Technical Datasheet

ISOFLEX-PU 570 BT

One-component, polyurethane-bituminous, liquid waterproofing membrane

Description

One-component liquid waterproofing membrane based on polyurethane and bituminous resins. Shows elasticity and high mechanical strength and chemical resistance. It offers the following advantages:

- Forms a continuous, elastic and waterproof membrane, without seams or joints.
- Shows high mechanical strength.
- Has excellent adhesion to various substrates, such as concrete, cement screed, wood, bituminous coatings, and steel surfaces.
- Can be easily spot repaired.
- Applicable even to irregular substrates and in thick layers.
- Quick-drying time.
- Crack-bridging ability.
- Joint-sealing solution.
- Cost efficiency.

Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. CE marked.
ISOFLEX-PU 570 BT has been successfully tested by a third-party laboratory for resistance to root penetration, according to CEN/TS 14416:2014.

Fields of application

Suitable for waterproofing:

- Underground constructions, foundations.
- Green roofs and flower beds.
- Non-potable water tanks.
- Irrigation channels.
- Under tiles in kitchens, bathrooms, balconies, flat roofs and terraces, as long as quartz sand has been previously broadcast on its last layer.
- Under thermal insulation boards on flat roofs.
- In construction works, highways, tunnels, bridge decks, etc.

Technical data

1. Properties of the product in liquid form

Form:	bitumen-modified polyurethane resin
Color:	black
Density:	1.31 - 1.35 kg/l
Viscosity:	~ 9,000 mPa·s (+23°C)

2. Properties of the cured membrane

Elongation at break: (ASTM D 412 / EN 527-3)	> 450%
Tensile strength: (ASTM D 412 / EN 527-3)	3.5 ± 0.5 N/mm^2
Adhesion: (EN 1542)	> 2 N/mm^2
Hardness acc. to Shore A:	30

Curing times (23°C, 50% R.H.)

Tack-free time:	2.5 - 3.5 h
Recoat time:	6 - 24 h
Service temperature:	from -40°C to +80°C

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 substrates
Any existing cavities in the concrete should be repaired in advance.
Severe cracks in the substrate must be locally primed 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.

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Concrete and other porous surfaces should be treated with the polyurethane primer PRIMER-PU 100, with a consumption of 200-300 g/m^2.
Surfaces with moisture content > 4% should be primed with the special two-component polyurethane primer PRIMER-PU 140, with a consumption of 100-250 g/m^2.

1.2 Smooth and non-absorbent substrates
Smooth and non-absorbent substrates and bituminous membranes must be primed with the water-based epoxy primer EPOXYPRIMER-500, thinned with water up to 30% by weight. The product is applied with brush or roller in one coat.
Consumption: 150-200 g/m^2.

Depending on the weather conditions, ISOFLEX-PU 570 BT 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 clean.
- Free of grease, loose particles, dust, etc. that may impair adhesion.
- Free of rust or corrosion that may impair adhesion.

Having been prepared by brushing, rubbing, sandblasting, etc., and then thoroughly cleaned from dust, metal surfaces are primed with the EPOXYCOAT-AC anti-corrosion epoxy coating in one or two layers. EPOXYCOAT-AC is applied by roller, brush or spray. The second layer follows after the first has dried, but within 24 hours.
Consumption: 150-200 g/m^2/layer.

Application of ISOFLEX-PU 570 BT should follow within the next 24-48 hours.

2. Application – Consumption
Before application, it is recommended to gently stir ISOFLEX-PU 570 BT until a homogeneous mixture is formed. Prolonged stirring should be avoided to prevent air entrapment.

a) Full-surface waterproofing
ISOFLEX-PU 570 BT is applied with a brush, roller or trowel 2-3 hours after priming and while PRIMER-PU 100 is still tacky.
Consumption: 1.3-2.0 kg/m^2 in 2-3 layers, depending on the substrate.

b) Waterproofing under tiles
After applying ISOFLEX-PU 570 BT and while it is still fresh, quartz sand (Ø 0.3-0.8mm) must be broadcast. The quartz sand must be completely dry.
Consumption of quartz sand: approx. 3 kg/m^2.

After 24 hours, any loose grains should be removed with a high suction vacuum cleaner.
When installing ceramic tiles, it is recommended to use high performance polymer-modified tile adhesives, such as ISOMAT AK-22, ISOMAT-AK 23 XXL, ISOMAT AK-25, ISOMAT AK-ELASTIC, ISOMAT AK-MEGARAPID.

Tools should be cleaned with SM-28 special solvent while ISOFLEX-PU 570 BT is still fresh.

Packaging

5 kg and 23 kg metal containers.

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, moisture and frost.

Remarks

- For spray application, ISOFLEX-PU 570 BT may be diluted with a small amount of SM-28 special solvent, depending on the weather conditions.
- ISOFLEX-PU 570 BT is not suitable for contact with chemically treated water of swimming pools.

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- Temperature during application and hardening of the product should be between +8°C and +35°C.
- The consumption of ISOFLEX-PU 570 BT should not exceed 1 kg/m^2 per layer.
- Containers that have been opened should be used at once and cannot be restored.
- ISOFLEX-PU 570 BT is intended for professional use only.

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 570 BT contains a maximum of 500 g/l VOC.

CE

2032

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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: ≥ 1.0 N/mm^2

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

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