INNO- SEAL
FOX MULTIPLUS® DUALGUM REACTIVE

Resistant to Heavy Conditions, Two Component, Colloidal Dispersion Polymer Modified, Bitumen-Rubber Waterproofing Material

Description

FOX MULTIPLUS® DUALGUM REACTIVE, resistant to heavy conditions, two components, colloidal dispersion polymer modified, bitumen-rubber based, water based liquid membrane. Fast curing waterproofing material with ultra-high application efficiency. It is a bitumen emulsion with high elasticity feature and adheres to concrete and metal surfaces perfectly. Creates a perfect membrane by is reinforced with non-woven Geotextile felt.

In compliance with TS EN 15814+A2 CB2-W2B-C2B-R3 standards.

CB2 : ≥ 4mm Static Crack Bridging
W2B: ≤ 0,15 N/mm² Pressure Water Impermeability
C2B : 0,30 MN/m² Compressive Strength
R3 : ≤ Rain Resistance after 1 hour

EN 15814+A2
CB2–W2B-C2B-R3

Fields of Application

- In indoor and outdoor, vertical and horizontal applications from positive direction,
- On surfaces which remains underground and has contact with continuous water,
- On surfaces such as foundations and curtain walls,
- On retaining walls,
- In tunnels,
- In underground structures such as basements etc.
- For protection of the concrete from the underground waters, microorganisms and dissolved salts in water,
- Terraces and Green roofs,
- On roof tops and industrial roofs

Advantages

- Provides excellent waterproofing.
- Has crack-bridging feature. Maintains its features even under -26°C.
- Ultimate elasticity (%2000).
- Its durability against bacteria attacks for 30 days underground at 40°C is tested and approved.
- Creates broad, permanent insulation.
- Does not contain Radon gas.
- Blocks methane gas.
- Does not contain solvent, water based.
- Has long life time, resistance to water, weak acids and some salt solutions.
- Can be used in vertical and horizontal applications.
- Resistant to freeze and thaw effects.
- Provides perfect solutions to details, applied fast and easily with spray machine.
- Can be applied even on fresh concrete.
- Cures fast (1 hour approximately).
- Can be covered 1 day after the application.

Technical Data

Structure of Material	Component A	Colloidal Dispersion Polymer modified Bitumen-Rubber
	Component B	Chemical Salt Solution
Color		Dark Brown, Black
Density		1,02 kg/lt
Percentage of Total Solid Matter		%62
Static Crack Bridging	TS EN 15812	≥4 mm
Compressive Strength	TS EN 15815	0,30 MN/m²
Rain Resistance	TS EN 15816	≤1 hour
Pressure Water Impermeability	TS EN 15820	≤0,15 N/mm²
Elongation at Break	DIN ISO 527	%2000
Recovery in Elongation	ASTM D 412	%90
Application Surface Temperature		+5°C +40°C
Service Temperature		-30°C +90°C
Touch Curing Time		Instantly
Curing Time		1 hour
Contact Time with Water		4 hours
Fully Cured Time		7 days

Product Standards

TEST NAME	METHOD	TS EN 15814 TEST REQUIREMENTS	RESULTS
Static Crack Bridging +4°C	TS EN 15812	Class CB0: No value is required Class CB1: Crack Bridging ≥1mm; Dry film thickness ≥3mm Class CB2: Crack Bridging ≥2mm; Dry film thickness ≥3mm	CB2
Flexibility at Low Temperature 0°C	TS EN 15813	Crack should not be seen	Suitable
Compressive Strength	TS EN 15815	Class C0 : No value is required Class C1 : 0,06 MN/m², Dry film thickness ≥3 mm Class C2A: 0,30 MN/m², Dry film thickness with mesh ≥4 mm Class C2B: 0,30 MN/m², Dry film thickness without mesh ≥4 mm	C2B
Rain Resistance	TS EN 15816	Class R0: No value is 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	R3
Continuous Water Resistance	TS EN 15817	No color change in water There should be no change in the product according to EN 15817	Suitable
Dimensional Stability at High Temperature +70°C	TS EN 15818	Collapse or flow should not be observed	Suitable
Decrease in Layer Thickness	TS EN 15819	Decrease in layer thickness should be 50% after 28 days	Suitable
Pressure Water Impermeability (1 mm open crack)	TS EN 15820	Class W1 : ≥ For 24 hours 0,0075 N/mm², Dry film thickness without mesh ≥ 3 mm Class W2A: ≥ For 72 hours 0,075 N/mm², Dry film thickness with mesh ≥ 4 mm Class W2B: ≥ For 72 hours 0,075 N/mm², Dry film thickness without mesh ≥ 4 mm	W2B
Fire Class	TS EN 13501-1	Euroclass	E

Application Procedure

Preparation of Substrate

The surface to be applied must be solid, free from any 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 (chamfer making at least 4 cm) should be done with **FOX MORTAR FC188 T (R4)** repair mortar.

Mixing

Preparation of B Component (Accelerator Solution)

The salt solution, which is ready in 20 kg can, is shaken and brought ready to use.

