

INNO-SEAL FOX MULTIPLUS® 2K FS542

Two Component, Bitumen Rubber and Cement Based, Flexible Waterproofing Material

Description

FOX MULTIPLUS® 2K FS542, is a bitumen rubber and cement based, two component, solvent free, crack bridging, flexible waterproofing material.

EN 15814 + A2: 2014 meets the conditions of CB1-W1-C2A-R1.

- CB1** : ≥1mm Static Crack Bridging
W1 : 0,0075 N/mm² Pressurised Water Impermeability
C2A : 0,30 MN/m² Compressive Strength
R1 : ≤ 24 hours After Rain Resistance

Public Works No: 04.379/I07



Fields of Application

- Positive direction in outdoor, horizontal and vertical applications,
- On reinforced concrete surfaces that are under the soil and in constant contact with water,
- On surfaces such as foundations, curtain walls,
- Retaining walls,
- In the insulation of flower beds,
- Insulation of balconies and terraces against surface water (provided that the top is protected)
- In basements and similar underground structures,
- It is used to protect concrete against underground water and microorganisms.

Advantages

- Durable, resistant to water, weak acids and some salt solutions.
- Does not sag on vertical surface.
- It has crack bridging feature.
- Can be applied on slightly damp and dry surfaces.
- Easy and fast application.
- It is applied with brush and trowel.
- Creates a seamless, permanent and moisture-proof coating.
- Creates a jointless, continuous and permanent insulation layer.
- It can be used in horizontal and vertical applications without any problem.
- It is resistant to freeze-thaw cycle.
- It has high aging resistance and provides permanent water impermeability even after years.
- Can be used in areas affected by movement and vibration.
- Solvent-free, water-based and environmentally friendly.

Technical Properties

Material Structure	A Komponent B Komponent	Polymer modified Bitumen-Rubber Special cement mixture
Colour		Dark brown, black
Mixture Density		1,30±0,02 kg/lt
Mixture Solids Ratio		%75±1
pH (A+B)		12,5±0,05
Viscosity		2500 mPa.s
Floor Temperature		+5°C /+30°C
Service Temperature		-20°C /+80°C
Curing Time		~24 hours
Water Contact Time		~24 hours
Final Curing Time		28 days

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



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Product Certificates

TEST	METHOD	EN 15814 TEST REQUIREMENTS	RESULT
Static Crack Bridging +4°C	EN 15812	Class CB0: No value required Class CB1: Crack bridging ≥ 1 mm; Dry film thickness ≥ 3 mm Class CB2: Crack bridging ≥ 2 mm; Dry film thickness ≥ 3 mm	CB1
Flexibility at Low Temperature 0°C	EN 15813	No Cracks	Suitable
Compressive Strength	EN 15815	Class C0: No value required Class C1: 0.06 MN/m ² , Dry film thickness ≥ 3 mm Class C2A: 0.30 MN/m ² , Dry film thickness ≥ 4 mm with mesh Class C2B: 0.30 MN/m ² , Dry film thickness ≥ 4 mm without mesh	C2A
Rain Resistance	EN 15816	Class R0: No value required Class R1: ≤ 24 hours, wet film thickness ≥ 3 mm Class R2: ≤ 8 hours, wet film thickness ≥ 3 mm Class R3: ≤ 4 hours, wet film thickness ≥ 3 mm	R1
Continuous Water Resistance	EN 15817	There should be no colour change in the water According to EN 15817, the product must not change	Suitable
Dimensional Stability at High Temperature +70°C	EN 15818	No collapse or yielding should be observed	Suitable
Reduction in Layer Thickness	EN 15819	Reduction in layer thickness at the end of 28 days should be ≤ 50	Suitable
Pressurised Water Impermeability (1 mm open crack)	EN 15820	Class W1 : 0.0075 N/mm ² for ≥ 24 hours, Dry film thickness without mesh ≥ 3 mm Class W2A: 0.075 N/mm ² for ≥ 72 hours, Dry film thickness mesh ≥ 4 mm Class W2B: 0.075 N/mm ² for ≥ 72 hours, Dry film thickness without mesh ≥ 4 mm	W1
Fire Class	TS EN 13501-1	Euroclass	E

Application Procedure

Substrate Preparation

The surface to be applied must be solid, free from all kinds of oil, grease, rust, paraffin, paint, bitumen residues that will prevent adhesion to the surface and all loose parts must be cleaned. Iron and wooden wedges on the surface should be removed and active water leaks, if any, should be blocked with FOX PLUG FC340. Existing gaps, uneven surfaces and corner edges (chamfering at least 4 cm) should be made with FOX MORTAR FC188 T (R4) repair mortar. The surface must be primed before **FOX MULTIPLUS® 2K FS542** application.

