

## Technical Datasheet

# ISOFLEX-PU 500 DTL

## One-component, fiber-reinforced, polyurethane, liquid waterproofing membrane for roof details and connections

### Description

One-component, fiber-reinforced, thixotropic, polyurethane, liquid waterproofing membrane for roof details and connections.

ISOFLEX PU 500 DTL is based on elastomeric, hydrophobic polyurethane resins of excellent mechanical, chemical, thermal and weather resistance. The product has additionally the following properties:

- Forms a continuous, elastic, waterproof and vapor-permeable membrane, without seams or joints.
- Features excellent adhesion to various substrates, such as concrete, screed, wood, metal, bituminous membranes and existing acrylic or hybrid liquid waterproofing membranes.
- Applicable even to irregular substrates.

Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. Certificate No.: 2032-CPR-10.11. CE marked.

### Fields of application

ISOFLEX-PU 500 DTL is suitable for waterproofing roof details such as:

- Wall-floor junctions
- Pipes
- Gutters
- Skylight domes
- Chimneys
- Rooftop ventilation and air-conditioning units.
- Photovoltaic systems
- Solar systems

### Technical data

#### 1. Properties of the product in liquid form

Form:	polyurethane prepolymer
Colors:	grey, white
Density:	1.40 kg/l

#### 2. Properties of the cured membrane

Elongation at break: (EN-ISO 527)	> 100 %
Tensile strength: (EN-ISO 527)	2.8 N/mm <sup>2</sup>
SHORE A hardness:	78 ± 2
Capillary absorption: (EN 1062-3, requirement of EN 1504-2: w < 0.1)	0.01 kg/m <sup>2</sup> ·h <sup>0.5</sup>
Water vapor permeability: (EN ISO 7783-2, permeable, Class I < 5m)	Sd = 0.82 m
Bond strength to concrete: (EN 1542, requirement for flexible systems without traffic: 0.8 N/mm <sup>2</sup> )	> 2 N/mm <sup>2</sup>
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

### Directions for use

#### 1. Substrate preparation

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 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 primer PRIMER-PU 100, with a consumption of approx. 200 g/m<sup>2</sup>.

# ISOFLEX-PU 500 DTL

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<sup>2</sup>.

## 1.2 Smooth – Non-absorbent surfaces

Smooth and non-absorbent surfaces, bituminous waterproofing membranes coated with granules and existing acrylic or hybrid liquid waterproofing membranes 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/m<sup>2</sup>.

Depending on the weather conditions, ISOFLEX-PU 500 DTL 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 materials that might impair adhesion, e.g. dust, loose particles, grease, etc.
- Free of rust or corrosion 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 no later than 24 hours.

Consumption: 150-200 g/m<sup>2</sup>/layer.

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

## 2. Application – Consumption

Before application, it is recommended to gently stir ISOFLEX-PU 500 DTL with a wooden or metal stick until homogeneous. Prolonged stirring should be avoided to prevent air entrapment in the material.

ISOFLEX-PU 500 DTL is applied by brush 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 after 16-36 hours, depending on the weather conditions.

Consumption: 1.2-1.5 kg/m<sup>2</sup>, depending on the substrate.

Tools should be cleaned with special solvent SM-28 while ISOFLEX-PU 500 DTL is still fresh.

### Packaging

ISOFLEX-PU 500 DTL is supplied in metal containers of 1 kg and 5 kg.

### Shelf life – Storage

12 months from production date if stored in original, unopened packaging, in cool, dry conditions. Recommended storage temperature between +5°C and +35°C.

### Remarks

- ISOFLEX-PU 500 DTL is not suitable for contact with chemically treated water of swimming pools.
- Temperature during application and hardening should be between +8°C and +35°C.
- Unsealed containers shall be used at once and cannot be restored.
- ISOFLEX-PU 500 DTL 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 500 DTL contains max. 500 g/l VOC.

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**2032**

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**2032-CPR-10.11**

DoP No.: ISOFLEX-PU 500 DTL / 1865-01

**EN 1504-2**

Surface protection products

Coating

Permeability to CO<sub>2</sub>: Sd > 50m

Water vapor permeability: Class I (permeable)

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

Adhesion:  $\geq 0.8 \text{ N/mm}^2$

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

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