

# HYCHEM DECKPROOF PU

Trafficable waterproof polyurethane membrane

DATA SHEET



**HYCHEM**  
EPOXY SYSTEMS

Deckproof PU is an elastomeric, UV stable, crack bridging polyurethane membrane system suited to a wide variety of internal & external waterproofing applications. The product system consists of a primer, a base coat, an intermediate coat and a topcoat. For areas exposed to foot traffic only, the intermediate coat can be eliminated.

The primer provides adhesion, the base coat provides flexibility and the top coat provides UV resistance and colour stability. The optional intermediate coat & aggregate broadcast provides a durable textured surface offering maximum abrasion resistance and antislip properties.

For areas exposed to vehicular traffic the intermediate coat is required.

## TYPICAL APPLICATIONS

DECKPROOF PU based membrane systems are suitable and recommended for:

- The waterproofing of residential balconies and rooftops
- The waterproofing of car park decks
- The waterproofing of containment structures such as banded material storage areas, planter boxes, general tanking and below grade waterproofing
- The waterproofing and protection of stadium terracing
- The waterproofing of industrial structures and airconditioning plants

## SYSTEM PRODUCTS

DECKPROOF PU-1-P - single pack primer

DECKPROOF PU-1-SL - single pack base for light to medium duty

DECKPROOF PU-1-V - single pack vertical grade coating

DECKPROOF PU-2-SL - two pack base & intermediate coat

DECKPROOF PU-2-TC (60 for PU-1-SL & 80 for PU-2-SL) - two pack top coats

## CHEMICAL RESISTANCE

The HYCHEM Deckproof PU membrane system has excellent resistance to dilute acids, alkalis and salt solutions, as well as the range of petroleum based oils and solvents.

## FEATURES AND BENEFITS

HYCHEM Deckproof PU has exceptional toughness, abrasion and wear resistance consistent with state of the art polyurethane technology.

The product has excellent crack bridging capabilities, is easy to apply and has low VOC content. It can be used on asphalt and timber as well as concrete. Application characteristics are excellent, with a pot life that gives a good balance between application time and early walk on characteristics.

## SPECIFICATION GUIDELINES

HYCHEM DECKPROOF PU is applied in 2 ways:

1) Light-Medium Duty with fine anti-slip	
Primer at 0.2-0.25 Kg/m <sup>2</sup>	Providing 190-240 microns dft
Basecoat (PU-1-SL or PU-2-SL) @ 2.1 - 2.4 Kg/m <sup>2</sup>	Providing 2,000 microns dft
Topcoat at 0.3 Kg/m <sup>2</sup>	Providing 150 microns dft
Light broadcast & backroll	Total nominal 2,390 microns dft (2.4mm)
2) Heavy Duty with medium to coarse anti-slip	
Primer at 0.2-0.25 Kg/m <sup>2</sup>	Providing 190-240 microns dft
Basecoat (PU-2-SL) @ 2.1 Kg/m <sup>2</sup>	Providing 2,000 microns dft
Intermediate coat @ 1.05 Kg/m <sup>2</sup>	Providing 1,000 microns dft
Broadcast to beach finish	Providing 250 -500 microns dft
Topcoat at 0.3 Kg/m <sup>2</sup>	Providing 150 microns dft
Total topping depth	Nominal 4,000 microns dft (4mm)

## TECHNICAL CHARACTERISTICS

PROPERTY	PRIMER	SINGLE PACK MEMBRANE	TWO PACK MEMBRANE	TOP COAT 60 & 80
Product type	1 part polyurethane	1 part polyurethane	2 part polyurethane	2 part polyurethane
Solids content	95%	95% minimum	over 97%	over 50%
Viscosity	150 cps	3,000-4,000 cps	5100 cps	3000 cps
Pot life	N/A	N/A	40 minutes	30 minutes
Tack free time	2-8 hrs - recoat by 24 hrs	12-24 hrs - recoat by 24 hrs	12-24 hrs - recoat by 24 hrs	2-4 hrs, recoat by 24 hrs
Shore D hardness	N/A	over 70 Shore A	over 80 Shore A	over 80 Shore A
Elongation	10%	over 400%	over 400%	350%
Tensile strength	N/A	over 3.5 MPa	over 10 MPa	2 MPa

## APPLICATION GUIDELINES

### Surface preparation

Concrete substrates shall be firm, clean and dry with a minimum compressive strength of 25 MPa and surface tensile strength of at least 1.5 MPa. New concrete must be allowed to cure for a minimum of 28 days. Repair imperfections (holes and cracks) with an epoxy patching compound such as Hychem GP where necessary. Remove all surface laitance, contaminants, coatings, curing compounds and all weak and loose materials. Prepare the entire concrete surface by Diamond Grinding, Scarifying or Captive Shot Blasting to provide the appropriate surface profile for optimum mechanical keying.

