



TECHNONICOL ULTRATHANE ECO

One component moisture curing liquid polyurethane membrane

DESCRIPTION:

TECHNONICOL ULTRATHANE ECO is a one component moisture curing liquid made up from pure polyurethane, which once cured forms a continuous elastic membrane, without any joints, overlapping or any integrated mesh required. It can be applied by brush, squeegee, roller, or airless spray. Roller application is necessary for reinforced systems.

The product is available in Grey, White, other requested colors.

AREA OF APPLICATION:

Waterproofing systems with or without reinforcement for:

- Roofs, terraces, and balconies.
- Tanks, channels, pipelines.
- Renewing old membranes.
- Parking and sport areas.
- Wet areas.
- Bridge decks, overpasses, and podiums.

ADVANTAGES:

- Easy to apply by means of brush, roller, or airless spray.
- High adhesion.
- High abrasion resistance.
- High elasticity and tensile strength.
- Water vapor permeable.
- Crack-bridging ability.
- Resistant to immersion into water.
- Ideal for outdoor application. Can be overcoated to improve U.V. protection.
- Substrate application temperature range: from + 5 ° C to + 35 ° C (R.H. < 85%).
- Operating temperatures from -30°C to +80°C in air, (+200°C for short time).

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 8%.
- 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.
- Clean concrete cracks, hairline cracks and joints of dust, residue, or other contamination. Fill all prepared cracks and joints with polyurethane sealant.
- Then apply a layer of ULTRATHANE ECO, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of the Technonicol Geo or Scrim cloth. Press it to soak. Then saturate the Technonicol Geo or Scrim cloth with enough ULTRATHANE ECO until it is fully covered. Allow to cure for 12 hours.

APPLICATION METHOD:

- Apply the TECHNINICOL EPOXY primer at the rate of 0.20-0.25g/m² to the entire substrate. In general, the primer should be used to promote adherence to the concrete surface, reduce the pinhole appearance, and absorption of moisture in the substrate and leave it for 3-4 hours, while the surface is still tacky. In any case, the waiting time after the application of the primer should not exceed 24 hours.
- Prior to the application, stir the mix well before applying the TECHNINICOL ULTRATHNE ECO is a single component moisture cure polyurethane coating at the rate of 1.5-1.6kg/m² to achieve the DFT of 1mm, with the help of brush, roller, or airless spray.
- Always apply in two coats and perpendicular to each other for better result. The second coat can be applied after the first coat dried (12-18 Hours at 20°C), not later than 48 hours of the first dried, depending on the ambient and surface temperature.
- (Recommendation: We recommend reinforcement of the entire surface, with the Technicol Geo Fabric /scrim cloth between the two coats and consumption may vary)
- The applied membrane is sensitive to UV radiation, so discoloration is possible during exposure. If used under exposure conditions, cured membrane shall be protected with concrete or UV stable coat.
- To ensure mechanical bonding to the vertical plaster, sprinkle the dry silica sand while tacky.

PERFORMANCE AND KEY PROPERTIES

Properties	Performance
Specific weight, g/ml, ASTM D 1475	1.40± 0,07
Viscosity at 20°C, mPa·s, UNI EN ISO 2555	4,000 ± 1,000
Solid content, %, EN ISO 3251	90±1
Tensile strength, Mpa, ASTM D 412	≥2
Elongation at failure, %, ASTM D 412	>500
Tear strength, N/mm ASTM D624	≥15
Permeability to water vapour, gm/m ² /day, ISO 9932	≥25
Adhesion to concrete, MPa, ASTM D 7234	>2.0
Crack bridging, mm, ASTM C 836	≥2
Water head resistance@5 bar pressure, EN 12390-8	Pass
Shore A Hardness, ASTM D 2240	70
Resistance to root, EN 13948	Pass
Curing at 20°C, 50% R.H.	- dry to the touch 6-8 hours - completely cured 7 days

CONSUMPTION:

Coverage Rate: 1.5-1.6kg/m² (total consumption) when applied in 2-3 layers, achieving a dry film thickness of approximately 1 mm. This coverage is based on application by roller, airless spray onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption. In the case of TECHNINICOL GEO FABRIC reinforcement, consumption increases.

STORAGE:

12 months from the date of production if stored properly in original, unopened sealed packaging, in a dry place at temperatures between +5°C and +35°C

HEALTH AND SAFETY

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 following local laws and national regulations.
- Vapor and atomized liquids are harmful. Use only in ventilated areas, wear approved respirators, when necessary, Keep out of reach of children.
- Do not use near high heat or open flame.