INNO- SEAL

FOX PURMAX® EP 2K

Epoxy Based, Two Component, Waterproofing Coating

Description

FOX PURMAX® EP 2K is epoxy polyurethane based, two component, low viscosity, liquid insulation material developed for waterproofing and protection. **FOX PURMAX® EP 2K** has excellent resistance strength for chemical, especially cold conditions, thanks to its content of pure elastomeric hydrophobic epoxy polyurethane resin and special inorganic filler.

Fields of Application

- On open terraces exposed to UV and sunlight (with protection of the FOX PURMAX® TOPCOAT)
- Terrace, balcony and all wet areas,
- On roof and garden terraces,
- In flowerpot insulation,
- Insulation of foundation and curtain walls from the positive direction,
- In tunnels,
- In collection tanks,
- In ornamental pools,
- In roof gutters,
- Water supply lines and canals,
- In underground water tanks.

Advantages

- Easy and single-coat application (with mop, comb trowel or airless gun)
- Provides excellent adhesion,
- Has excellent chemical resistance,
- Has excellent cold weather resistance,
- Elastic, Resistant to abrasion,
- Has crack bridging ability,
- High adhesive strength,
- Hydrophobic (water repellent),
- Resistant to water deposits and puddles,
- Has excellent thermal resistance, the product never softens again,
- Can be applied on asphalt,
- Liquid impermeable,
- Can be walked on (light traffic),
- Suitable for local repairs.
- Can be painted with **FOX PURMAX® TOPCOAT**.

Technical Data

Density			1,10 gr/cm³
Color			Cream
Tensile Strength	DIN 53504	+23°C	7,5 N/mm²
		-20°C	17,5 N/mm²
Adhesion Strength to Concrete			1,83 N/mm²
Adhesion Strength to Concrete			2,95 N/mm² (Primed surface with Fox Epothane Primer)
Adhesion Strength to Steel			1,00 N/mm²
Adhesion Strength to Steel			1,57 N/mm² (Primed surface with Fox Epothane Primer)
Percentage of Total Solid Matter			%100
Dilution			Not Dilution
Shore A Hardness		7 days	65
Shore D Hardness		7 days	19
Elongation at Break	DIN 53504	+23°C	%325
		-20°C	%325
Tear Resistance	DIN 50515	+23°C	10,5 N/mm
		-20°C	61 N/mm
Application Time			90 minutes

The above values are given for + 23 ° C and 50% relative humidity. High temperatures shorten the time, low temperatures extend the time

Physical Properties

Temperature	+10°C	+20°C	+30°C
Application time	90 minutes	90 minutes	45 minutes
New Coat Application Time	Min. 24 - Max. 48 hours	Min. 16 - Max. 48 hours	Min. 12 - Max. 48 hours
Initial Hardening Time	30 hours	24 hours	16 hours
Pedestrian Traffic	24 hours	24 hours	12 hours
Light Traffic	3 days	2 days	1 days
Fully Cured Time	10 days	7 days	7 days

The above values are theoretical. May vary depending on temperature differences and humidity ratio.

Primer Selection Table

Surface Condition	Recommended Primer
Concrete in accordance with the standard	FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER HB, FOX PURMAX® PRIMER 1K
Moist substrates	FOX EPOTHANE® PRIMER WB
Moist substrates (with Moisture Barrier)	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER HBF
High porous substrates	FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER SL,
Highly porous moist substrates	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER HBF
Steel, galvanized steel and aluminum surfaces	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER WA, FOX PURMAX® PRIMER 1K
Wooden boards and some special surfaces	FOX EPOTHANE® PRIMER, FOX PURMAX® PRIMER 1K
Asphalt and Bitumen membrane surfaces	FOX EPOTHANE® PRIMER SL, FOX EPOTHANE® PRIMER HBF, FOX PURMAX® PRIMER 1K
Re-application on application (Old-New)	FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER WA, FOX PURMAX® PRIMER 1K
Non-porous concrete and non-absorbent surfaces	FOX EPOTHANE® PRIMER SL, FOX EPOTHANE® PRIMER HBF, FOX PURMAX® PRIMER 1K
Ceramic, marble, granite and shiny surfaces	FOX EPOTHANE® PRIMER WA

Chemical Resistance

Toluene %47,5	+	Toluene %30	+	Acetic Ester %50	+
Isooctane %30,4	+	Benzene %30	+	Methyl Isobutyl Ketone %50	+
N-Heptane %17,1	+	Xylene %30	+	Butyl alcohol %50	+
Methanol %3	+	Methyl Naphthalene	+	Methanol	+

This research was done at room temperature. High temperature values and / or mixtures of chemicals can affect chemical resistance. Color change may occur due to the effects of chemicals. If the surface is exposed to chemicals, it should be cleaned within 1 hour at the most. It is recommended to use (+). Conditional use is recommended (+ -).

Surface Quality

Concrete substrates to be applied must be solid and have sufficient compressive strength (at least 25 N/mm^2). Tensile strength should be at least 1.5 N/mm^2, humidity maximum 4%, ground temperature minimum +8°C. In addition, it should be noted that the dew point of the ground is above +3°C. The bottom surface is clean, dry and should be free from foreign substances such as all kinds of dirt, oil, grease, coating and surface curing materials.

