

ISOFLEX-PU 500 THIXO

One-component, thixotropic, polyurethane, liquid waterproofing membrane for vertical, curved and sloping surfaces

Description

One-component, thixotropic, polyurethane, liquid waterproofing membrane for vertical, curved and sloping surfaces.

ISOFLEX-PU 500 THIXO is based on elastomeric, hydrophobic polyurethane resins of excellent mechanical, chemical, thermal and weather resistance. Thanks to its thixotropy, it is easily applied to vertical, curved and sloping surfaces. The product has additionally the following properties:

- Forms a continuous, elastic, waterproof, vapor-permeable layer, without seams or joints.
- Features excellent adhesion to various substrates, like concrete, cement mortars, metal, wood and most waterproofing membranes.
- Applicable even to irregular substrates.

Fields of application

ISOFLEX-PU 500 THIXO is suitable for waterproofing:

- Sloping roofs, flat roofs and balconies, as exposed waterproofing membrane.
- Gypsum and cement boards.
- Under tile layers in bathrooms, kitchens, balconies and flat roofs, as long as quartz sand is broadcast on its last layer.
- Under thermal insulation boards on flat roofs.
- In construction works, such as highways, bridge decks, tunnels etc.
- Foundations.
- Old layers of bituminous or EPDM membranes.
- Polyurethane foam.
- Metal surfaces.

Technical data

1. Properties of the product in liquid form

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|------------|--------------------------------|
| Form: | polyurethane prepolymer |
| Color: | white, grey |
| Density: | 1.42 kg/l |
| Viscosity: | 20,000-22,000 mPa·s (at +23°C) |

2. Properties of the cured membrane

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| Elongation at break: (EN-ISO 527) | > 350 % |
| Tensile strength: (EN-ISO 527) | 4 N/mm ² |
| Hardness according to SHORE A: | 78 ± 2 |
| Water impermeability: (DIN 1048) | 5 atm |
| Capillary absorption: (EN 1062-3, requirement of EN 1504-2: w < 0.1) | 0.01 kg/m ² ·h ^{0.5} |
| Water vapor permeability: (EN ISO 7783-2, permeable, Class I < 5 m) | Sd = 0.82 m |
| Adhesion: (EN 1542, requirement for flexible systems with no traffic 0.8 N/mm ²) | > 2.0 N/mm ² |
| Artificial weathering: (EN 1062-11, after 2000 h) | Pass (no blistering, cracking or flaking) |
| Reaction to fire: (EN 13501-1) | Euroclass F |
| Service temperature: | from -40°C to +90°C |

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Directions for use

1. Substrate preparation

In general, the substrate must be dry (moisture content < 4%) and free of grease, loose particles, dust, etc.

1.1 Concrete surfaces

Any existing cavities in concrete should be repaired in advance.

Severe cracks on the substrate must be primed locally and after 2-3 hours (depending on the weather conditions) must be sealed with the polyurethane sealants FLEX PU-30 S or FLEX PU-50 S.

Concrete and other porous surfaces with moisture content < 4%, should be treated with the primer PRIMER-PU 100, at a consumption of approx. 200 g/m².

Surfaces with moisture content > 4% should be primed with the special two component polyurethane primer PRIMER-PU 140, at a consumption of 100-200 g/m².

1.2 Smooth – Non-absorbent surfaces

Smooth and non-absorbent surfaces, as well as surfaces with bituminous membranes or other old waterproofing layers, must be primed with the water-based epoxy primer EPOXYPRIMER 500, thinned with water up to 30% by weight. The product is applied by brush or roller in one coat.

Consumption: 150-200 g/m².

Depending on the weather conditions, ISOFLEX-PU 500 THIXO is applied within 24-48 hours from priming, as soon as the moisture content falls below 4%.

1.3 Metal surfaces

Metal surfaces should be:

- Dry and stable.
- Free of materials that may hinder adhesion, e.g. dust, loose particles, grease, etc.
- Free of rust or corrosion that may hinder adhesion.

Having been prepared by brushing, rubbing, sandblasting, etc., and then thoroughly cleaned from dust, metal surfaces are primed with the EPOXYCOAT-AC anticorrosive epoxy coating in 1 or 2 layers. EPOXYCOAT-AC is applied by roller, brush or spray. The second layer follows after the first has dried and within 24 hours.

Consumption: 150-200 g/m²/layer.

