Kalekim

Tecnica 3120 WP

Polyurethane Based Waterproofing Material

Technical Data Sheet

Tecnica 3120 WP

Description

One component, ready-to-use, polyurethane-based waterproofing material that has high elasticity and mechanical strength.

Fields of Application

- Waterproofing of flat roofs, balconies and terraces,
- Waterproofing of basement walls,
- Protection of polyurethane foam insulation,
- In waterproofing and protecting concrete structures such as bridges, tunnels, and similar constructions,
- In waterproofing metal surfaces,
- In waterproofing water storage and distribution channels,
- In waterproofing and coating for rooftop parking,
- Used for protection and waterproofing of reinforced concrete structures.

Properties

- Provides seamless and continuous waterproofing on the applied surface
- Not affected by external weather conditions and is resistant to UV rays.
- Crack-bridging up to 2 mm, even at (-10°C).
- Excellent adhesion.
- Elastic.
- Maintains its mechanical properties at a temperature span of (-20°C) to (+80°C).
- Good resistance against acidic and alkali solutions, detergents, sea water and oils.
- Resistant to water and frost.
- Fills non-structural cracks
- Easy to repair locally.
- Easy to apply (by brush, roller or airless spray).

Preparation of Substrate

- The substrate must be sound, dry,clean and free of any contaminants like dirt, oils,dust etc. that may prevent good adhesion. The surface must be cleaned from all materials like existing coating prior to application.
- Where necessary, surface preparation should be done through sanding or similar mechanical surface abrasion processes, and all surfaces should be thoroughly cleaned from dust by using industrial vacuum equipment.
- Concrete and cement-based surfaces should be mechanically sound, with a minimum tensile strength of 1.4 MPa and a compressive strength of 25 MPa.
- New concrete structures need to be cured for at least 28 days.
- The moisture content in the concrete must be checked before application. Surface moisture should be maximum 4%.
- Any potential pits, cracks, pores, segregation, cracks, and defects in the concrete should be repaired with Tamirart 40 or Tamirart S40.
- Sharp corners at corners and junctions in the applied area should be rounded, and horizontal and vertical junctions should be puttied with Tamirart S40 or Kalepolymas.
- Tecnica 3100 P should be applied to the prepared substrate surface using a brush, roller, or airless spray. After the primer application, Tecnica 3120 WP, a polyurethane-based waterproofing material, should be applied while the surface is still tacky within 2-3 hours (at the latest, within 4 hours).
- On highly absorbent and reinforcement-desired surfaces, multi-purpose epoxy-based Tecnica 162 should be applied. If the surface moisture content exceeds 4% by weight, Tecnica 152 moisture barrier epoxy primer should be used.
- After the application of Tecnica 162 or Tecnica 152, within 6-12 hours (not exceeding 24 hours), while the material is still in a tacky condition, Tecnica 3120 WP, a polyurethane-based waterproofing material, should be applied.
- On steel and metal surfaces, after the surface has been properly cleaned, it should be primed with Tecnica 162 multi-purpose epoxy primer.

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Application

- Before application, Tecnica 3120 WP should be thoroughly mixed with a low-speed mixer
- Tecnica 3120 WP, prepared for application, should be applied in 2 coats with a brush or roller to the prepared surface.
- The second coat should be applied 12 hours after the first coat (at the latest, within 24 hours).
- The application thickness should be a minimum of 2 mm. Regular checks should be made to ensure the application thickness.

Crack Fixing and Waterproofing

- The cracks on the concrete should be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane.
- After priming with Tecnica 3100 P, the surface should be left to dry for 3-4 hours.
- Primed cracks should be filled with Kalepolymas and one layer of Tecnica 3120 WP polyurethane waterproofing material should be applied on it.
- Apply a correct cut piece of insulation fabric (50 – 60 g/m² polyester geo-textile) on the still wet Tecnica 3120 WP.
- Press the fabric until it is soaked and saturated with enough Tecnica 3120 WP.
- The applied surface should be left to dry for 12 hours, and it should not be covered during this time.

Sealing and Repairing of Joints

- Clean concrete expansion joints and control joints of dust, residue or other contaminants.
- Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10 - 15 mm. and a width of 20 - 25 mm.
- Apply some Kalepolymas on the bottom of the joint only.
- Then apply one layer of Tecnica 3120 WP in 10 cm wide inside and on both left and right sides of the joint. Place insulation fabric (50 - 60 gr./m² polyester geo-textile) over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside.
- Then fully saturate the fabric with enough Tecnica 3120 WP. Fill the remaining free space of the joint with Kalepolymas sealant.
- The applied surface should be left to dry for 12 hours, and it should be covered during this time.

Post-Application Protection & Suggestions

- Tecnica 3120 WP should be applied by trained and experienced professionals.
- Smoking should be avoided during application, and work should be conducted in well-ventilated areas, away from naked flames.
- During application, hands and eyes should be protected with gloves and safety goggles.
- Tecnica 3120 WP applied surfaces should be protected from mechanical damages for at least 24 hours. Fresh surfaces should be protected from water, dew and similar external factors, dust, dirt and solvents.
- The reaction speed is influenced by the temperature of the ambient and the building structure; higher temperatures accelerate, lower temperatures slow down the reaction.
- If Tecnica 3120 WP is applied indoors, a suitable ventilation system should be used.
- Do not apply in extremely hot, rainy, windy weather.
- Do not apply on damp, wet or frozen surfaces.
- Necessary precautions should be taken in areas where water or water vapor is observed from the negative side.
- Before application, the moisture and adhesion of the substrate should be checked, and the dew point should be determined.

Storage

- The product should be stored in its original unopened undamaged packaging, in a clean and dry place, between +5°C and +25°C, and should not be exposed to direct sunlight.
- It should be protected against water, frost, and severe weather conditions.
- Shelf life is maximum 9 months when stored in the original sealed packaging.

Packaging

25 kg tin pail

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Technical Properties

(25 °C and %50 RH)

General Data

Appearance	White and Gray
Shelf Life	9 months when stored in the original packaging
Density	~ 1.35 ± 0.05 g/ml
Shore A (DIN 53505)	40 ± 3
Drying Time	12 hours
Full cure mechanical strength	7 days
Consumption (for1 mm thickness)	Approximately 0.75-1.00 kg/m^2 Total theoretical consumption 1.50-2.00 kg/m^2

Performance Data

Elongation at Break (DIN 53455)	> %300
Force at break (DIN 53455)	> 2.1 N/mm^2
Resistance to Water Pressure (DIN EN 1928)	Impermeability (1m water column, 24 hours)
Adhesion to Concrete (EN 1542)	≥ 1.5 MPa
Crack-bridging Capability	Up to 2 mm

Application Data

Temperature	+10 °C / +35 °C
Time to gain resistance against rain (20 °C, %50 RH)	6-8 hours
Set to Light Traffic (20 °C, %50 RH)	12-18 hours
Final Curing Time (20 °C, %50 RH)	7 days
Max. surface moisture	4%

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