

MITCHPRUF PU

Two Components Polyurethane Liquid Waterproofing Membrane

DESCRIPTION

MITCHPRUF PU is a 2 component polyurethane based waterproof membrane coating having excellent flexibility and weatherproofing characteristics. Due to its excellent adhesion and thixotropic nature it is an ideal material for vertical and horizontal applications. **MITCHPRUF PU** cures upon reaction of its two components.

MITCHPRUF PU provides a seamless, tough and highly flexible membrane ensuring complete and long term water protection.

USES

- Odorless waterproofing system for bathrooms, swimming pools, kitchens, terraces, balconies, shower areas.
- Cold applied waterproofing for flat roofs and concrete structures, basement masonry, roof gardens, car parking
- As a damp proofing course be used for roof slabs, terraces, balconies, sunshades, parapet walls, etc. of domestic, commercial, mega and industrial structures.

MITCHPRUF PU is ideally suited for application on structures having complicated geometry like domes, arches, shells, folded plates, paraboloids, and corrugated sheets.

ADVANTAGES

- Weatherproof / waterproof elastomeric protective coating.
- It's a solvent free, cold applied product.
- It forms a long lasting impermeable, seamless and breathing membrane.
- It is highly elastic and has crack bridging ability.
- It is applied very easily.
- Can be used on a variety of substrates such as concrete, asbestos, cement, zinc and GI sheets, timbre, light weight concrete etc.
- Outstanding mechanical properties.
- High elasticity and tensile strength of the cured membrane enables it to accommodate roof movement.
- High abrasion resistance.
- Good chemical resistance.
- Versatile, ideal for applications in both new and old substrates.

TYPICAL PHYSICAL PROPERTIES

Appearance	Gray
Density at 25°C	1.45 kg/L
VOC	VOC 10.0 g/L
Solid Content	100%
Pot Life at 25°C	40 minutes
Elongation at Break (ASTM D412)	180%
Tensile Strength (ASTM D412)	> 5 N/mm ²
Modulus of Elasticity (ASTM D412)	0.6 N/mm ²
Bond Strength (ASTM D412)	> 2 N/mm ²
Shore A Hardness (ASTM D2240)	75
Crack Bridging (ASTM C 1305)	1.5 mm
Depth of water penetration (BS EN 12390)	No penetration after applying water pressure of 300 kPa at 72 Hours
Application Surface Temperature	+5°C to +35°C
Drying Time	24 hours
Complete Curing	7 days
Service Temperature	-5°C to +80°C

METHOD OF APPLICATION

SURFACE PREPARATION

The surface of the concrete shall be sound, clean and uncontaminated.

This preparation shall be such as to leave a sound exposed concrete surface free from dust, loose particles and any deleterious matter. If the concrete surface is defective or has laitance, it must be cut back to a sound base.

Oil, grease, varnishes, rust, dust and mold on metal surfaces shall be removed by wire or stiff brushing and grit blasting then wiped with MITCH SOLVENT X prior to priming.

New concrete or cementitious surfaces should be at least 28 days old and have moisture content not exceeding 5%. Old or existing surface should be refurbished mechanically to ensure clear and sound substrate.

PRIMING

Highly porous concrete or concrete containing micro silica will be sealed using Primer PU, a Polyurethane primer. The primer shall be applied at a rate of 5-6 m²/kg

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The primer should be left to achieve a tack-free condition for 6-8 hours before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

MIXING

MITCHPRUF PU is supplied in two pre-weighed packs (Base (A), Hardener (B)), ready for onsite mixing. Mixing should be carried out using a heavy duty, slow speed drill fitted with mixing paddle. The contents of base (part A) should be thoroughly stirred to disperse any possible settlement. The entire contents of the hardener can should be stirred and added to the base container.

Mix thoroughly for 2-3 minutes taking extra care to avoid air entrapment. Mix until a homogeneous mixture is attained. Improper mixing may result in product failure. Once mixed, the material must be used within its pot life.

APPLICATION

MITCHPRUF PU can be applied by brush, roller or airless spray. Subsequent layers could be done only after the first layer has been cured tack free (min 16 hours). In below ground structures, wet areas and roofs, the application thickness should not be less than 1.2 mm. All liquid application should be in at least two coats. It should be ensured that the material is not applied at excessive film thickness in single layer. Excessive film thickness may create bubbles.

A layer of MITCH FIBROFLEX, a fiber glass mesh should be embedded between the two **MITCHPRUF PU** coats over pipe culverts, floor drains, corner joints and floor / wall junctions.

The final wet coat of **MITCHPRUF PU** shall be spread with sufficient clean silica and before applying tile adhesives. Tiling or finished floor installations should be carried out as soon as possible after full cure of membrane is established.

CRACK TREATMENT

Shrinkages and non-moving structural cracks less than 1.0 mm shall be filled with a pre-treatment strip of **MITCHPRUF PU** of 1.0 mm thick extended to 75 mm on both sides of the crack. Voids and honeycombs shall be patched with MITCHFLOOR EP allowing the area to cure before applying the membrane.

RIGHT ANGLE BENDS

All right angle bends must have a coving detail installed. In areas where parapet walls, columns, pipe penetrations are present, a 45° coving fillet shall be made at all corners using MITHCHEM FIBER, a Fiber reinforced shrinkage controlled mortar for concrete repair to the water saturated cured surface.

All other angles, joints, protrusions and stress joints should be pre-treated with a heavy application of **MITCHPRUF PU** extending 150 mm on both sides of the coving.

MOVEMENT JOINTS

Expansion and movement joints should be sealed with MITCHLASTIC PU, a Polyurethane sealant. When cured a stripped layer of **MITCHPRUF PU**, 200mm wide shall be applied and centered over all the sealed joints. While the membrane is still wet, cover with a correct cut strip of fiber mesh, then apply another coat of **MITCHPRUF PU** until it is fully covered. Allow to cure before the general application.

COVERAGE/ CONSUMPTION

2kg / m² for DFT 1mm

SHELF LIFE

Keep the product in dry and sheltered place at temperature between +5°C to +25°C. In these conditions and in closed original containers, the product will have a shelf life of 12 months.

PACKING

18 Kg pails

CLEANING

Clean all the tools and application equipment with water immediately after use. Hardened or cured material can only be removed mechanically.

CAUTIONS

- **MITCHPRUF PU** should not be applied on surfaces with a risk of rising dampness.
- Don't apply the product with imminent rain forecast.
- Don't mix more material than can be used within the pot life of mixture.
- Incorrect assessment treatment of cracks may lead to a reduced service life and reflective cracking.
- Apply only when substrate and ambient temperature exceeds +5°C. During application the surface temperature must be +3°C above dew point.

HEALTH & SAFETY

During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary. In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly. If ingested, obtain medical attention immediately. Do not induce vomiting.

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TECHNICAL ASSISTANCE:

For further details and assistance for specific application requirements and for other product information please contact Mitchell.