INNO-FLOOR

FOX PROCRETE® MF

Polyurethane Concrete Coating, Obtained as a Result of Modification of Polyurethane Based Resins with Special Additives and Chemicals, Three Component, Chemical Resistant, High Performance, Smooth Surface Finish for Industrial Floor Coverings

Definition

FOX PROCRETE® MF is a three-component industrial floor coating system obtained by modification of polyurethane-based resins with special additives and chemicals, created by adding a special filler to the resins, has a smooth surface finish, excellent chemical, thermal shock and solvent resistance, and can be applied in 3-6 mm thickness.

Fields of Application

- In areas subject to heavy/medium traffic load, long-lasting and durable coating is needed,
- In the Food, Chemical and Pharmaceutical industry,
- In areas requiring chemical and mechanical resistance,
- In production areas,
- In packaging areas,
- In wineries and breweries,
- In industrial kitchens,
- In water facilities,
- In laboratories,
- In storage areas.

Technical specifications

Density		1,72±0,05 g/cm^3
Color		Red, Yellow, Blue, Orange, Green, Light Gray, Dark Grey, Cream
Compressive Strength	28 day	≥55 N/mm²
Adhesion Strength	to concrete	≥3,60 N/mm²
Tensile Strength		≥10 N/mm²
Flexural Strength		≥22 N/mm²
Application Thickness		3-6 mm
Temperature Resistance	6mm	-20°C /+120°C
Applicable Surface Temperature		+10°C /+30°C
Operation time		20-25 minute
Light Traffic		24 hour
Complete Setting		48 hour

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

Advantages

Temperature Resistance

FOX PROCRETE® MF is against liquid spills, 3 mm coating under temperatures between -5°C/+60°C, 4 mm coating under -15°C/+80°C, 6mm coating under temperatures between -20°C/+120°C. It does not lose its properties. Constantly repeated thermal shocks and thermal transformations under the effects of liquid-vapor do not cause swelling and peeling in the coating.

Anti-slip Feature

FOX PROCRETE® MF has a moderate slip potential according to the non-slip tests performed on wet surfaces using 4-S rubber in accordance with the EN13036-4 standard. **FOX PROCRETE® MF** floor coating have been formulated to meet this specific requirement, together with the right choice of footwear. Optimum slip resistance can only be achieved with regular cleaning.

Anti-Slip Test Values	Slip Potential EN13036-4	FOX PROCRETE® MF EN13036-4	Slip Angle DIN51130	FOX PROCRETE® MF DIN51130
36 and over	Low	-	19°-27° (R11)	
25-35	Medium	-	10°-19° (R10)	
24 and under	High	24	6°-10° (R9)	R9

Volatile Substance and Odor

FOX PROCRETE® MF gives very low emissions as a result of VOC emission chamber testing, quality management inspection and product control procedures and complies with all emission requirements for indoor floor systems. Since it does not contain any volatile components that may affect the health and comfort of personnel, it is an extremely clean product that does not pose the risk of leaving odors on foodstuffs. It becomes food stain resistant 12 hours after application.

Impact and Abrasion Resistance

FOX PROCRETE® MF has high mechanical properties thanks to its low elastic modulus and is also very durable under point impact. Provides high mechanical resistance against heavy loads. It does not shed pieces from the coating, does not create cracks, does not scratched or crushed or chipped. It provides extremely high wear resistance for floors under heavy static and dynamic loads where forklift transportation and transportation vehicles operate.

Chemical Resistance

FOX PROCRETE® MF provides exceptional resistance to chemical attack. It is extremely resistant to a wide spectrum of chemicals, from concentrated inorganic and organic acids to alkalis and solvents.
Some of these chemicals are as follows:

- Acids commonly used in the Food Industry such as acetic acid, lactic acid, oleic acid, citric acid,
- Hydrochloric, nitric, phosphoric and sulfuric acids,
- Alkali containing sodium hydroxide at 50% concentration
- Vegetable and animal oils, sweeteners and essences,
- Petroleum products such as mineral oils, kerosene, gasoline etc.
- Organic solvents including methanol, xylene and ethers,

(For detailed information, please contact our Technical Service).

Permeability

FOX PROCRETE® MF exhibits zero permeability and no surface absorbency.

Moisture Tolerance

FOX PROCRETE® MF is extremely resistant to moisture. It can be applied on 7-day-old concrete or on old concrete with high moisture content without using special primers. This applicability enables quick and easy programming in facilities with wet areas. Epoxy floor coatings applied under the same conditions may deteriorate.

Cleaning and Hygiene

FOX PROCRETE® MF is a hygienic product. Thanks to its chemical and monolithic structure, it does not create an environment suitable for bacterial and fungal growth. For this reason, it is used safely in the food and pharmaceutical industries where hygiene standards are highest. Regular cleaning and maintenance increases the life of the floor and ensures its good appearance.

Application Procedure

Surface quality

The concrete substrates on which **FOX PROCRETE® MF** will be applied must be solid and have sufficient compressive strength (at least 25 N/mm^2), tensile strength must be at least 1.5 N/mm2, and the ground temperature must be minimum +10°C. Additionally, care should be taken to ensure that the dew point of the ground is above +3°C. The subsurface must be clean, dry and free of any foreign substances such as dirt, oil, grease, coating and surface curing materials.

