

# INNO-FLOOR FOX EPOTHANE® PRIMER FL-HB

## Epoxy Based, for Moisture Surfaces, Filled, Solvent-Free, Primer

### Description

**FOX EPOTHANE® PRIMER FL-HB**, epoxy-based, two-component, filled, solvent-free, low-viscosity primer set that forms an anti-moisture layer.

### Fields of Application

- On dry, moist, fresh concrete,
- On dry, damp, even non-blasted steel,
- Shiny and smooth surfaces,
- As a primer before epoxy and polyurethane coatings,
- As a binder for epoxy-based correction mortars and screeds,
- It is used as a repair and filling mortar by mixing with silica sand at the appropriate level.
- As a primer under **FOX EPOTHANE®** series epoxy floor coverings,
- As a primer under **FOX PURATHANE®** series polyurethane floor coverings,
- **FOX PURMAX®** series is used as a primer under polyurethane waterproofing coatings.

### Advantages

- It is used indoors and outdoors.
- It can be applied under +10°C, up to 100% relative humidity and completes its curing.
- Provides good corrosion protection on steel.
- It has high chemical and mechanical resistance.
- Despite its high mechanical properties, it is flexible and does not lose its flexibility over time.
- A high amount of filling can be entered into it.
- Easy to apply.
- Surface adherence is excellent.
- Excellent adhesion to glossy, glassy and smooth surfaces.
- It is liquid and moisture impermeable.
- Non-slip surface can be obtained.
- Solvent-free.
- It has low viscosity; it can be applied easily even in cold weather.
- It has high adhesion strength to dry, moist and fresh concrete.
- It can be applied in open area after rain and on concrete cleaned with water jet.

### Technical Properties

|                                 |             |                            |
|---------------------------------|-------------|----------------------------|
| Density                         |             | 1,35 gr/cm <sup>3</sup>    |
| Color                           |             | Yellowish, Grey            |
| Mortar Properties               |             | with 14,3% Binder          |
| Compressive Strength            |             | ~109 N/mm <sup>2</sup>     |
| Flexural Tensile Strength       |             | ~40 N/mm <sup>2</sup>      |
| Adhesion Strength               | to Concrete | >2 N/mm <sup>2</sup>       |
| Total Solid Material Ratio      |             | %100                       |
| Dilution                        |             | None                       |
| Application Surface Temperature |             | +5°C /+30°C                |
| Vapor Permeability              | ISO 7783-2  | 4,1 gr/ m <sup>2</sup> day |
| Workability Time                |             | 25 minutes                 |

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



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## Physical Properties

| Temperature               | +10°C                   | +20°C                   | +30°C                  |
|---------------------------|-------------------------|-------------------------|------------------------|
| Relative Humidity Ratio   | %60                     | %60                     | %60                    |
| Pot Life                  | 45 minutes              | 35 minutes              | 25 minutes             |
| New Coat Application Time | Min. 24 - Max. 35 hours | Min. 12 - Max. 18 hours | Min. 7 - Max. 10 hours |
| Pedestrian Traffic        | 30 hours                | 15 hours                | 8 hours                |
| Light Traffic             | 3 days                  | 2 days                  | 1 day                  |
| Getting Full Cured        | 7 days                  | 7 days                  | 7 days                 |

The above values are theoretical. It may vary according to temperature differences and humidity.

## System Details and Consumption

| System Details                    |                              | Product  | Consumption  |
|-----------------------------------|------------------------------|--|--|
| Primer                            | Primer                       | FOX EPOTHANE® series<br>(See primer selection chart.)  | 100-200 gr/m <sup>2</sup>                              |
|                                   | Surface roughness <1 mm      | 1 unit FOX EPOTHANE® series +<br>0,5-unit Silica sand 60-70 AFS (0,1-0,3 mm) by weight   | 200-500 gr/m <sup>2</sup><br>100-250 gr/m <sup>2</sup> |
|                                   | Surface roughness up to 2 mm | 1 unit FOX EPOTHANE® series +<br>1 unit Silica sand 60-70 AFS (0,1-0,3 mm) by weight   | 200-500 gr/m <sup>2</sup><br>200-500 gr/m <sup>2</sup> |
| Mortar Coating and Filling Mortar | 5-20 mm layer thickness      | 1 unit FOX EPOTHANE® PRIMER +<br>3-unit Silica sand 60-70 AFS (0,1-0,3 mm),<br>3-unit Silica sand 40-45 AFS (0,3-0,5 mm),<br>3-unit Silica sand 15-25 AFS (0,7-1,2mm), by weight | 2,2 kg/m <sup>2</sup> /mm                              |

