

ISOFLEX-PAS 580

Polyaspartic liquid waterproofing membrane

Description

ISOFLEX-PAS 580 is a two-component polyaspartic (cold polyurea), liquid waterproofing membrane:

- Based on elastomeric, hydrophobic polyaspartic resins, featuring thus excellent mechanical, chemical, thermal, UV and weather resistance properties.
- Forms a continuous, elastic, waterproof and vapor-permeable membrane, without seams or joints.
- Provides excellent adhesion to a variety of substrates, including concrete, cement screeds, wood and most waterproofing membranes.
- Applicable even to irregular substrates.

Certified according to EN 1504-2 and classified as coating for surface protection of concrete. CE marked.

Fields of application

ISOFLEX-PAS 580 is suitable for waterproofing:

- flat roofs and balconies, as an exposed waterproofing membrane
- under tiles in kitchens, bathrooms, balconies and flat roofs as long as quartz sand has been broadcast on its last layer
- under thermal insulation boards on flat roofs
- gypsum and cement boards
- old layers of bituminous membranes
- polyurethane foam
- metal surfaces

Technical data

1. Properties of the product in liquid form

Form:	polyaspartic resin
Color:	white
Density (A+B):	1.41 kg/l
Mixing ratio:	66:34 by weight
Viscosity:	2,000 mPa·s (+23°C)

2. Properties of the cured membrane

Elongation at break: (EN-ISO 527)	350 ± 50 %
CO ₂ permeability: (EN 1062-6)	Sd > 50 m
Tensile strength: (EN-ISO 527)	9 ± 1 N/mm ²
SHORE D hardness:	52
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
Drying time: (+23°C, 50% R.H.)	4 h
Pot life: (+23°C, 50% R.H.)	40 min
Service temperature:	from -40°C to +90°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 surfaces

Any existing cavities in concrete should be repaired in advance.

Severe cracks 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.

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

Depending on the weather conditions, ISOFLEX-PAS 580 is applied within 2-4 hours from priming and as soon as the moisture content falls below 4%.

ISOFLEX-PAS 580

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/m².

Depending on the weather conditions, ISOFLEX-PAS 580 is applied within 4-5 hours from priming and as soon as the moisture content falls below 4%.

1.2 Smooth – Non-absorbent surfaces

Smooth and non-absorbent substrates, as well as bituminous membranes or 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 layer.

Consumption: 150-200 g/m².

Depending on the weather conditions, ISOFLEX-PAS 580 is applied within 24-48 hours from priming, as soon as the moisture content falls below 4%.

1.3 Metal surfaces

The metal surfaces should be:

- Dry and stable.
- Free of dust, loose particles, grease, rust, corrosion, etc. that might 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 one has dried, but within 24 hours.

Consumption: 150-200 g/m²/layer.

Application of ISOFLEX-PAS 580 should follow within the next 24-48 hours.

2. Application – Consumption

Components A (resin) and B (hardener) are packaged in two separate containers, at the correct predetermined mixing ratio by weight. First, component A should be mixed. Then, the entire contents of component B is added to component A and the two components are mixed for about 3 minutes with a low-speed mixer (300 rpm).

It is important to stir the mixture thoroughly near the walls and bottom of the container to achieve uniform dispersion of the hardener.

a) Full-surface waterproofing

ISOFLEX-PAS 580 is applied by brush or roller in two layers. The second layer should be applied crosswise after 8-24 hours, depending on the weather conditions.

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

In case of dense, multiple cracks all over the surface, it is strongly recommended that ISOFLEX-PAS 580 membrane be fully reinforced with 100 cm wide strips of polyester fleece (60 g/m²). These placed strips must overlap by 5-10 cm.

In that case, after priming, the first layer of ISOFLEX-PAS 580 is applied and, while still fresh, a strip of polyester fleece (100 cm wide) is embedded. The same application process is followed in the remaining surface.

Then, two extra layers of ISOFLEX-PAS 580 are applied over the entire surface.

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

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. After priming, the first ISOFLEX-PAS 580 layer is applied and, while still fresh, a 10 cm wide polyester fleece strip (60 g/m²) is embedded lengthwise. Two extra ISOFLEX-PAS 580 layers are applied along the cracks, completely covering the reinforcement.

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

c) Waterproofing under tiles

ISOFLEX-PAS 580 is applied by brush or roller in two layers. ISOFLEX-PAS 580 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 still fresh layer.

Then, two extra ISOFLEX-PAS 580 layers are applied along the cracks, completely covering the reinforcement.

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

Consumption of quartz sand: approx. 3 kg/m².

ISOFLEX-PAS 580

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, and ISOMAT AK-MEGARAPID.

Tools should be cleaned with SM-28 special solvent while ISOFLEX-PAS 580 is still fresh.

Packaging

15 kg (A+B) 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 and frost.

Remarks

- For spray application, it may be thinned only with the special solvent SM-28, up to 10%, depending on the weather conditions.
- ISOFLEX-PAS 580 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.
- Each ISOFLEX-PAS 580 layer should not exceed 1 kg/m².
- Unsealed containers must be used at once and cannot be restored.
- ISOFLEX-PAS 580 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 j, type SB is 500 g/l (2010) for the ready-to-use product.

The ready-to-use product ISOFLEX-PAS 580 contains a maximum of 500 g/l VOC.



2032

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22

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EN 1504-2

Surface protection products

Coating

Permeability to CO₂: Sd > 50 m

Water vapor permeability: Class I (permeable)

Capillary absorption: $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Adhesion: $\geq 1.0 \text{ N/mm}^2$

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

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