

ARBOFLEX[®] PU LIQUID WATERPROOFING

One component polyurethane membrane

ARBOFLEX PU is a single component liquid made from pure polyurethane which, once catalyzed, forms a seamless elastic membrane without any joints, overlapping or any integrated mesh needs. The material properties of ARBOFLEX PU enable it to be air tight and waterproof on a range of substrates. This product is brush or roller applied.

Product application

- ROOFING: Flat and low pitched roofs, balconies and overhangs
- FLOORING: Walkable floors with waterproofing and anti slip finish
- Structural concrete slabs, and concrete walls and foundations
- Metal and asbestos roofs
- Swimming pools, artificial lakes and ponds
- Green roof compatible
- On inverted roofs

Coverage

- 1.5 - 1.8 kg/m²
- A 20KG tin of ARBOFLEX PU cover 10-13 m² depending on the condition of the surface. This rate may be affected also by the skill and experience of the installing contractor when applying the system.

Note: For information on other substrates please contact our technical department.

Recommended thickness	± 1.5 mm
Dry time at 23°C	± 5~6 hours approx
Elongation at break at 23°C	>600%
Tensile strength at 23°C	2~3 MPa
Application methods	Brush or roller applied
Application systems	Wet on wet application or accelerated application to achieve recommended thickness
Colour	Grey



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Product features

- ARBOFLEX PU is a highly elastic and wear-resistant membrane that, once applied, offers great stability, durability and waterproof certified.
- Thanks to its versatility ARBOFLEX PU adapts to any surface, making it the ideal product for application onto uneven surfaces such as curved or irregular shapes.
- No surface reinforcement is required, only detail work interfaces with other building elements.
- Green roof application certified according to EN 13948.
- Applying ARBOFLEX PU reduces seals and joints. As the finish is seamless and makes up a single layer it provides a surface with optimum maintenance and cleaning properties.
- The ARBOFLEX PU polyurethane membrane system should be applied in dry conditions.
- If there is humidity or moisture in the substrate at the time of application, check the technical specifications of our primers where the maximum support humidity ranges are specified.
- The ARBOFLEX PU system requires solar radiation protection (UV rays). We recommend ARBOFLEX PU UV PROTECT which also minimises odour from PU.
- The ARBOFLEX PU system's properties enable it to bond to a range of surfaces including cement, concrete, polyurethane foam, butyl, and bituminous sheets wood, polyurethane plates, metal, etc.
- The surface can be walked on and is compatible with ARBOFLEX SLIP RESIST.
- ARBOFLEX PU is immune to temperature changes of between -40°C and +80°C, conserving its elastic properties. The ARBOFLEX PU polyurethane membrane is a self-leveling membrane. It can be used on low and steep slope roofs. It requires ARBOFLEX PU additive for slopes of more than 35% of a gradient.
- This product is not suitable for spray application.
- Ceramic flooring can be placed on top. In this instance, we recommend spreading a well-distributed load of SILICA SAND to improve mechanical anchorage in the last coat of ARBOFLEX PU, or if it has already catalyzed, spreading a layer of 50 to 60 g/m² ARBOFLEX PU PRIMER for anchoring the SILICA SAND.
- Our product can be used to fill fissures and joints.

Thickness and recommended yield

The recommended minimum thickness is up to 1.5 mm.

Packaging

Metal tins. 6 KG / 15 KG / 20KG.

Shelf life & storage

Expires after 12 months from the date of manufacturing. Store in a dry place in temperatures between 5° C and 35° C.

Once the tin has been opened, the product must be used immediately.

Surface preparation

- Surface preparation (fill the cracks and fissures, remove old existing waterproofing paints, etc). Clean the surface, removing any debris and existing chippings.
- Ensure roof substrate has suitable strength to withstand the liquid system.

You can apply ARBOFLEX PU liquid waterproofing membrane over several supports and materials. Below we set out some of the applications for the most common surfaces; for any surfaces not included, please call our technical department.

