INNO- SEAL

FOX PURMAX® ULTRA

Polyurea Based, Two Component, Aliphatic, Waterproofing Coating

Description

FOX PURMAX® ULTRA is a polyurea based, two component, aliphatic, can be applied with hand single layer, liquid applied, cold applied, low viscosity liquid insulation material developed for waterproofing and protection. **FOX PURMAX® ULTRA** has excellent resistance to UV rays, chemical, mechanical and thermal conditions thanks to its pure elastomeric hydrophobic modified polyurea resin and special inorganic filler content.

Fields of Application

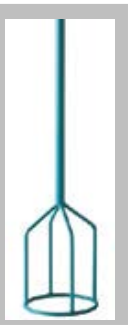
- On open terraces exposed to UV and sun rays,
- Terrace, balcony and all wet areas,
- On roof and garden terraces,
- Swimming pools, ornamental pools,
- In aircraft hangars,
- Water supply lines and canals,
- Underground water storages,
- Tunnels,
- Collection Tanks,
- Prefabricated Structures,
- Steel Structures,
- On wide open terraces,
- Roof gutters,
- In flowerpot insulation,
- Insulation of foundation and curtain walls from the positive direction.

Advantages

- Easy and single layer application (with drawers, airless gun),
- Provides excellent adhesion,
- Has excellent chemical resistance,
- Has excellent mechanical strength,
- Flexible, Resistant to abrasion,
- Has the ability to crack bridging,
- Bonding strength is high,
- Hydrophobic (water repellent),
- Can be used with continuous water,
- Has excellent thermal resistance, the product never softens again,
- Non-flammable,
- Can be applied on asphalt,
- Fluid,
- Liquid impermeable,
- Can be walked on (light traffic),
- Suitable for local repairs,
- Can be painted with **FOX PURMAX® TOPCOAT**.

Technical Features

Density		1,35 gr/cm³
Color		Cotto
Pull-off Strength	DIN EN ISO 527	9 N/mm²
Bonding Strength	Pulling off the concrete	> 1,5 N/mm²
Tear Strength	DIN ISO 34-1	40 N/mm
Total Solid material percentage		% 100
Dilution		No dilution
Shore A hardness DIN 53 505	7 days	80
Shore D hardness DIN 53 505	7 days	30
Elongation at break DIN EN ISO 527		% 675
Working Time		45 minutes



The above values are given at + 23 ° C for 50% relative humidity. Higher temperatures shorten the duration, lower temperatures extend the duration.

Physical Features

Temperature	+10°C	+20°C	+30°C
Working Time	70 min.s	60 min.s	40 min.s
Overlay Time	Min. 24 - Max. 48 hou vrs	Min. 16 - Max. 48 hours	Min. 12 - Max. 48 hours
First Hardness	24 hours	16 hours	16 hours
Pedestrian Traffic	16 hours	13 hours	10 hours
Light Traffic	3 days	2 days	1 day
Fully Cures In	10 days	7 days	7 days

The above values are theoretical. May vary with temperature differences and humidity.

Primer Selection Table

Surface Condition	Recommended Primer
Standard concrete	EPOTHANE® PRIMER, EPOTHANE® PRIMER HB, FOX PURMAX® PRIMER 1K RAPID
Moist substrate	EPOTHANE® PRIMER WB
Moist Substrates (Moisture Barrier)	EPOTHANE® PRIMER HB, EPOTHANE® PRIMER HBF
Highly porous substrates	EPOTHANE® PRIMER, EPOTHANE® PRIMER SL
High porous moist substrates	EPOTHANE® PRIMER HB, EPOTHANE® PRIMER HBF
Steel, galvanized steel and aluminum surfaces	EPOTHANE® PRIMER HB, EPOTHANE® PRIMER WA, FOX PURMAX® PRIMER 1K RAPID
Wood plates and some special surfaces	EPOTHANE® PRIMER, FOX PURMAX® PRIMER 1K RAPID
Asphalt and Bitumen membrane surfaces	EPOTHANE® PRIMER SL, EPOTHANE® PRIMER HBF, FOX PURMAX® PRIMER 1K RAPID,FOX PURMAX® PRIMER 1K
Reapply on Application (Old-New)	EPOTHANE® PRIMER WA, FOX PURMAX® PRIMER 1K RAPID
Non-porous concrete and non-absorbent surfaces	EPOTHANE® PRIMER SL, EPOTHANE® PRIMER HBF, FOX PURMAX® PRIMER 1K RAPID, FOX PURMAX® PRIMER 1K
Ceramic, marble, granite and shiny surfaces	EPOTHANE® PRIMER WA

Chemical Resistance

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

There may be color change with the effect of chemicals. This research was done at room temperature. High temperature values and / or mixtures of chemicals can affect chemical resistance.

Surface Quality

Concrete substrates should be sound and have sufficient compressive strength (at least 25 N / mm2), tensile strength of at least 1,5 N / mm2, maximum moisture content of 4% and minimum floor temperature of + 8 ° C. Also, care should be taken to ensure that the floor's dew point is above + 3 ° C. The bottom surface is clean, dry and must be free from foreign substances such as, dirt, oil, grease, coating and surface curing materials.

