- US gal and 5 US gal for the epoxy lacquer.
- 1L can and 5L gal for the catalyst .

8- STORAGE :

Store this product in well closed containers , kept in a ventilated area , away from direct sunlight , heat sources , flames , freezing conditions , in a moderate temperature between 5 to 35 °C .

9- HEALTH AND SAFETY :

- Keep out of the reach of children .
- Apply in a well ventilated area away from children , pregnant women and persons with respiratory problems .
- Don't hang the product container while storing .
- Do never touch any paint with bare hands .
- It's recommended to wear face mask and hand gloves while applying , especially in case of repetitive exposures .
- In case of eye contact flush with large amounts of water without rubbing eyes , if the malaise persists , directly contact a physician .
- In case of skin contact , wash the defected area with warm soapy water ; if any allergic reaction appears consult a physician .
- Get rid of the unused remaining quantities and the empty cans according to your country regulations .

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