Surface Preparation

Concrete sub-surfaces should be prepared by using abrasive equipment (Shot Blasting, milling, diamond polishing, etc.) to remove the cement laitance and obtain an open-pore surface. Weak concrete pieces should be removed from the surface and small gaps and holes should be made completely open. The resulting dust should be cleaned with the help of an industrial vacuum cleaner. For sub-surface repairs, filling the gaps and leveling the surface, the ground should be prepared with the mortar obtained by mixing 60-70 AFS (0.1-0.3mm) quartz sand and **FOX PROCRETE® PRIMER**.
FOX PROCRETE® MF can shrink/stretch within itself due to its general structure. To prevent this, 8-10 mm thick joints should be opened on the edges of the column and on the floor (at least every 4-5 meters for the floor) and the joint gaps should be cleaned with the help of an industrial vacuum cleaner. These gaps should be filled with **FOX PROCRETE® MF** after the application of **FOX PROCRETE® PRIMER.**

Application Conditions

- It can be applied on 7-day-old concrete or on old concrete with high moisture content without using special primers.
- Be careful of dew and condensation!
- Condensation on unapplied or newly coated surfaces will damage the coating. To prevent this, the ground temperature must be above +10°C.

Points to be taken into consideration in application:

Surface Temperature	; Minimum +10°C - Maximum +30°C
Ambient temperature	; Minimum +10°C - Maximum +30°C
Temperature of Material	; Minimum +10°C - Maximum +30°C

Mixing

Before starting the mixing, make sure that the product temperatures are between +20°C and +25°C. Since **FOX PROCRETE® MF** has 3 components, obtaining a homogeneous mixture is important to avoid air bubbles and surface defects after application. For this reason, it is highly recommended to mix it with a mixer such as COLLOMIX XM 2. After components A and B are completely added into the **FOX PROCRETE® MF** COLLOMIX XM 2 mixer, component C powder is added onto component A+B. Mix for a maximum of 3 minutes until you obtain a homogeneous mixture.

Application

Priming

The surfaces on which **FOX PROCRETE® MF** will be applied must be previously primed by scraping with a suitable trowel with **FOX PROCRETE® MF** or by applying a roller with **FOX PROCRETE® PRIMER**. Attention must be paid to the ground temperature (min +10°C). Application should be made on the primer within the coating period. If priming will be done with **FOX PROCRETE® PRIMER,** this period is Min.24–Max.72 hours. In cases exceeding 72 hours, re-priming is required before applying **FOX PROCRETE® MF**. If priming will be done with **FOX PROCRETE® MF,** the coating time on the primer is minimum 8 hours.

Coating

FOX PROCRETE® MF, the prepared mixture is poured onto the previously primed surface and spread to the desired thickness with a comb or suitable trowel. In order to obtain a seamless and smooth floor, the area and material to be covered must be planned well. After the surface is flattened, the air entrained in the product is removed by passing over it with a puffer roller.

Cleaning Application Tools

After application, the tools and equipment used should be cleaned with solvent. **FOX PROCRETE® MF** can only be cleaned from the surface mechanically after hardening.

Consumption

7–9 kg/m2 to obtain 4 mm thickness,
10–12 kg/m2 to obtain 6 mm thickness
FOX PROCRETE® MF mixture should be used.

Matters to be taken into consideration

- When applying **FOX PROCRETE® MF**, if the ambient and surface temperature is below +10°C or above +30°C, appropriate temperatures must be waited. Application should not be made in extremely hot, rainy or windy weather. The materials to be used in the application area should be brought and stored 1-2 days in advance and ensure that they adapt to the environmental conditions. In applications to be carried out in extremely cold weather, the ambient and ground temperature should be increased with heaters, and the materials to be used should be conditioned at +20°C and +25°C and made ready for application.
- Working and reaction times of polyurethane-based systems are affected by the ambient and surface temperature and the relative humidity in the air. The reaction slows down at low temperatures, which extends the pot life and working time. High temperatures accelerate the reaction and the times mentioned above are shortened accordingly. In order for the material to complete its cure, the ambient and ground temperature must not fall below the minimum allowed temperature. After mixing, the material should be allowed to rest and then mixed again.
- After applying **FOX PROCRETE® MF,** you should wait at least 1 day before applying another coating.

Packing

20 kg set
Component A; 3.10 kg plastic bottle
Component B; 2.70 kg plastic bottle
Component C; 14.20 kg powder polyethylene reinforced kraft bag

Shelf life

When stored correctly at room temperature, between +5°C and +30°C, away from direct sunlight, the shelf life is 6 months from the date of production. Opened packages should be closed and consumed within 1 week.

Storage

It should be stored in its unopened original packaging, at a temperature between +5°C and +30°C, in a cool and dry environment, away from direct sunlight and protected from frost. For short-term storage, a maximum of 3 pallets should be placed on top of each other and shipment should be made on a first-in, first-out system. For long-term storage, pallets should not be stacked on top of each other. **FOX PROCRETE® MF** A Component freezes below 0°C. Therefore, special attention should be paid to storage conditions.

Security precautions

It is dangerous to approach storage and application areas with fire. Storage and application areas should be ventilated. During application, work clothes, protective gloves, glasses and masks in accordance with occupational and worker health rules should be used. It should not be contacted with skin or eyes during storage and application. In case of contact, it should be washed immediately with plenty of water and soap. If swallowed, a doctor should be consulted immediately. Food and beverage materials should not be brought into application areas. It should be stored in places inaccessible to children.
For detailed information, please refer to the Material Safety Data Sheet.

Disclaimer

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