EUNICOTE Pitch Polyurethane 500

Liquid-applied polyurethane waterproofing membrane

Description

EUNICOTE Pitch Polyurethane 500 is a solvent based liquid- applied, highly permanent elastic, cold applied and cold curing, bitumen extended, one component polyurethane membrane used for long-lasting waterproofing.
Pitch Polyurethane 500 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. Reaction with ground and air moisture causes curing.

Advantages

- Simple application(one component)
- When applied Forms seamless membrane without joints when applied.
- Resistant to water and frost.
- Excellent crack-bridging properties.
- Excellent thermal resistance, it never turns soft.
- Maintains mechanical properties over a temperature span of -30°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 torch (flames) during application.

Uses

- Waterproofing of foundations
- Waterproofing of retaining walls
- Under-tile waterproofing in bathrooms, terraces, roofs, etc...

Typical Properties

PROPERTY	RESULTS
Elongation at Break	> 600 %
Tensile Strength	> 4,5 N/ mm^2
E-Modulus	~1,0 N/ mm^2
Tear Resistance	15 N/ mm
Puncture Resistance	<100 N
Resistance to Hydrostatic pressure	No Leak @ 3 bar (30 m water column)
Adhesion to concrete	>1,0 N/mm^2
Hardness (Shore A Scale)	40
Thermal Resistance (80°C for 100 days)	Passed - No significant changes
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change
Service Tempera-	-40°C to +90°C
Tack Free Time	5-6 hours
Light Pedestrian Traffic Time	24 - 48 hours
Final Curing time	7 days
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.

Consumption

1,4 -2,0 kg/m^2 applied in two or three layers. 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. In case of reinforcement, consumption increases .

Application

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, and 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 smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed. WARNING: Do not wash surface with water!

Repair of cracks and joints:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

• Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with our Pitch Polyurethane 500 Primer and allow 2-3 hours to dry. Fill all prepared cracks with our Pitch Polyurethane 500 PU sealant. Then apply a layer of Pitch Polyurethane, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of our fabric. Press it to soak. Then saturate the fabric with enough Pitch Polyurethane, until it is fully covered. Allow 12 hours to cure.

• Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1. Apply some our Pitch Polyurethane 500 PU Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of Pitch Polyurethane, 200mm wide centered over and inside the joint. Place the fabric 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 Pitch Polyurethane. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with our Pitch Polyurethane 500 PU sealant. Do not cover. Allow 12- 18 hours to cure. The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

Priming:

On sound, high quality concrete surfaces no primer is necessary. Prime very absorbent and brittle concrete or brittle cement screed surfaces with Pitch Polyurethane 500 or with our Pitch Polyurethane 500 PRIMER. Prime non- absorbent surfaces like metal, ceramic tiles and old coatings with our Pitch Polyurethane 500 PRIMER. Allow the primer to cure according its technical instruction.

Waterproofing membrane:

Stir well before using for at least 2-3min. Apply the Pitch Polyurethane 500 onto the surface by roller or brush, until all surface is covered. Reinforce always with the fabric at problem areas, like wall-floor connections, 90o angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet Pitch Polyurethane 500 a correct cut piece of fabric, press it to soak, and saturate again with enough Pitch Polyurethane. For detailed instructions with the fabric, contact our R+D department. We recommend reinforcement of the entire surface, with the fabric. Use 5-10cm stripe overlapping. After 8-24 hours, apply another layer of the Pitch Polyurethane. For demanding applications, apply a third layer of the Pitch Polyurethane. If the Pitch Polyurethane 500 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. ATTENTION: Do not apply the Pitch Polyurethane over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

WARNING: The Pitch Polyurethane 500 is slippery when wet. In order to avoid slipperiness, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our technical department.

Protection /Thermoinsulation on Foundations/Retaining Walls:

Protect the cured Pitch Polyurethane, with a drainage board before backfilling. If an additional (optional) Thermoinsulation is required, place a

insulation board (XPS, EPS, PUR, PIR, etc) on the cured Pitch Polyurethane. Following to that place the protective drainage board.

Health and Safety
For further information see the Pitch Polyurethane 500 Material Safety Data Sheet, or consult our technical department.

Packaging
Pitch Polyurethane 500 is supplied in 20kg, 5kg and 1kg metal pails. Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Technical Service
The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

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