Application Procedure

Surface preparation

Concrete Surfaces

Oil, grease, fuel and paraffin wastes must be removed, as well as mold release agents, cement residues, chips, loose particles and cured membranes. Surface defects, uneven surfaces and corner edges should be repaired with **FOX MORTAR FC188 T** repair mortar as a chamfer of at least 4 cm radius. Surface cracks should be repaired by filling with **FOX PURSEAL PS600** polyurethane sealant. It must be primed with suitable **FOX EPOTHANE®** or **FOX PURMAX® PRIMER 1K** series primers.

Asphalt Surfaces

Asphalt surface should be cleaned with water jet. In applications under vehicle traffic, the load-lifting capacity of the asphalt should be suitable for the loads in use. In order to at least 60% of aggregates are exposed, asphalt surface should be sandblasted with shot blast. Then it should be primed with suitable **FOX EPOTHANE®** series primers.

Bitumen Surfaces

Loose parts on the bitumen surface should be removed, blisters should be opened and dried. The main cracks should be opened, repaired and taped, primed with suitable **FOX EPOTHANE®** and **FOX PURMAX® PRIMER 1K** series primers.

Application Conditions

- Relative air humidity should be 80% maximum.
- Be careful about dew and condensation!
- Dew point and water vapor condensation on the floor that has not been applied or newly coated will damage the coating. To prevent this, the floor temperature must be above +8°C.

Watch Points in Application,

Surface Temperature ; Minimum +8°C - Maximum +30°C
Ambient Temperature ; Minimum +10°C - Maximum +30°C
Material Temperature ; Minimum +15°C - Maximum +30°C

Mixing

FOX PURMAX® 2K contains pigment and filler. Mix A component product thoroughly with an electric mixer and a suitable mixing tip until get a homogeneous color and make sure that there is no product on the bottom and sides of the container. After adding the B component product to the A component product, mix continuously for 3-4 minutes until you get a homogeneous mixture. Avoid over mixing to minimize air entrainment.
Mixing tools: (300 rpm/min - 400 rpm/min) electric mixer and epoxy / polyurethane resin mixing tip.

Application

Priming

Surfaces to be made with **FOX PURMAX® EP 2K** must be previously primed with **FOX EPOTHANE®** series primer. Attention should be paid to the floor temperature (min + 8°C). **FOX PURMAX® EP 2K** should be applied on the primer within the application period.

Coating

FOX PURMAX® EP 2K is poured onto the surface and applied on a single layer with a comb trowel or a mop. Alternatively, at least two coats are applied by roller or brush. If applied with a roller or brush, it should not be waited for more than 10-24 hours between coats. **FOX PURMAX® PRIMER 1K** primer should be applied if you have exceeded the duration (more than 4 days have passed) or if you are unsure of the adhesion between the coats.

Cleaning of the Tools

Tools and equipment used after the application should be cleaned with solvent or polyurethane thinner. **FOX PURMAX® EP 2K** can only be mechanically cleaned from the surface after hardening.

Coverage

2,00-2,50 kg/m^2

Watch Points

- Concrete surfaces to be coated with epoxy / polyurethane must be at least 3 weeks old before application, creating a vapor barrier layer on the floors that sit on the ground, and the roof, walls, doors and windows of the building have been made, the ambient and surface temperature must be at least +10°C and +30°C.
- The materials to be used should be brought to the application area 1 - 2 days in advance and must be adapted to the ambient conditions.
- In cold weather applications, the ambient and floor temperatures should be increased, and the packages should be kept at +20°C - 25°C and ready for use in order to increase the workability of the products.
- Rain, dust, wind, animals and pest must be prevented from entering the building when the coating is fresh.
- Pot life and curing times in resin based systems are affected by ambient temperature, ground temperature and humidity in the air. At low temperatures, curing slows down, which extends the pot life, the coating time and the working time.
  At high temperatures, curing is accelerated, which reduces pot life, coating time and working time. In order for the entire product to complete its curing, the ambient and ground temperatures should not be lowered below the minimum temperature levels given. After the application is completed, the coating should be protected from direct water contact for at least 24 hours. If water contact occurs, there will be softening and blistering on the coating, which will cause the coating to lose its properties. Therefore, the coating should be completely removed and applied again.
- Consumptions are given for ideal conditions where ambient and surface temperatures are considered as 20°C. Actual consumption may vary depending on the surface structure and ambient temperature. It should be remembered that consumption will increase in bad surfaces and cold weather conditions.
- Mixing must be done with an electric mixer of 300-400 rpm/min and the specified epoxy / polyurethane resin mixing tip. In case of not mixing with the specified mixing tip, air will be dragged into the product, which will cause air bubbles to form on the coating after application.

Package

20 kg Set
Component A; 17,75 kg tin bucket
Component B; 2,25 kg tin bucket

Shelf Life

When stored properly at room temperature, away from direct sunlight, between +5°C and +30°C, shelf life is 12 months from the date of production.

Storage

Should be stored in its original package, in a cool and dry place protected from frost. In short-term storage, maximum 3 pallets should be placed on top of each other and shipment should be made with the first-in, first-out system. In long-term storage, pallets should not be placed on top of each other.

Safety Precautions

It is dangerous to approach the storage and application areas with fire. Storage and application areas should be ventilated.

During the application, work clothes, protective gloves, goggles, masks in accordance with the occupational health and safety rules should be used. During storage and application, the material should not be contacted with the skin and eyes, if contacted, should be washed immediately with plenty of water and soap, and if swallowed, should be sought medical attention immediately. Foods and drinks should not be taken into the application areas. The material should be stored out of the reach of children.

For detailed information, please refer to the Material Safety Data Sheet.

Disclaimer

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