

# DURAPROOF PU

**Single component, liquid applied, polyurethane elastomeric waterproofing membrane**

## Primary Applications

The high elasticity, excellent bond and low water permeability of Duraproof PU make it ideal for a wide range of water and vapour proofing applications such as concrete foundations, basements tunnels, ground floors, suspended floors, car decks, roof terraces, balconies, patios, bridges, precincts and water retaining structures (potable water), sewage works, and inverted roofs. The excellent chemical resistance of this Duraproof PU makes it particularly suitable for tank applications in areas where aggressive ground water conditions prevail.

## Features & Benefits

- One component; ready to apply direct from the container
- Liquid application means details are simplified and there are no joints in the membrane
- Highly elastic, cures to give a permanently flexible resilient barrier over a wide range of temperatures
- Rapid installation; significantly reduces time spent on preparatory works and detailing
- Excellent adhesion, can be applied to a wide range of substrates. Continuous adhesion prevents lateral migration of water
- Impervious - outstanding barrier properties ensure protection against corrosive soil conditions
- Thermally stable - irreversible chemical cure eliminates melting and flow at high temperature
- Excellent resistance to oxidation and embrittlement
- Mechanical damage to the membrane can be easily repaired by spot application
- Environment friendly

## Standard compliance

Duraproof PU meets the requirements of the following. According to specifications BS 3416 Type 1, Class A and ASTM D 638, IS 9862:1981

## Description

Duraproof PU single component modified polyurethane dispersant based binder which cures by reaction with atmospheric moisture to provide a tough elastomeric waterproofing membrane. It is supplied in a single grade to meet all site application methods and requirements.

Duraproof PU is a medium viscosity grade (approximately. 2500 cps) for roller, squeegee or spray application to horizontal and vertical surfaces.

## Technical Properties

<b>Tack free time @ 25°C</b>	: 4 hours
<b>Time to full cure @ 25°C</b>	: 24 hours @ 300micron thickness

### Typical cured membrane properties (at 28 days)

<b>Elongation (ASTM D412)</b>	: 600 %
<b>Tensile strength (ASTM D412)</b>	: 1.5 N/mm <sup>2</sup>
<b>Modulus @ 100% elongation (ASTM D412)</b>	: 0.62 N/mm <sup>2</sup>
<b>Recovery from 600% elongation (ASTM D412)</b>	: 95 %
<b>Tear resistance (ASTM D624)</b>	: 8.0 N
<b>Water vapour transmission for 0.3mm film (ASTM E96)</b>	: 9.7 g/m <sup>2</sup> /24 hrs.
<b>Permeability (ASTM E96)</b>	: 0.063 ng/m/sec/Pa*
<b>Shore A hardness (ASTM D2240)</b>	: 50
<b>Artificial weathering</b>	: No loss of flexibility after 4000 hours exposure
<b>Extensibility after heat aging (min. requirement - extended to 6.4mm without cracking)</b>	: No cracking or tearing
<b>Service temperature (continuous ambient)</b>	: -40°C to 70°C

## Chemical properties

Duraproof PU is unaffected by the range of acids, alkalis and water borne salts and is resistant to bio-deterioration.

## Instructions for use

### Preparation

All surfaces to be waterproofed should be sound, clean and dry.

Concrete surfaces should have a light steel-trowel followed by a fine hair-broom or equivalent finish which is dry and free of dust, oil and other contaminants. All high spots should be removed.

Moss and lichen must be removed physically followed by treatment with fungicidal wash to kill any spores and inhibit further growth. After treatment wash down thoroughly with clean water and allow to dry. All metal surfaces should be made clean of paint, oils, rust and other contaminants.

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## **Priming**

Priming is not normally required on good quality concrete substrates. However, absorbent surfaces such as porous concrete, sand/cement and cement boards will require sealing to prevent absorption of Duraproof PU. This should be using a 1:1 mixture of Duraproof PU and clean water.

## **Application**

Duraproof PU should be applied by brush, roller, and squeegee or airless spray (two coat application for standard grade on vertical surfaces) at a minimum wet film thickness of 300 micron. This is in addition to the preparatory work.

The minimum application life (after opening the pack) is up to 48 hours if stored in closed containers.

On a vertical surface a film build of 0.3mm is achievable in two coats. In critical applications where surety of film thickness is paramount, two coats should be applied at right angles to one another. Quantities per coat should be gauged to give the specified final film thickness.

## **Packing**

Duraproof PU is supplied in 25kg containers

## **Coverage**

Duraproof PU covers 0.5kg/m<sup>2</sup> @ 0.3mm approximately depends on the substrate conditions.

## **Shelf life**

Duraproof PU has a shelf life of twelve months if kept below 25°C in the original, unopened packs.

## **Health and safety**

The use of goggles is highly recommended but should accidental eye contamination occur, wash thoroughly with more plenty of water and seek medical advice. And ensure adequate ventilation when using resin and solvent containing products.

## **Fire**

Duraproof PU is non flammable



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