Preparation of A Component Bitumen Emulsion

It is made homogeneous by circulating at least 5 minutes by helps of the bitumen emulsion spraying machine pump in its package.

Application

Priming

For primer application, the B component (accelerator solution) valve of the spraying machine is closed and applied homogeneously on the surface with approximately 250-300 gr / m^2 consumption. Wait at least one hour for the primer to dry.

Waterproofing Application

- Place the **FOX MULTIPLUS® DUALGUM REACTIVE** barrel and B component (accelerator solution) can near the sprayer. Place the suction hoses of both products into the product. Start the machine and start the circulation process.
- **FOX MULTIPLUS® DUALGUM REACTIVE** must be mixed by circulating for at least 5 minutes by helps of a spray machine pump.
- B component (accelerator solution) and **FOX MULTIPLUS® DUALGUM REACTIVE** start to be sprayed together with pressure adjustment according to the desired amount of consumption, but all of the sprayed **FOX MULTIPLUS® DUALGUM REACTIVE** and B component (accelerator solution) must be applied to cover exactly each other.
- After applying the product to the surface, make sure that the water flows from the new layer in droplets.
- Check that the leaked water is clear after applying the product to the surface. Turbid or brown water is a sign that the reaction is not complete and the product is spoiled. This can be corrected by changing the B component (accelerator solution) ratio.
- The insulation coating should be left to dry for at least 1 day depending on the climatic conditions, and foundation filling should be done after ensuring that it is completely dry. Before foundation filling is made, it must be covered with drainage plate or thermal insulation plates and it must be protected from impacts and tears that may occur during filling.
- Spraying should be done by moving at a continuous speed horizontally or vertically until it reaches the required thickness.
- **FOX MULTIPLUS® DUALGUM REACTIVE** can be applied on damp surfaces, not wet surfaces. If it is predicted that it will rain during the application, application should not be started.

Cleaning of the Tools

Tools and equipment used after the application should be cleaned with kerosene, diesel or solvent.

Coverage

Waterproofing ~ In order to obtain 1mm thickness, application should be applied as ~ 1kg / m^2.

Watch Points

- All surfaces on which **FOX MULTIPLUS® DUALGUM REACTIVE** will be applied must be intact and free of materials such as dirt, dust, dirt, grease, decomposition, congestion.
- **FOX MULTIPLUS® DUALGUM REACTIVE** is applied with a double nozzle spray machine. First nozzle sprays the FOX **FOX MULTIPLUS® DUALGUM REACTIVE** and the second nozzle sprays B component (accelerator solution).
- **FOX MULTIPLUS® DUALGUM REACTIVE** can be applied on curved surfaces, horizontal and vertical surfaces.
- **FOX MULTIPLUS® DUALGUM REACTIVE** should be homogenized by circulating for at least 5 minutes by means of a spray machine pump.
- **FOX MULTIPLUS® DUALGUM REACTIVE** and B component (accelerator solution) are sprayed simultaneously in the ratio of 20: 1 (20 **FOX MULTIPLUS® DUALGUM REACTIVE**: 1 B Component (accelerator solution)).
- Pedestrian traffic is allowed 3 hours after the application is completed.
- In **FOX MULTIPLUS® DUALGUM REACTIVE** application, if the ambient temperature is below + 5°C or above + 30°C, suitable temperatures should be expected.
- To prevent bubble / bubble formation on the surface after application, it is recommended to shade the surface, apply in the morning hours when the sun's rays are low or in the evening hours. After the Dualgum Reactive application is completed, top of material should be protected with covers such as geotextile mesh after 40-45 minutes.
- If bubbles form when applied under strong sunlight, they should be repaired later.

Package

Component A	1 ton IBC OR 200kg Plastic barrel
Component B (accelerator solution);	30 kg can

Shelf Life

When stored properly at room temperature, away from direct sunlight, between +5°C and +30°C, shelf life is 12 months from the date of production. It should be protected from frost. The opened material should be consumed as soon as possible.

Storage

Should be stored in its original package, in a cool and dry place protected from frost. In short-term storage, maximum 2 pallets should be placed on top of each other and shipment should be made with the 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 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, the material should not be contacted with the skin and eyes, if contacted, should be washed immediately with plenty of water and soap, and if swallowed, should be sought medical attention immediately. Foods and drinks should not be taken into the application areas. The material should be stored out of the reach of children.
For detailed information, please refer to the Material Safety Data Sheet.

Disclaimer

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FOX MULTIPLUS® DUALGUM REACTIVE

Resistant to Heavy Conditions, Two Component, Colloidal Dispersion Polymer Modified, Bitumen-Rubber Waterproofing Material

Determination of Water Impermeability: Class W2B

Crack Bridging Ability: Class CB2

Compressive Resistance: Class C2B

Resistance to Rain: Class R3

Reaction to Fire: Class E

Water Resistance: Passing

Flexibility at Low Temperature: Passing

Dimensional Stability at High Temperature: Passing

Reduction in fully dried layer thickness ≤ %50 (MLV)

Dangerous materials: NPD