Application of ISOFLEX-PU 500 THIXO should follow within the next 24-48 hours.

2. Application – Consumption

Before application, it is recommended to slightly stir ISOFLEX-PU 500 THIXO, until it becomes homogeneous. Excessive stirring should be avoided though, in order to prevent air entrapment in the material.

a) Total waterproofing of the surface

ISOFLEX-PU 500 THIXO is applied by brush or roller in 2 layers. The first layer is applied 2-3 hours after priming and while PRIMER-PU 100 is still tacky. The second layer should be applied crosswise after 8-24 hours, depending on the weather conditions.

Consumption: approximately 1.0-1.5 kg/m², depending on the substrate.

In case of dense, multiple cracks all over the surface, it is strongly recommended to fully reinforce ISOFLEX-PU 500 THIXO membrane with 100 cm wide polyester fleece strips (60 g/m²). These placed strips must overlap by 5-10 cm. In that case, 2-3 hours after priming, the first layer of ISOFLEX-PU 500 THIXO is applied, in order to cover the reinforcement (to a width of 100 cm), and while still fresh, a strip of polyester fleece is embedded. The same application process is followed in the remaining surface.

Then, two extra layers of ISOFLEX-PU 500 THIXO are applied on the entire surface.

Consumption: approximately 2.0-2.25 kg/m², depending on the substrate.

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b) Local waterproofing of cracks

In this case, the primer is applied on the substrate only along the cracks, to a width of 10-12 cm. Two-three hours after priming, the first ISOFLEX-PU 500 THIXO layer is applied and, while still fresh, a 10 cm wide polyester fleece strip (60 g/m²) is embedded lengthwise. Two extra ISOFLEX-PU 500 THIXO layers are applied along the cracks, completely covering the reinforcement.

Consumption: approximately 200-250 g/m of crack length.

c) Waterproofing under tiles

ISOFLEX-PU 500 THIXO is applied by brush or roller in 2 layers.

ISOFLEX-PU 500 THIXO should be locally reinforced along joints and wall-floor junctions, by embedding a 10 cm wide polyester fleece strip (60 g/m²) on its first layer, while it is still fresh. Then, two extra ISOFLEX-PU 500 THIXO layers are applied along the cracks, completely covering the reinforcement.

After applying the final layer and while this is still fresh, quartz sand (Ø 0.3-0.8 mm) must be broadcast. The quartz sand must be completely dry.

Consumption of quartz sand: approx. 3 kg/m². After 24 hours, any loose grains should be removed with a high suction vacuum cleaner. Tiles should be fixed with a high performance polymer-modified tile adhesive, such as ISOMAT AK 22, ISOMAT AK 25, ISOMAT AK-ELASTIC, ISOMAT AK-MEGARAPID.

Tools should be cleaned with SM-16 solvent, while ISOFLEX-PU 500 THIXO is still fresh.

Packaging

ISOFLEX-PU 500 THIXO is supplied in metal containers of 1 kg, 6 kg and 25 kg.

Shelf life – Storage

12 months from production date if stored in original, unopened packaging at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

Remarks


- In case of application by spray, as well as at temperatures of less than 10°C, it may be diluted, only with the special solvent SM-16, up to 10%.
- ISOFLEX-PU 500 THIXO is not suitable for contact with chemically treated water of swimming pools.
- Temperature during the application and hardening of the product should be between +5°C and +35°C.
- Substrate temperature must be at least 3°C above the dew point, in order to avoid the risk of vapor condensation.
- Unsealed containers must be used as soon as they are opened and cannot be restored.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory i, type SB is 500 g/l (2010) for the ready-to-use product.

The ready-to-use product ISOFLEX-PU 500 THIXO contains a maximum of 500 g/l VOC.

ISOFLEX-PU 500 THIXO

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|  2032 |
| ISOMAT S.A. 17th km Thessaloniki – Ag. Athanasios P.O. BOX 1043, 570 03 Ag Athanasios, Greece 18 |
| 2032-CPR-10.11E DoP No.: ISOFLEX-PU 500 THIXO / 1866-01 EN 1504-2 Surface protection products Coating Permeability to CO ₂ : Sd > 50m Water vapor permeability: Class I (permeable) Capillary absorption: w < 0.1 kg/m ² ·h ^{0.5} Adhesion: ≥ 0.8 N/mm ² Reaction to fire: Euroclass F Dangerous substances comply with 5.3 |

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