

CIKOproof PUR-650

Liquid applied elastomeric Polyurethane waterproofing membrane

Description

CIKOproof PUR-650 is a liquid-applied, permanent elastic, cold applied and cold curing, bitumen extended, one component polyurethane membrane used for long-lasting waterproofing.

CIKOproof PUR-650 is based on pure elastomeric hydrophobic polyurethane resins, and is extended with chemically polymerized virgin bitumen, which result in excellent mechanical, chemical, thermal and natural element resistance properties.

Cures by reaction with ground and air moisture.

Properties

- Single component ready and easy to use system.
- When applied forms seamless membrane without joints.
- Resistant to water.
- Resistant to frost.
- Provides excellent crack-bridging properties.
- Provides excellent thermal resistance
- Maintains its mechanical properties over a temperature span of -40°C to +90°C.
- Provides excellent adhesion to almost any type of surface.
- Resistant to domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.
- Does not need the use of open flames (torch) during application.
- Positive feedback worldwide.

Application area

CIKOproof PUR-650 is a high quality waterproof membrane coating for use in:

- Waterproofing of Foundation
- Waterproofing of Retaining Walls
- Under-tile Waterproofing in Bathrooms, Kitchens, Balconies, Terraces, Roofs, etc

Physical properties

Form	Liquid
Colour	Black
Density @ 20°C	Approx. 1.29 Kg/L
Tensile Strength ASTM D412/ DIN52455	>4.5 MPa
Elongation ASTM D412/DIN52455	>600%
E-Modulus ASTM D412/DIN52455	App 1 N/mm ²
Service temperature	-40 ⁰ C to +90 ⁰ C
Max temperature short time (15min shock)	250 °C
Tack Free time @ 20 ⁰ C and 50% RH	5 hours
Light pedestrian traffic time	24-48 hours
Full cure	7 days
Shore A Hardness ASTM D2240	Approx. 40
Adhesion to Concrete ASTM D 903	>1MPa
Tear Resistance ASTM D624	>15 N/mm
Puncture Resistance ASTM E154	>150N
Resistance to hydrostatic pressure DIN16726	No leak @ 3 bar (30m water column)
Thermal resistance (80°C for 100 days)	Passed – No significant changes (EOTA TR-011)
Hydrolysis (5% KOH, 7 days Cycle)	No Significant elastomeric changes
Chemical Resistance	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils

Coverage

1.5 kg will provide a theoretical coverage of 1 m² @1mm DFT. It is recommended not to exceed a thickness of 0.5 mm per single application.

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Application instructions

Surface preparation

Careful surface preparation is essential for optimum finish and durability.

The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane.

Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. New concrete structures need to dry for at least 28 days. Old loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed

Mixing

CIKoproof PUR-650 is a single component system and requires slight stirring (2-3min) with a slow speed drill-paddle assembly.

Priming

Usually priming is not required, unless CIKoproof PUR-650 is to be applied over bare concrete or on highly porous substrates.

For porous surface CIKOPrimer PU shall be used for priming the substrate.

Application of primer should be carried out as per the respective technical data sheet.

Application method

Waterproofing membrane

Stir well with electric drill mixer before using, for at least 2-3 minutes. Apply the CIKoproof PUR-650 onto the surface by roller or brush, until all surface is covered. After 8-24 hours, apply another layer of the CIKoproof PUR-650. For demanding applications, apply a third layer.

Reinforce always with fabric at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc.

If the CIKOPROOF PUR-650 is to be covered with ceramic tiles, fully saturate with oven-dry silica sand (corn-size 0,4-0,8mm) the last layer while still wet. This saturation will create an adhesion bridge to the tile adhesive that will follow.

Protection /Thermo insulation

Protect the cured CIKoproof PUR-650 with a drainage board before backfilling. If an additional thermoinsulation is required, place an insulation board (XPS, EPS, etc) on the cured membrane. Following to that the protective drainage board.

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Packaging

CIKoproof PUR-650 is available in 20 kg (15.5 L) pails.

Shelf life

CIKoproof PUR-650 has a shelf life of 12 months in unopened pails and if stored in accordance with CIKO instructions.

Storage

CIKoproof PUR-650 should be stored under enclosed shaded area at temperatures between 5 - 30°C.

Precautions

- Do Not Wash Surface with water before application
- Not to use over standing water.
- High Humidity might affect the final finish
- Application temperature shall be between 5 and 35 °C
- CIKOPROOF PUR-650 is slippery when wet.
- CIKoproof PUR does not have sufficient UV and weather resistance to be used in exposed applications without protection.

Health & safety

CIKoproof PUR-650 should not come in contact with eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Applicator should wear appropriate clothes, gloves and goggles. Use of barrier cream is recommended to provide additional skin protection. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice. Refer Material Safety Data Sheet for further details.

Technical Support

For further technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries

Note: The information presented herein based on the best of our knowledge and expertise for which every effort is made to ensure its reliability. Although all the products are subjected to rigid quality tests and are guaranteed against defective materials and manufacture, no specific guarantee can be extended because results depend not only on quality but also on other factors beyond our control

