

HYCRETE PU

Polyurethane Concrete Flooring System

DESCRIPTION

Hycrete PU-SL(m) is a unique polyurethane concrete product which is applied as a topping on concrete floors where difficult service conditions are the norm. Hycrete PU-SL(m) is recommended for use where exposure to temperatures up to 120 °C is expected. For these conditions a minimum of 9 mm is recommended. Hycrete PU-SL(m) is also the product of choice where maximum resistance to acetic acid, lactic acid and other organic acids are required. Resistance to food acid (eg phosphoric acid) and sanitizing chemicals such as peroxyacetic acid solutions are also excellent.

The system is based on a solventless polyurethane and a cementitious quartz filler blend. The product is usually applied as a 6 mm broadcast topping complete with a range of anti-slip finishes. This broadcast system should be sealed with Hycrete PU-TC(m) topcoat.

Hycrete PU-SL(m) can also be applied as a single layer, smooth seamless 4 mm self-levelling topping. The Hycrete flooring systems possess antimicrobial, anti-slip or smooth finishes and can tolerate high substrate moisture.

As an alternative to a solid colour finish, a decorative quartz or paint chip with clear glaze finish may be applied. Refer to Endurabond Flake and Endurabond Decorative Quartz.

Advantages:

- Heavy duty, durable, abrasion and impact resistant
- Chemically resistant to many acids, caustics, fats and cleaning solutions
- Fast installation with no odour issues
- Can be applied to 7 day old concrete
- Moisture tolerant and can be applied to a slightly damp surface
- Available with a chemical accelerator for fast cure time even at low temperatures
- Available in a variety of non-slip textures to meet and exceed slip standards for safety
- Supplied as a pre-packaged kit for uniform consistency
- Available in a range of colours

RECOMMENDED USES:

- Abattoirs and meat processing establishments
- Bakeries and snack food manufacturers
- The fish processing industry
- Breweries, wineries, fruit juice and soft drink manufacturers
- Cold storage warehouses, cool rooms and freezers
- The dairy industry including milk, butter, cheese and yoghurt products
- The edible oil and margarine industry
- The sugar industry including refineries and confectionery producer. The chemical and mining industry, containment bunds in mineral processing and treatment plants
- Ammonium Nitrate storage
- Areas subject to constant heavy traffic and chemicals such as tanker bays, waste transfer stations, fertilizer plants, large machinery workshops, bulk liquids transfer etc.
- Commercial and industrial kitchens in restaurants, hospitals, catering facilities, etc.
- Bars, food retailers, supermarket food preparation areas

LIMITATION:

Hycrete PU-SL(m) is an industrial flooring finish which may discolour on exposure to UV light from the sun or an artificial source. The severity of discolouration is dependent on colour choice. Any such discolouration has no effect on the performance of the product. Colour stable topcoats are available.

APPLICATION GUIDELINES:

SUBSTRATE PREPARATION

The concrete substrate should be firm, clean and dry. The compressive strength of the surface must be a minimum of 25 MPa and the surface tensile strength a minimum of 1.5 MPa.

New concrete is to be a minimum of 7 days old. The surface of the concrete will need to be mechanically prepared by either diamond grinding, shot blasting or scarifying. All weak and loose material, surface laitance, contaminants and coatings or curing compounds must be completely removed. It is preferred that the prepared surface has a profile to ensure both excellent chemical and mechanical adhesion.

Anchoring grooves minimum 10 mm wide and 10 mm deep will need to be cut just inside the perimeter of the area to be topped as well as around drains. Double diamond blade saw cuts 6 x 6 mm must be placed over the entire floor at maximum distance of 4 m intervals.

Porous concrete will require priming, if unsure then onsite tests must be carried out. For more information refer to the **Hycrete PU specification**.

PRIMING

If required, apply a 1mm scratch coat of Hycrete PU-SL(m) to the prepared surface.

MIXING INSTRUCTIONS

The resin and hardener are to be mixed together in the correct ratios using a mechanical variable speed helical mixer for at least 1 - 2 minutes prior to the addition of the bag of Hycrete PU-SL(m) aggregate. Continue mixing until all the ingredients have been incorporated and are thoroughly mixed, with the final mix being totally homogenous. It is important to maintain continuity of mixed material on site to maintain the wet edge of the applied Hycrete topping.

HYCRETE UNIVERSAL SMOOTH FINISH 3-4MM TOPPING

Prime concrete as recommended above. Apply the mixed product over the prepared surface using either pin rake or notched trowel set at the correct thickness (3-4mm). The topping is then rolled with a spiked roller to remove any entrained and entrapped air resulting in a smooth finish.

HYCRETE UNIVERSAL ANTI-SLIP 6MM TOPPING

Where a 6 mm anti-slip topping is required, applied the self-levelling topping at 4 mm thickness, broadcast into the wet Hycrete PU-SL with the chosen aggregate to a beach finish and allowed to cure. Once cured the excess aggregate is swept up and vacuumed away. The surface is now ready for sealing with Hycrete PU-TC(m) topcoat. The non-slip texture of the system will be determined by the size of the aggregate used and thickness of topcoat.