Application Procedure

Preparation of the Substrate

Concrete Surfaces

Oil, grease, fuel and paraffin wastes must 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 FC 188 T** repair mortar to be at least 4 cm radius in diameter. Surface cracks should be repaired by filling with **FOX PURSEAL PS 600** polyurethane mastic. The appropriate **FOX EPOTHANE®** series primer should be applied before application.

Asphalt Surfaces

The asphalt surface should be cleaned with water jet. In applications that will be under vehicular traffic, the load lifting capacity of the asphalt should be in accordance with the loads in use. The asphalt surface should be primed with appropriate **FOX EPOTHANE®** series of primers shot blasted with at least 60% of aggregates.

Bitumen Surfaces

The loose pieces on the bitumen surface should be removed, the blisters opened and dried. Main cracks should be primed with appropriate **FOX EPOTHANE®** series primers, which must be opened, repaired and taped over.

Plywood/OSB Surfaces

Ensure that the mounting of the plates is done correctly; all joints should be cleaned and taped with suitable tapes, should be primed with appropriate EPOTHANE® series primers,.

Iron/Steel Surfaces

Prior to primer application, sandblasting of grade SA 2.5 should be done and primed with suitable **FOX EPOTHANE®** series primers.

Application Conditions

- Relative air humidity should be 80% maximum.
- Be careful of dew and condensation!
- Dew condensation and water vapor condensation on untreated or newly coated surfaces will damage the coating. To prevent this, the floor temperature must be above + 8 ° C.

Considerations in Applications,

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

Mixing

FOX PURMAX® ULTRA A component contains pigment and filler. Once the homogenous color is achieved, thoroughly mix the A-component product with the electric mixer and the appropriate mixer head until it is sure that no product is left on the sides of the beaker and the bottom of the container. After thoroughly mixing component B into the component product A, mix continuously for 3-4 minutes until a homogeneous mixture is obtained. Avoid over-mixing to minimize air entrainment.
Mixing tools: (300 rpm - 400 rpm), an electric mixer and an epoxy / polyurethane resin mixer.

Application

Primer

Primer

Surfaces **FOX PURMAX® ULTRA** will be applied, must be primed with **FOX EPOTHANE®** series primer. Be sure to pay attention to the ground temperature (min + 8oC). **FOX PURMAX® ULTRA** should be applied within the working time of the primer.

Coating

FOX PURMAX® ULTRA can be applied onto the surface smoothly with a comb trowel or a drawer. Alternatively, apply at least two coats with roller or brush. If applied by roller or brush, do not wait more than 10-24 hours between coats. If you have exceeded the period (for example after more than 4 days) or if you are unsure about the adhesion between the floors, apply **FOX PURMAX® PRIMER 1K RAPID** primer.

Cleaning of the Tools

Tools and equipment used should be cleaned with solvent or polyurethane thinner after application. After **FOX PURMAX® ULTRA** hardens; it can only be cleaned off the surface mechanically.

Consumption

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

Watch Points

- The concrete surfaces to be coated with epoxy / polyurethane must be at least 3 weeks old before application. It is necessary that the floor which is sitting on the soil floor has a vapor cut-off layer and that the building's roof, walls, doors and windows are made, ambient and surface temperature should be at least + 10 ° C and at most + 30 ° C.
- The materials to be used must be brought to the application area 1 - 2 days beforehand and it is necessary to comply with the ambient conditions.
- In applications to be carried out in cold weather, the ambient and floor temperature should be increased and in order to increase the workability of the products, the packages should be ready to use at + 20/25 ° C.
- Prevent entry of rain, dust, wind, animal and poultry into the building when coating is fresh.
- Resin-based systems are affected by pot life and curing times, ambient temperature, and ground temperature and air humidity. At lower temperatures, curing is slower, which extends the pot life, overcoating time and working time. Curing at high temperatures accelerates, shortening the pot life, the coating time and the working time. Completion of the complete product should not be reduced below the minimum temperature levels given the ambient and floor temperature. After completion of the application, 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 properties of the coating to be lost. For this reason, the coating must be completely removed and rebuilt.
- Consumptions are given for ideal conditions in which the ambient and surface temperatures are assumed to be 20 ° C. Actual consumption may vary depending on surface structure and ambient temperature. It should not be forgotten that the consumption will increase in bad weather conditions and cold weather conditions.
- Mixing must be done with an electric mixer of 300-400 rpm and the specified epoxy / polyurethane resin mixer. In case of no mixing with the specified mixing head, air will be dragged into the product, which will cause air bubbles to form on the coating after application.

Package

20 kg Set
A component; 10,00 kg tin bucket
B component; 10,00 kg tin bucket

Shelf Life

Shelf life is 6 months from the date of production when stored properly at +5 oC to + 25 oC at room temperature, away from direct sunlight.

Storage

The product should be stored in its original package, in a cool and dry place protected from frost. For short term storage, maximum 3 palettes should be placed on top of each other and the shipment should be made on a ‘first come, first go’ basis. Palettes should not be placed on top of each other during long term storage.

Health and Safety Precautions

It is dangerous to approach the application sites with fire. Fresh air should be circulated in the storage and the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children.

For detailed information please consult the Material Safety Data Sheet**.**

Disclaimer

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