INNO-SEAL

FOX PURMAX® 1K FS401

Polyurethane Based, One Component, Waterproofing Coating

Description

FOX PURMAX® 1K FS401, one component, polyurethane based, 400% elastic, point impact resistant, low viscosity, cold applied insulation material.

It complies with EN 1504-2:2004 standard.

Fields of Application

- Indoor and outdoor (under coating areas),
- In terraces, balconies and all wet areas,
- On roof and garden terraces,
- In flower bed insulation,
- In the positive insulation of foundation and shear walls,
- In tunnels,
- In collection tanks,
- In ornamental pools,
- In underground water tanks,
- Terraces above the parking lot

Advantages

- Fast and easy to apply as it is a one component.
- It can be applied by brush, roller or airless spray.
- High elasticity and flexibility.
- Excellent adhesion to concrete.
- Excellent mechanical properties.
- High adhesion strength.
- Liquid impermeable.
- Excellent crack closure even at low temperatures.
- Resistant to ponding on the terrace.

Technical Properties

Density	TS EN ISO 2811-1		1,43 gr/cm³
Color			Gri
Breaking Strength	ASTM D 412		>5,5 N/ mm²
Adhesion Strength	ASTM D 903	To Concrete	>2 N/ mm²
Viscosity	EN ISO 3219		2500-3500 cP
Water Vapor Permeability	ASTM E 96		0,8 gr/m² hours
Dilution			None
Shore A Toughness	TS EN ISO 868	7 days	60
Elongation at Break	ASTM D 412		400%
Thermal Resistance		80°C	100 days
QUV	ASTM G53		2000 hours
Application Temperature			+5°C /+35°C
Service Temperature			-30°C /+80°C
Application Time			40 minutes
Recoat Time			8-24 hours
Full Cure Time			7 days

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

Primer Selection Table

Substrate Condition	Recommended Primer
Concrete conforming to the standard	FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER HB, FOX PURMAX® PRIMER 1K FOX EPOTHANE® PRIMER FL, FOX EPOTHANE® PRIMER HB-FL
Moist Substrates	FOX EPOTHANE® PRIMER WB
Moist substrates (with Moisture Barrier)	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER HB-FL
Highly porous substrates	FOX EPOTHANE® PRIMER, FOX EPOTHANE® PRIMER SL, FOX EPOTHANE® PRIMER FL, FOX EPOTHANE® PRIMER HB-FL
Highly porous moist substrates	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER HBF, FOX EPOTHANE® PRIMER HB-FL
Steel, galvanized steel and aluminum surfaces	FOX EPOTHANE® PRIMER HB, FOX EPOTHANE® PRIMER WA, FOX PURATHANE® PRIMER 1K
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
On 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.

Substrate Quality

Concrete substrates on which the application will be made must be strong and have sufficient compressive strength (minimum 25 N/mm²), tensile strength must be at least 1,5 N/mm², humidity ratio must be maximum 4%, floor temperature must be minimum +5°C. In addition, care should be taken to ensure that the dew point of the floor is above +3°C. The substrate must be clean, dry and free of any foreign matter such as dirt, oil, grease, coating and surface curing materials.

Application Procedure
Substrate Preparation
Concrete Substrates

Oil, grease, fuel and paraffin waste should be removed, as well as completely free of 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 with a radius of at least 4 cm with a chamfer. Surface cracks should be filled with **FOX PURSEAL PS600** polyurethane mastic and repaired. It should be primed with suitable **FOX EPOTHANE®** series primers.

Asphalt Substrates

Asphalt surface should be cleaned with water jet. In applications that will be under vehicle traffic, the load-bearing capacity of the asphalt should be suitable for the loads in use. The asphalt surface should be shotblasted to reveal at least 60% of the aggregates and primed with suitable **FOX EPOTHANE®** series primers.

Application Conditions

- Relative air humidity should be 80% 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 above +5°C.

Watch Points in Application

Surface Temperature ; Minimum +5°C - Maximum+35°C
Ambient Temperature ; Minimum +5°C -Maximum +35°C
Material Temperature ; Minimum +5°C -Maximum +35°C

Mixing

FOX PURMAX® 1K FS401 contains pigment and filler. Mix the product thoroughly with an electric mixer and a suitable mixing tip until a homogeneous color is obtained and you are sure that there is no product left on the bottom and sides of the container. Avoid over-mixing to minimize air entrainment.
Mixing tools: (300 rpm - 400 rpm) an electric mixer and epoxy/polyurethane resin mixing tip.

Application

Primer

FOX PURMAX® 1K FS401, the surfaces to be made must be primed with **FOX EPOTHANE®** series primer beforehand. The floor temperature (min +5°C) must be paid attention to. **FOX PURMAX® 1K FS401** should be applied on the primer within the application period.

Waterproofing

FOX PURMAX® 1K FS401 It is applied in at least two coats with a roller, brush or airless spray. In case of application with a roller or brush, a minimum of 8 hours and a maximum of 24 hours should be waited between coats. After the coat application, 60 gr/m² reinforcement mesh is applied. Then the second layer is applied. If it will be used under coating (such as ceramics, marble), **FOX PURMAX® 1K FS401** 2nd layer application should be sanded with 40-45 AFS silica sand while still wet.

Cleaning of Tools

Tools and equipment used after the application should be cleaned with solvent or polyurethane thinner. After **FOX PURMAX® 1K FS401** hardens, it can only be cleaned from the surface by mechanical methods.

Consumption

1,50-2,0 kg/m²

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 earthen ground, and the roof, walls, doors and windows of the building should be made, and the ambient and surface temperature should be around minimum +5°C and maximum +35°C.
- 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 kept at +20°C-25°C to be ready for use 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 entrained into the product, which will cause air bubbles to form on the coating after application.

Package

25 kg tin bucket

Shelf Life

Shelf life is 6 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 3 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.

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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

The data contained in this technical document is based on our scientific and practical knowledge. SARTECH Yapı Malz. San. ve Tic. Ltd. Şti. is only responsible for the quality of the product. Our company cannot be held responsible for the consequences that may occur due to misuse and/or other than the written suggestions about where and how the product will be used. For detailed information, the safety data sheet and technical data sheet should be consulted or our company officials should be contacted.

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