THERMO SHIELD ANIT-SLIP 9MM TOPPING

Apply the Hycrete PU-SL(m) broadcast system in two layers to achieve a final total film thickness of 9 mm. Remove the excess broadcast aggregate and apply the Hycrete PU-TC(m) topcoat as a final seal coat.

HYCRETE ROLL COAT 200-450 microns

A multiple roll coat system for less harsh environments. Apply the Hycrete PU-TCL(m) topcoat in 2-3 applications to achieve a final dry film thickness of 200-450 microns. The use of a sand in the first or second layer will improve the slip resistance.

Aggregates

The hardness of the broadcasting aggregate will impact on the durability and lifespan of the applied flooring system. The harder the aggregate, the better the long term performance. The following list shows a comparative hardness of some commonly available aggregates.

Quartz Sand (Hard) < Bauxite (Harder) < Aluminium Oxide (Hardest)

For heavy duty environments where exposure to regular hard wheeled traffic or constant mechanical abrasion is common, Hychem strongly recommend consideration be given to choosing either Bauxite or Aluminium Oxide as the broadcasting aggregate.

HYCRETE PU

SYSTEM OUTLINE:

1. HYCRETE UNIVERSAL SMOOTH FINISH SELF - LEVELLING 3-4MM TOPPING

Component	Product	Coverage
Primer*	Hycrete PU-SL(m)	1m ² per Litre
1 st Coat	Hycrete PU-SL(m)	3-4L per m ²
2 nd Coat **	Hycrete PU-TC(m)	4-5m ² per Litre

2. HYCRETE UNIVERSAL ANTI-SLIP 6MM TOPPING

Component	Product	Coverage
Primer*	Hycrete PU-SL(m)	Optional
1 st Coat	Hycrete PU-SL(m)	4L per m ²
Aggregate broadcast		
2 nd Coat **	Hycrete PU-TC(m)	2m ² per Litre

3. THERMO SHIELD ANTI-SLIP 9MM TOPPING

Component	Product	Coverage
Primer*	Hycrete PU-SL(m)	Optional
1 st Coat	Hycrete PU-SL(m)	3L per m ²
Aggregate broadcast		
2 nd Coat	Hycrete PU-SL(m)	3L per m ²
Aggregate broadcast		
3 rd Coat **	Hycrete PU-TC(m)	2m ² per Litre

4. HYCRETE ROLL COAT 200-450 microns

Component	Product	Coverage
1 st Coat	Hycrete PU-TC(m)	2.2-5L per m ²
Optional Aggregate broadcast		

*Primer coat required over porous substrates and for smooth finish.











**UV Optional finish available Hycrete PU-TC Solar.

TRAFFICKING

Allow to cure for a minimum of 24 hours at temperatures no less than 10°C before light trafficking.

COLOUR CHART

Standard colour range for Endurabond 450 and Unithane PU. Some colours may require two coats for adequate hiding. Special colour by request. For further information please contact your Polymer Group representative or Customer Service.

	
Beige RAL 1001	Maize Yellow RAL 1006
	
Sky Blue RAL 5015	Grass Green RAL 6010
	
Light Grey RAL 7035	Dusty Grey RAL 7037
	
Traffic Grey B RAL 7043	Red Oxide
	
Jet Black	Curtain Call

SYSTEM DESIGN



COVERAGE

1litre Hycrete PU-SL(m) per m² per 1 mm thickness.

PACKAGING

Hycrete PU-SL(m) Base Coat is a 3 component product consisting of a resin, hardener and blended fillers. ***

Hycrete PU-TC Topcoat is a flat gloss, 3 component product consisting of a resin, hardener and blended fillers.

Hycrete PU-TC Solar Topcoat is a UV stable, semi-gloss, 3 component product consisting of a resin, hardener and blended fillers.

Products:	Component A	Component B	Component C	Colour Pack
Hycrete PU-SL(m) Base Coat 10.5 litres	3 kg	3 kg	14 kg Aggregate	175gms
Hycrete PU-TC (m) Topcoat 2.35 litres	1 kg	1 kg	1.25 kg Aggregate	175gms
Hycrete PU-TC Solar Topcoat 2.5 litres	1 kg	1.3 kg	1 kg Aggregate	175gms

*** Thermo Shield additional component D 16kg bag 2mm aggregate.

NOTES:

- Material Safety Data Sheets are available on request.
- Do not proceed with painting when surface temperature is less than 10°C or above 35°C; if less than 3°C above dew point; when the relative humidity of the atmosphere exceeds 85%; or when such conditions are expected within 4 hours of completion of painting work.
- Apply first coat as soon as possible after the preparation and before any deterioration of the surface.
- Practical coverage of products is project dependent.
- This specification must be read in conjunction with the relevant technical data sheets.

SHELF LIFE

This product has a shelf life of at least 9 months from date of manufacture, stored away from sunlight at 25 °C in original un-opened container.

Hycrete products manufactured by:

Hychem Construction Resins

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