HYCHEM

HYCHEM Deckproof PU

Trafficable waterproof polyurethane membrane

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 bunded 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

Features & 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.

Technical Data

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

Physical Properties

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 Updated: 20/03/2014

APPLICATION GUIDELINES

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

Specification guidelines

HYCHEM DECKPROOF PU is applied in 2 ways:

- Light-Medium Duty with fine anti-slip

Primer at 0.2-0.25 Kg/m2	Providing 190-240 microns dft

Basecoat (PU-1-SL or PU-2-SL) @ 2.1 - 2.4 Kg/m2 Providing 2,000 microns dft

Topcoat at 0.3 Kg/m2	Providing 150 microns dft
Light broadcast & backroll	Total nominal 2,390 microns dft (2.4mm)

- Heavy Duty with medium to coarse anti-slip

Primer at 0.2-0.25 Kg/m2	Providing 190-240 microns dft
Basecoat (PU-2-SL) @ 2.1 Kg/m2	Providing 2,000 microns dft Intermediate coat @ 1.05 Kg/m2 Providing 1,000 microns dft
Broadcast to beach finish	Providing 250 -500 microns dft
Topcoat at 0.3 Kg/m2	Providing 150 microns dft
Total topping depth	Nominal 4,000 microns dft (4mm)

HYCHEM

HYCHEM Deckproof PU

Trafficable waterproof polyurethane membrane

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.

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/m2 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 knotched 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/m2 (1mm) using a knotched 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/m2 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.

HYCHEM Deckproof PU

Trafficable waterproof polyurethane membrane

On-site trial

Hychem recommend carrying out an on-site trial before proceeding with any application.

Application Information

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

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.

Environmental Conditions

Temperature and the surrounding atmospheric conditions will play a part in the curing process of all resin products. Under conditions of low temperatures and high humidity the final cured surface finish can be adversely affected, potentially resulting in poor gloss retention, discoloration over time, poor overcoat ability and inter-coat adhesion. Quite often these conditions will result in the formation of a white film over the surface, often evident after contact with water. If this occurs, the existing coating will need to be abraded to completely remove the affected surface to ensure the adhesion of subsequent applications. In some cases, partial or complete re-priming may be necessary. Attention also needs to be paid to the substrate temperature, which should be at least 3-5 °C above the dew point during the curing phase. Industry standards recommend the accurate recording of environmental conditions such as substrate and air temperatures, humidity levels and dew point readings during both the application and curing processes. Full material warranties cannot be provided unless all the relevant data has been recorded accurately. If in doubt consult the HYCHEM technical department for advice.

Safety Precautions

Products may be injurious to health through breathing, skin absorbtion 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.

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.

Chemical Resistance

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

Warranties and Disclaimers

HYCHEM warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. HYCHEM has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of the application tools, including trowelling, spray equipment etc. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by HYCHEM.

Field Support

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.

HYCHEM Deckproof PU

Trafficable waterproof polyurethane membrane

Customer Responsibility

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.

Legal Notes

The information, and in particular the recommendations relating to the application and end-use of HYCHEM products, are given in good faith based on HYCHEM's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with HYCHEM's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. HYCHEM reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

EDITION: TDS HYCHEM Deckproof PU_20140320