The above values are theoretical and do not include the need for additional material due to surface porosity, profile, differences in leveling and loss.

## Primer Selection Table

| SURFACE CONDITION                                  | RECOMMENDED PRIMER  |
|--|---|
| Concrete conforming to the standard                | FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER HB   |
| Moist substrates                                   | FOX EPOTHANE® PRIMER WB   |
| Moist substrates (with Humidity Barrier)           | FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER HBF, FOX EPOTHANE® PRIMER FL-HB   |
| Highly porous substrates                           | FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER SL, FOX PURATHANE® PRIMER 1K   |
| 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 PURATHANE® PRIMER 1K, FOX EPOTHANE® PRIMER HBF, FOX EPOTHANE® PRIMER SL |
| Wooden boards and some special surfaces            | FOX EPOTHANE® PRIMER, FOX PURATHANE® PRIMER 1K  |
| Asphalt and Bitumen membrane surfaces              | FOX EPOTHANE® PRIMER SL, FOX EPOTHANE® PRIMER HBF, FOX PURATHANE® PRIMER 1K   |
| Reapplication on application (Old New)             | FOX EPOTHANE® PRIMER WA, FOX PURATHANE® PRIMER 1K   |
| For non-porous concrete and non-absorbent surfaces | FOX EPOTHANE® PRIMER SL, FOX EPOTHANE® PRIMER HBF, FOX PURATHANE® PRIMER 1K   |
| For ceramic, marble, granite and glossy surfaces   | FOX EPOTHANE® PRIMER WA   |

The above values are theoretical and do not include the need for additional material due to surface porosity, profile, leveling differences and loss.

## Surface Quality

The concrete substrates on which the application will be made must be strong and have sufficient compressive strength (at least 25 N/mm<sup>2</sup>), the tensile strength must be at least 1,5 N/mm<sup>2</sup>, and the ground temperature must be minimum +8°C. In addition, care should be taken to ensure that the dew point of the floor is above +3°C. The substrate is clean, dry and free of all kinds of dirt, oil, grease, coating and surface curing materials, etc. It should be free from foreign matter such as



## Application Procedure

### Preparation of Substrate

Concrete substrates on which the application will be made should be prepared using abrasive equipment (Shot Blasting, milling cutter, diamond grinding, etc.) to remove the cement slurry and obtain an open porous surface. Weak concrete pieces should be removed from the surface, small gaps and holes should be made completely open. The resulting dust should be cleaned with the help of industrial vacuum cleaner. Sub-surface repairs should be made with the mortar obtained by mixing 60-70 AFS (0,1-0,3mm) silica sand and **FOX EPOTHANE® PRIMER FL-HB** primer for filling the gaps and smoothing the surface.

### Application Conditions

- It can be applied under +10°C.
- Relative air humidity should be 100% maximum.
- Pay attention to dew and condensation!
- Dew and water vapor condensation on the untreated or newly coated floor will damage the coating. To prevent this, the ground temperature must be at least +3°C above.

### Watch Points

|                         |                                |
|-------------------------|--------------------------------|
| Surface Temperature     | ; Minimum +5°C - Maximum +30°C |
| Environment Temperature | ; Minimum +5°C - Maximum +30°C |
| Material Temperature    | ; Minimum +5°C - Maximum +30°C |

### Mixing

Before starting the mixture, make sure that the product temperatures are between +15°C and +25°C. Mix A component **FOX EPOTHANE® PRIMER FL-HB** with a suitable mixer for 1 minute without entraining air. Then pour the B component onto the A component. Stir continuously for 2 minutes until a homogeneous mixture is obtained. If necessary, add 60-70 Afs (0,1-0,3 mm) silica sand or other fillers after A and B components are mixed. Mix for another 2 minutes until a homogeneous mixture is obtained. Avoid over-mixing to minimize air entrainment. Mixing tools: (300-400 rpm) an electric mixer and epoxy/polyurethane resin mixing tip.