Product advantages

- BBA certified for life in excess of 25 years.
- NHBC and Green Roof Approval.
- ARBOFLEX PU can be used on new or existing roofs, walkways, balconies, gutters etc.
- Ready to use straight out of the tin, application with solvent resistant roller.
- Use fully reinforced with ARBOFLEX MATT ensures easy 'wet on wet' application.
- Can be used all year round - moisture curing.
- Fully trafficable when cured.
- Instantly rain resistant once the matting is encapsulated.
- Once installed, forms a seamless membrane.
- Excellent adhesion to different substrates: plywood, bitumen membranes, asphalt, metals, brick, concrete, wood etc.
- Fresh concrete must be cured for 28 days.

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On EPDM and TPO it is recommended to perform a patch test to check compatibility. Do not use silicone sealants. Always use ARBOFLEX PU SEALANT or other compatible PU based mastics.

ARBOFLEX PU application instructions

1. Stir before use
2. Apply when ambient temperature is minimum of 2° and rising and not exceeding 30°C.
3. Ensure substrate is in good condition, dry, clean and free from dust, moss or lichen.
4. All edge trims to be fixed to substrate prior to application of ARBOFLEX PU.
5. ARBOFLEX PU is self-terminating. If the brickwork is in good condition, strike a line using tape on the brickwork to coat up to the line (important: when the ARBOFLEX PU has been installed ensure the tape is pulled before the ARBOFLEX PU is dry). If the brickwork is in poor condition, a termination bar or flashing is required.
6. Open tin and mix thoroughly before using.
7. Apply ARBOFLEX PU straight out of the can onto the substrate using a solvent resistant roller. Dry roll ARBOFLEX MATT into the product until the ARBOFLEX PU is drawn through, then immediately apply another coat of ARBOFLEX PU ensuring the matting is fully embedded avoiding any pinholes.
8. It is advised to start at the perimeter of the area including upstands to a minimum of 150mm (if possible), ensuring the matting overlaps any trims (including fixings)/ joints/change of material by 50mm.
9. Infill the remaining field area using the same method as above with ARBOFLEX MATT, at a minimum coverage rate of 1.5kg per m². The whole area including trims must be coated to form a continuous seamless membrane. Please take time to ensure no pin holes exist. Drying time will be approx. 2-8 hours depending on weather, fully cured in 24 hours.

Coverage: A 20KG tin of ARBOFLEX PU covers 10-13 m² depending on the condition of the surface. This rate may also be affected by the skill and experience of the installing contractor when applying the system.
10. Apply an optional layer of ARBOFLEX PU UV PROTECT for a long lasting finish.

Storage

- Store unopened in original container in a cool dry place within 5°C and 35°C, out of direct sunlight.
- Protect from frost. Flammable material, keep away from fire.
- For transportation purposes ensure the product is upright and the lid fully closed.
- SHELF LIFE: Expires after 12 months, at temperatures between 5°C and 35°C.

Notes

- In all cases, consult the curing time, detail works, conditions of application of all the products through the technical data sheets of each product or consult our technical department.
- For other types of supports/substrates, further information on the application procedure, any additional queries, please consult the technical data sheets (TDS) of these products, or our technical department.
- These guidelines can be modified dependent on the condition of the substrate, the structure, weather conditions or the time of application.

Repair and overlaps processes

Repair

In case of accidental damage to the membrane such as drilling, the following steps can be followed:

- Cut, removal of the affected area and/or damaged surface.
- Sanding this area extending about 20~30cm. around the perimeter, for overlapping security.
- Apply a thin layer (50-100g/m²) of polyurethane resin ARBOFLEX PU PRIMER.
- Allow for curing.
- Apply ARBOFLEX PU with ARBOFLEX PU ACCELERATOR.
- Apply ARBOFLEX PU UV PROTECT.

