

ARMOFLOOR EP500

High Build Epoxy Floor Coating

Description:

ARMOFLOOR EP500 is an epoxy floor coating based on solvent free technology. The product is manufactured in colored dual pack system, base and hardener. It is suitable for chemical protection of industrial pavements, reinforced concrete, slabs and metallic structures.

ARMOFLOOR EP500 adheres perfectly to a variety of supports like: concrete, metal, wood, stoneware, etc. Once cured, the applied material forms an anti-dust coating with high chemical resistant, excellent abrasive and seamless mechanical.

Uses:

ARMOFLOOR EP500 is used as a coating or within a system at:

- Car parks & ramps.
- Storage areas and hangers.
- Production faculties and industrial flooring.
- Pharmaceutical and food processing faculties.
- Warehouses.
- Decorative flooring for shops and malls.

Advantages:

- Solvent free, odourless coating.
- High build coating in single application.
- Excellent mechanical and abrasion resistant.
- Durable and low maintenance cost.
- Excellent resistance to a wide range of chemicals.
- Excellent adhesion to substrate. Bonding strength is greater than cohesive strength of concrete.

Instructions for Use:

ARMOFLOOR EP500 should be applied by specialist contractors who must follow the Product Method Statement. Consult with MATEX Technical Department for a list of approved applicators.

Surface Preparation:

All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds, dirt, oil and grease. Ensure that concrete floors are fully cured for at least 28 days after casting in order to allow all shrinkage movements to take place.

Prepare floor using mechanical preparation methods such as: grinding, captive blasting, or sand blasting. If the substrate is restricted to access, utilise preparation by handy mechanical tools. Remove dust from the surface thoroughly preferably by vacuum.

Perform necessary repairs to cracks, damaged substrate or voids filling by means of proper repair products. Allow the product to cure. Consult MATEX technical department for further advice. Apply a rich coat of ARMOPRIME EP100 or EP70 – epoxy primers, depending on the surface condition to enhance mechanical adhesion between the coating and the substrate in case of weak porous surfaces.

For applications on metal surfaces, apply ARMOPRIME EP70 immediately after mechanical preparation by sand blasting or mechanical wire brush to remove rust and corrosion to prevent further oxidization to the surface.

Mixing:

Mix the content of component A (Base) with a low speed mixer for two minutes to homogenize the material of the container. Slowly add the content of part B (Hardener) to Part A container. Mix the material thoroughly for an interval of 2-3 minutes to obtain a homogenous, color consistent, lump free mixture. Transfer the contents of the mix into a separate clean container and mix for further 30 seconds.

Application:

Preconditioned materials at 20°C to 25°C will reduce possibilities of flash/slow setting and other defects. Substrate temperature must be at

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least 3°C higher than the dew point temperature.

Apply ARMOFLOOR EP500 with a brush, roller or a spray machine, to a well prepared substrate at a consumption rate of 4-5 square meter/ liter in two coats. The second coat shall be applied after the first coat is fully dry. The total dft of the coating shall be a minimum of 400 microns. For anti-slip flooring, apply the selected aggregate size in the rate set by design while the coating is still wet.

Once coating is dry (16-24 hours), remove excess aggregates and apply second coat as required. Apply the subsequent coat of ARMOFLOOR EP500 within a time frame of 24 hours. Allow 3 days for pedestrian traffic and 7 days for full traffic to ensure proper curing of the material.

Standards:

- ASTM C 579, ASTM D 4060
- BS 6319, PART 3 & PART 7

TECHNICAL PROPERTIES	
Color	Standard Matex Flooring Color Chart
Density	1.55 ± 0.03 kg/lit
Viscosity @25°C	1200 Mpa.s
Potlife time @25°C	60 minutes
Solid Content	100%
Application Temperature	+5°C to 40°C
Open to Foot Traffic	24 hours @25°C
Open to Vehicular Traffic	48 hours @25°C
Bond Strength (ASTM D4541)	Greater than cohesive strength of concrete
Compressive Strength (ASTM C109)	>80 N/mm ²
Flexural Strength (ASTM C580)	>40 N/mm ²
Tensile Strength (ASTM C307)	>20 N/mm ²
Water Absorption	<0.1%
Service Temperature	+5°C to +80°C
VOC	<10 g/lit

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

CHEMICAL RESISTANCE		
MATERIAL	CONCENTRATION	RESISTANCE
Citric Acid	10%	Excellent
Hydrochloric Acid	10%	Excellent
Sodium Hydroxide	50%	Excellent
Acetic Acid	10%	Excellent
Butanol	-	Excellent
Nitric Acid	10%	Excellent
Sulphuric Acid	20%	Excellent
Mineral oil	10%	Excellent
Ammonia	10%	Excellent
Sea Water		Excellent
Jet Fuel		Excellent

*For 1 hour exposure

Coverage:

ARMOFLOOR EP 500 achieves coverage approx. 4.0-5.0 square meters per liter @ 200 micron thickness both dry and wet film thickness (DFT, WFT).

*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

ARMOFLOOR EP 500 is available in 4 liter set and 15 liter set of two parts in metal containers.

Storage:

ARMOFLOOR EP500 is to be stored in original packing in dry conditions away from direct sunlight.

Shelf Life:

ARMOFLOOR EP500 can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing. Store at +5°C to 25°C.

Cleaning:

All tools must be cleaned with ARMOSOLVENT before hardening. Hardened material should be removed mechanically.

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Remarks:

- ARMOFLOOR EP500 should not be applied onto surfaces likely to suffer from rising dampness or moisture content.
- ARMOFLOOR EP500 should not be applied at ambient temperature less than 5°C.
- ARMOFLOOR EP500 should not be applied to asphalt, weak or friable concrete, PVC tiles or asphalt sheet substrates.
- ARMOFLOOR EP500 should not be applied if the surface relative humidity is more than 75%.
- All existing expansion or movement joints should be followed through the new floor surface.
- ARMOFLOOR EP500 may change color or fade if exposed to sunlight but this has no effect on its performance characteristics.
- Pay attention to aggressive cleaning cycles and temperatures of both chemicals and cleaning regimes.
- Prior to application, ARMOFLOOR EP500 kits should be stored under cover in air conditioning and protected from extremes of temperature which may cause inconsistent workability, finish and cure times of the mixed material.

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

FIRST AID:

- Eyes: In the event of accidental splashes, flush with warm water and seek medical advice.
- Skin: Wash skin thoroughly with soap and water
- Inhalation: Remove to fresh air, keep patient rested
- Ingestion: Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to ARMOFLOOR EP500 Material Safety Data Sheet.

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MATEX warrants that its products are free from material and manufacturing defects. Instructions on how to use the product should be strictly followed to ensure effectivity and safe use. MATEX shall not be liable either directly or indirectly for any damages to personal, equipment or products that may occur as a consequence of the failure of any products application because it has no direct or continuous control over where or how its products are applied. It is the user's responsibility to acquire always the updated version of datasheets.