Moisture content of the surface is to be below 4% and there must be no rising damp.

### Mixing - single & two component products

- Empty the entire contents of component A into component B for two component products where applicable.
- Mix for 2 minutes using a suitable mechanical mixer. Keep speed at around 400-600 rpm and avoid entraining air. Ensure that contents on the side of the pail are incorporated by scraping the sides and remixing. For single component products mixing is still required to ensure all ingredients and pigments are dispersed evenly.

### Detailing

Live cracks larger than 0.6mm need to be treated as flexible joints.

- Firstly, rout out all such cracks to a minimum width of 6mm and fill with Hychem Hyflex NS or similar and allow to cure.

### Priming

- Apply around 0.2-0.25 Kg/m<sup>2</sup> using a roller
- Allow the primer to cure for 2-8 hours before proceeding with base coat.
- On asphalt, spread primer at the same rate and allow to cure for 2-8 hours.
- After the primer has cured apply a brush coat of the appropriate base membrane to all smaller cracks at a thickness of around 0.8mm.

### Base Coat

- Apply the selected base coat with a knotted trowel, trowel or a squeegee at the required thickness and allow to cure. The floor is now ready for application of the top coat if a medium traffic system is desired, or an application of intermediate coat for a heavy duty system.

### Intermediate Coat

(For light to medium duty this application can be eliminated)

- Apply a coat of intermediate at around 1.05 Kg/m<sup>2</sup> (1mm) using a knotted trowel, trowel or a squeegee.
- Cast the surface with quartz aggregate to a beach finish using 30/60 mesh quartz or coarser.
- Allow to cure, vacuum off excess and seal with topcoat.

### Top Coat

This is applied as a UV stable and weather resistant sealer with a gloss finish. Mix Resin & Hardener at the correct ratio and mechanically stir the contents for 2 minutes before application. The material is available in a mid grey colour which can be darkened by the addition of black pigment if required. Some special colours are available upon request where time permits. Please enquire with your Hychem sales consultant. The sealer has high flexibility and excellent chemical resistance.

Spread the material at an application rate of 0.3 Kg/m<sup>2</sup> to seal in all the antislip aggregate. Rollers should be high quality and lint free. Two coats may be required depending on the texture of the surface being coated, the colour being applied as well as the finish required.

Note: This material contains solvent, all sources of ignition need to be avoided.

### Final Cure

For pedestrian and vehicular traffic a period of 24 hour normally suffices. Very low humidity can extend this period. For ultimate exposure to chemicals a full cure of 7 days is recommended.

### LIMITATIONS OF APPLICATION

Polyurethane systems are moisture reactive. They must not be applied over damp surfaces or those with active moisture vapour transmission. Preferred conditions at time of installation is 10° C-30° C with a relative humidity below 85%.

New concrete needs to be cured for 28 days.

Do not apply under 5° C or over 30° C.

### HEALTH AND SAFETY

Products may be injurious to health through breathing, skin absorption and ingestion. All users of this product must read the material safety data sheet (MSDS) prior to commencement.

In case of skin contact, wash thoroughly with soap and water. For eye contact, immediately flush with plenty of water for at least 15 minutes and contact a physician. For respiratory problems, remove individual to fresh air.

### CLEAN UP

Uncured – remove spillage using a cloth moistened with Xylene (HYCHEM Solvent X).

Cured product can only be removed mechanically.

Clean up spillages by casting an absorbent material and remove waste according to regulations.

### SAFETY PRECAUTIONS

Polyurethane products may cause allergic reactions through skin contact, goggles, protective gloves and overalls must be worn. Ensure that there is adequate ventilation and avoid breathing the vapour.

Field Support where provided, does not constitute supervisory responsibility. Suggestions made by HYCHEM either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they and not HYCHEM are responsible for carrying out procedures appropriate to a specific application.

The technical information and application advice given in this publication is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the product suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use. Hychem recommend carrying out an on-site trial before proceeding with any application.