

LASTOFLEX-PU FC

One component, liquid-applied, polyurethane-based, roof coating which cures with the humidity of atmosphere to form a strong, elastic and impermeable to water, membrane.

PHYSICAL PROPERTIES AND ADVANTAGES

- Easy to apply by brush, roller or airless spray.
- Fast curing formula.
- Long-lasting waterproofing and protection.
- Highly resistant to stagnant water. Does not peel off.
- Forms a seamless membrane without joints which is 100% bonded to the substrate. Even when damaged, water does not spread to the entire surface of the substrate, and the membrane can easily be repaired locally.
- Very good resistance to weather conditions : rain water, frost, UV rays.
- Highly elastic properties even at very low temperature (-40 °C). Very good crack-bridging properties.
- Excellent thermal resistance. The membrane does not turn soft or tacky at high temperatures (+80 °C).
- Excellent adhesion on several substrates without use of primer. Special primers are available to cover almost all type of substrates.
- High mechanical properties such as tensile strength, tear strength and abrasion resistance. Suitable for pedestrian traffic.
- Water vapour permeable. Does not cause moisture accumulation on the ceiling.
- Good resistance to chemicals and detergents.
- Does not release any dangerous substances once fully cured.
- Cost efficient.

CLASSIFICATION ACCORDING TO ETAG 005

- Minimum expected working life : W2 (10 years).
- Climatic zone : S (Severe Climate).
- User Load : P4 (Special).
- Roof slopes : S1 to S4.

- Minimum surface temperature : TL4 (-30 °C).
- Maximum surface temperature : TH4 (+90 °C).
- Reaction to Fire (EN 13501-1) : Class E.

TECHNICAL PROPERTIES

- Dynamic viscosity EN ISO 3219 (23 °C, shear rate 100 [1/s]) : 2500 mPa.s
- Density DIN EN ISO 2811-1 (21 °C) : 1,42 gr/cm³
- Temperature variations resistance : -40 to 90 °C.
- Surface membrane formation time (23 °C, 50% R.H.): 30 min
- Elongation at break point (DIN 53504) : 600%
- Tensile strength (DIN 53504) : 3,50 N/mm²
- Hardness SHORE A (DIN 53505) : 45
- Water Vapour permeability (DIN EN 1931, 23 °C-0/75% R.H.) : 12,2 gr/m²/day

- Impermeability to water (DIN EN 1928, 1m water column, 24h) : Watertight
- Adhesion on concrete (with primer) : > 2 N/mm²
- Accelerated Weathering Test, UV & water exposure, EOTA TR-010, Radiant exposure 400 MJ/m², 2400 hours :
Discoloration (yellowing). Passed.

- Resistance against thermal ageing, EOTA TR-011, 100 days at 80 °C :
Passed, No significant changes

- Fatigue resistance, EOTA TR-008, -10 °C, initial crack : 1 mm, change in crack width : 1 mm, Number of cycles : 500 :
No cracks

APPLICATION FIELDS

It is generally used for surface waterproofing. Due to the high hydrophobic performance of the cured membrane, LASTOFLEX-PU FC is suitable for waterproofing surfaces with stagnant water, roofs, basements, tanks, balconies, terraces, flowerbeds, cut & cover tunnels, irrigation channels, bridges, parking decks, bathrooms or kitchens (under tile), roofs with polyurethane insulation foam, etc. It is especially suitable for whenever a fast application is required.

APPLICATION INSTRUCTIONS

Weathering conditions:

Rainy weather should be avoided.

Preparation :

The application surface must be clean from loose particles, dust, oil, etc. LASTOFLEX-PU FC should generally be applied on dry and sound surfaces. Old coatings should be removed. The substrate should not be washed with water prior to the application of the coating. A moisture content of less than 5% is generally recommended for concrete surfaces. Joints and cracks should be sealed with ELASTOSEAL-PU joint sealant.

Priming :

LASTOFLEX-PU FC can also be applied without the use of a primer. However, the use of **Primer VL** is recommended in order to improve the mechanical properties of the surface of the concrete. Wet substrates should generally be avoided. In special occasions of moist concrete, it is possible to use **Primer EP-W** as a moisture barrier and then apply the coating. For application on top of bitumen-based coatings or bitumen felts, it is suggested to use **Primer VL 2K** in order to avoid the blistering of the substrate. For non-absorbent surfaces like ceramic tiles or metal substrates it is recommended to use **Primer EP-W**.

Application :

LASTOFLEX-PU FC is applied by roll, brush or air-gun in 2-3 layers. For improved mechanical and crack-bridging properties, it is recommended to apply LASTOFLEX-PU FC together with **ELASTOTET GEOTEXTILE** (non-woven and needle-punched polyester geotextile of 120 gr/m²). The geotextile is applied on top of the freshly laid first coat of LASTOFLEX-PU FC, before the application of the second and the third layer. The use of LASTOFLEX-PU FC together with geotextile is highly recommended for sealing the areas of joints and cracks (on top of ELASTOSEAL-PU), as well as the corners between the floor and the wall or any other connection such as chimneys, bases of solar panels, etc. Furthermore, the use of LASTOFLEX-PU FC in combination with geotextiles is also recommended for waterproofing roofs with cementitious screeds which have the tendency to crack. Time interval between each coat is at least 30 minutes and not more than 48 h. When primer is applied, the first coat of LASTOFLEX-PU FC can be applied not earlier than 1 hour and not later than 24 hours from the application of the primer. The drying time is significantly affected by the environmental conditions (temperature and humidity). For application by airless spray, it is suggested to dilute the product with Xylene up to 10%. **Never dilute the product with water.** The same solvent can be used for cleaning the tools or the equipment from the fresh coating. Once the material is cured, it can only be removed mechanically. LASTOFLEX-PU FC is not suitable for application as a directly exposed layer on swimming pools. When the product will be exposed to the sun, it will exhibit some discoloration (yellowing) within a few days from its application. This phenomenon is especially evident in the white colour. The discoloration however, does not affect the mechanical properties or the overall performance of the coating. For applications where colour stability is required, it is suggested to apply **LASTOFLEX-ST** or **LASTOFLEX-AR** as a top coat. When LASTOFLEX-PU FC is wet, it can become slippery. To avoid this effect, the coating can be sprinkled on top with an appropriate particle size of

quartz while it is still fresh. For application of LASTOFLEX-PU FC in thick coats, it is recommended to add up to 5% of **ELASTOTET HARDENER** in order to eliminate the formation of bubbles. For laying tiles on top of LASTOFLEX-PU FC in balconies, bathrooms or kitchens check the adhesion of the tile adhesive on the coating, or alternatively execute the following steps : a) Flood the freshly led final coating of LASTOFLEX-PU FC with quartz, b) Wipe off the residual quartz after the coating is cured and c) Bond the tiles with a good quality (elastic) tile adhesive on the quartz layer.

Consumption :

A minimum consumption of 1,0-1,3 Lt/m² (1,5 – 2 kg/m²) is recommended. In any case the consumption depends on the roughness of the surface or the specifications of the application. Do not apply LASTOFLEX-PU FC more than 0,7 – 0,8 kg per coat as this could lead to bubble entrapment inside the coat.

Curing time:

6 to 24 h, depending on environmental conditions.

Colours :

Black and grey as standard. Beige, Red and White upon request.

Packaging :

Lids of 1 kg, 6 kg, 25 kg.

Shelf life : At least 12 months in sealed containers, when stored in dry and cool areas. When opened, the product should be used all at once. The half-used pail will develop a cured layer of material on top during storage. If this cured layer is removed, the remaining liquid material can be used again.

Warning to users

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