Mixing

FOX MULTIPLUS® 2K FS542 While component B is slowly added to component A, it is mixed for about 3-4 minutes until the mixture is homogeneous with an electric mixer with 400-600 rpm and **T mixer type with the mixing apparatus specified in the technical specifications section** and rested for 2 minutes. Then it is mixed again for 1 minute and made ready for application.

Mixing Ratios

24 kg **FOX MULTIPLUS® 2K FS542** A component, mixed with 8 kg **FOX MULTIPLUS® 2K FS542** B component.
Note: Both are in a bucket as Component B is kraft bag, Component A is liquid.

Application

Priming

For primer application, **FOX MULTIPLUS® 2K FS542** A component product is mixed for 3-5 minutes with an electric mixer at 400-600 rpm by adding 1/5 water (diluted). Apply the mixture homogeneously on the surface with a brush as a single coat. Ponding should not be allowed in horizontal applications. Wait for the primer to dry before applying the waterproofing layer.

Waterproofing Application

After the primer dries, the **FOX MULTIPLUS® 2K FS542** mixture prepared with the help of a brush or trowel is applied to the surface in two layers and at the specified consumption. After making sure that the insulation coating is completely dry, the foundation filling should be done. Before filling the foundation, it must be covered with drainage board or thermal insulation plates and protected from impacts and tears that may occur during filling. The application should not be made during rain or when there is a possibility of rain.



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Cleaning of Tools

Tools and equipment used after application should be cleaned with water. **FOX MULTIPLUS® 2K FS542** can be mechanically cleaned from the surface with solvent after hardening.

Consumption

Primer; 0,25 kg/m²
1st layer; 1,50 kg/m²
2nd layer; 1,50 kg/m²

Watch Points

- When applying **FOX MULTIPLUS® 2K FS542**, if the ambient and surface temperature is below +5°C or above +30°C, suitable temperatures should be expected.
- Do not apply when it is raining or when there is a possibility of rain. Surfaces that are not fully cured should not be exposed to water.
- **FOX MULTIPLUS® 2K FS542** should be mixed with the mixing apparatus specified in the technical specifications section.
- **FOX MULTIPLUS® 2K FS542** should be consumed within 1 hour at the latest after mixing.
- The working and reaction times of bitumen rubber based systems are affected by ambient and ground temperature and relative humidity in the air. At low temperatures, the reaction slows down, which prolongs the pan (container) life and working time. High temperatures accelerate the reaction and the times mentioned above are shortened accordingly.
- Especially in extremely hot weather, the product may increase in consistency due to rapid water loss. To prevent this, water can be added at a rate not exceeding 3% of the total product amount. The product must be mixed homogeneously.
- In exterior surface applications, the applied surface must be protected from sun, wind, rain or frost for the first 24 hours.
- For the material to complete its curing, the ambient and ground temperature should not fall below the minimum permissible temperature.

Package

32 kg Set
Component A; 24 kg Plastic bucket
Component B; 8 kg Kraft bag

Shelf Life

When stored correctly at room temperature, away from direct sunlight, between +5°C and +30°C, the shelf life is 12 months from the date of manufacture. Opened material should be used as soon as possible.

Storage

It should be stored in its unopened original packaging, in a cool and dry environment, protected from frost. For short-term storage, maximum 2 pallets should be stacked on top of each other and shipment should be made on a first-in, first-out basis. For long term storage, pallets should not be stacked 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, it should not be contacted with the skin and eyes, should be washed immediately with plenty of water and soap, and if swallowed, seek medical attention immediately. Food and drink materials should not be brought to the application areas. It should be stored out of the reach of children.

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

Disclaimer

The data contained in this technical document is based on our scientific and practical knowledge. Fox Bau Yapı Kimyasalları A.Ş. 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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