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Overlaps

In situation where the re-coat time (48-72 hours) has been exceeded, the following procedures apply:

- Sanding strip longitudinal overlap of about 20~30 cm. wide.
- Cleaning (vacuuming) of waste generated (powder, dust) or existing dust; if it's possible, do not use water, and if it's used, check the support humidity value; ketones applicability based solvents for conducting this type of surface cleaning.
- Apply thin layer (50-100 g/m²) of ARBOFLEX PU PRIMER.
- Lightly spread SILICA SAND over the wet primer previously applied.
- Allow for curing.
- Apply ARBOFLEX PU.
- Apply ARBOFLEX PU UV PROTECT (according to ETA 10/0121), in the desired thickness. ARBOFLEX PU UV Protect can be applied if required for UV protection and for non trafficked and maintenance roofs only.

Handling

These safety recommendations for handling, are necessary for the implementation process as well as in the pre and post, on exposure to the loading machinery.

- Respiratory Protection: When handling or spraying use an air-purifying respirator.
- Skin protection: Use rubber gloves, remove immediately after contamination. Wear clean body-covering. Wash thoroughly with soap and water after work and before eating, drinking or smoking.
- Eye / Face: Wear safety goggles to prevent splashing and exposure to particles in the air.
- Waste: Waste generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.

Please consult Material Safety Data Sheet (MSDS) for full information.

Recommended products

The ARBOFLEX PU system may be complemented with the following products, as a means of protection or to improve its physical-mechanical properties depending on its exposure, the desired finish or the type of substrate.

- These primers are applied on the substrate beforehand to improve bonding and level the surface, as well as regulating the humidity in the substrate, (see permitted Trims, ARBOFLEX PU SEALANT levels in their technical datasheet).
- ARBOFLEX PU UV PROTECT

Note: see all the TDS of all products, or consult our technical department

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Technical data

Properties	Result
Specific gravity at 23°C ISO 1675	1,40±5% g/cm
Viscosity at 23 °C ISO 2555	2.000~6.000cps
Dry extract at 105 °C % weight EN1768	>90
Flash Point ASTM D93	42 °C
Ashes at 450 °C % weight	42~47%
Solid content ISO 1768	82-85%
VOC declaration	240 g/l
Working life of the system	25 years W3: 25 years and 1,2 mm thickness
Roof slope	S1~S4 (zero slope)
Fire reaction	NPA
External fire performance EN 13501-5	Broof (t1)+ (t4)
Resistance to wind loads	ABLE>50KPa
Anti roots certification EN13948	YES
Support/environment range temperatures	5 °C~35 °C
Hardness Shore A at 23 °C DIN 53.505	>85
Hardness Shore D at 23 °C DIN 53.505	>35
Tear Strength, (longitudinal)trouser, angle, and crescent test pieces ISO 34-1:2011	24 KN/m
Tensile strength at 23°C without ARBOFLEX PU ACCELERATOR ISO 527-3	2~3 MPa
Tensile strength at 23°C with ARBOFLEX PU ACCELERATOR ISO 527-3	4~6MPa
Elongation at break at 23°C without ARBOFLEX PU ACCELERATOR ISO 527-3	>600%
Elongation at break at 23°C with ARBOFLEX PU ACCELERATOR ISO 527-3	>400%
Initial dry time at 23 °C and 55% relative humidity without ARBOFLEX PU ACCELERATOR	±5~6 hours
Initial dry time at 23 °C and 55% relative humidity with ARBOFLEX PU ACCELERATOR	±1,5 hours
Recoat time without ARBOFLEX PU ACCELERATOR	±5~48 hours
Recoat time with ARBOFLEX PU ACCELERATOR	±1,5~24 hours
Water vapor resistance EN 1931	μ=2.500
Water vapor permeability EN 1931	1 g/m ² /day
Concrete adherence at 23°C	>2MPa

The values in this table are approximate and can vary depending on the situation of the support or application methods employed.

Both the information and the product descriptions contained in this publication have been compiled to the best of our knowledge and belief based on our prior experiences and tests. Claims for compensation may not be derived from the same. We reserve the right to make improvements to our product range, in accordance with our high standards in relation to technical advancement and the progression of quality.



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