## Application

### As Primer

**Apply FOX EPOTHANE® PRIMER FL-HB** with a trowel or zero notch trowel. Make sure that the application is made on the entire surface without gaps. If necessary, apply two coats of primer depending on the surface condition. If epoxy or polyurethane coating will be applied on it, silica sand 40-45 Afs (0,3-0,5 mm) can be sprinkled on the material while it is still wet.

### As a Surface Smoothing Primer

It is necessary to smooth the rough surfaces before epoxy/polyurethane flooring. Apply the mixture of **FOX EPOTHANE® PRIMER FL-HB**, Silica sand 60-70 AFS (0,1-0,3 mm), taking into account the surface roughness, as scraping with a zero-notched trowel according to the required thickness.

### As Mortar Coating/ Filling Mortar

**FOX EPOTHANE® PRIMER FL-HB**, Silica sand 60-70 AFS (0,1-0,3 mm), Silica sand 40-45 AFS (0,3-0,5 mm), Silica sand 15-25 AFS (0,7-1,2mm) on the still sticky **FOX EPOTHANE® PRIMER** using leveling strips. After a short waiting time, compact and smooth the surface with a trowel or Teflon-coated trowel (usually 20-90 rpm).

### Cleaning of Tools

Tools and equipment used after the application can be cleaned with solvent. After **FOX EPOTHANE® PRIMER FL-HB** has hardened, it can only be removed from the surface by mechanical methods.

### Watch Points

- The concrete surfaces to be coated with epoxy/polyurethane should be at least 3 weeks old before the application, a vapor barrier layer should be formed on the floors resting on the earth ground, and the roof, walls, doors and windows of the building should be made, and the ambient and surface temperature should be minimum +10°C and maximum +30°C. It should be around.
- The materials to be used must be brought to the application area 1-2 days in advance and must adapt to the ambient conditions.
- In applications to be made in cold weather, the ambient and ground temperature should be increased, and the packages should be made ready for use by keeping them at +20°C-25°C in order to increase the workability of the products.
- Rain, dust, wind, animals and insects should 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, floor temperature and humidity in the air. Curing slows down at low temperatures, which extends pot life, cover time and working time. Curing is accelerated at high temperatures, which shortens pot life, cover time and working time. In order for the entire product to complete its curing, the ambient and ground temperature must 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 there is water contact, there will be softening and swelling on the coating, which will cause the coating to lose its properties. Therefore, the coating must be completely removed and redone.
- Consumptions are given for ideal conditions where the ambient and surface temperature is 20°C. Actual consumption may vary depending on the surface structure and ambient temperature. It should not be forgotten that consumption will increase in uneven surfaces and cold weather conditions.
- Mixing must be done with an electric mixer at 300-400 rpm and the specified epoxy/polyurethane resin mixing tip. If mixing is not done 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

25 kg set

A Component; 20 kg tin bucket

B Component; 5 kg tin bucket

### Shelf Life

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

### Storage

It should be stored in its unopened original package, in a cool and dry environment, protected from frost. In short-term storage, maximum 2 pallets should be placed on top of each other and shipment should be made with a 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 storage and application areas with fire. Storage and application areas should be ventilated. During the application, work clothes, protective gloves, glasses and masks in accordance with the occupational and worker health rules should be used. During storage and application, it should not be contacted with the skin and eyes, in case of contact, it should be washed with plenty of water and soap, and if swallowed, a doctor should be consulted immediately. Food and beverage materials should not be brought into the application areas. It should be stored out of the reach of children.

For detailed information, the Material Safety Data Sheet should be consulted.

### Disclaimer

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