

HYCRETE PU-TC-SOLAR

DATA SHEET



HYCHEM
EPOXY SYSTEMS

Hychem HYCRETE PU-TC-SOLAR is a 4-component, high build coloured polyurethane coating. It has excellent mechanical and chemical properties. It is resistant to organic acids, dilute mineral acids, vegetable and animal fats, petroleum oils and solvents. HYCRETE PU-TC-SOLAR has improved resistance when exposed to UV and weathering compared to conventional HYCRETE PU-TC.

FEATURES AND BENEFITS

- Excellent chemical resistance – resists organic acids, dilute mineral acids, vegetable and animal fats, petroleum oils and solvents.
- High impact/abrasion resistance – resists mechanical wear and heavy vehicular traffic.
- Fast curing – trafficable in 24 hours.
- Semi-gloss finish – easy to keep clean and maintain.
- Odourless – non-tainting to food.
- Solvent free – Very low VOC non-flammable.
- Improved UV resistance compared to conventional HYCRETE PU-TC.

TYPICAL APPLICATIONS

HYCRETE PU-TC-SOLAR is used as a protective coating in situations subject to constant exposure to aggressive chemicals, and mechanical abuses such as dairy, food and beverage production facilities, warehouse and distribution centres, chemical and minerals processing plants and waste treatment plants. It is normally used as a top coat over HYCRETE PU-SL wear coat broadcast.

PRODUCT CHARACTERISTICS

(A) Technical data	
<i>Liquid mixture (A+B+C)</i>	
1. Solids content	99%
2. Density (25°C)	1.34 g/cm ³
3. Viscosity (25°C)	A+B: 1000–1500 mPa's
4. Packaging size (4-component)	3.3 kg (+0.175 kg colour paste) (1 kg A + 1.3 kg B + 1 kg C + 0.175 kg colour paste)
5. Shelf life	9 months in closed original container
6. Storage	Dry at 10–30°C, avoid direct sunlight

(B) Technical data

Cured material

1. Adhesive strength (DIN ISO 4624)	<1.5 N/mm ² (concrete failure)
2. Hardness (DIN EN ISO 868)	Shore D52 after 7 days Shore D60 after 28 days

APPLICATION

Surface preparation on concrete

Prior to the application of HYCRETE PU-TC-SOLAR, the substrate must be thoroughly prepared.

- The concrete substrate must be firm, clean and dry with a minimum compressive strength of 25 MPa and a minimum surface tensile strength of 1.5 MPa.
- New concrete must be allowed to cure for a minimum of 28 days.
- Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak or loose materials.
- Prepare the concrete surface by Grinding, Shot Blasting, Scarifying, Ultra High-Pressure Water Jetting or Scabbling to provide the appropriate concrete surface profile (CSP) for optimum mechanical keying.
- The extent of surface preparation required is dependent upon but not limited to the thickness of the coating system to be applied. It is highly recommended that all surface preparation is carried out in accordance with industry standards and publications such as NACE 02203 item No. 22420 or ICRI Technical Guideline No. 03732.

MIXING

Mix components A and B together for 30 seconds. Add aggregate bag and mix until a smooth consistency without lumps is achieved, 1–2 minutes should be sufficient.

APPLICATION GUIDELINES

Do not apply over damp or wet surfaces.
Do not apply where there is water vapour transmission.

Non-slip finish

- Apply to substrate and broadcast anti-slip aggregate into the wet surface and allow to cure. The size of the aggregate that is used depends on the level of slip resistance required.
- Apply a second coat of HYCRETE PU-TC-SOLAR to seal the surface. Keep in mind not to flood the surface so much as you lose the slip resistant effect of the aggregate.
- HYCRETE PU-TC-SOLAR may also be applied over either a self-levelling or broadcast Hycrete PU-SL(m) topping.

(C) Technical data

Liquid mixture (A+B)

1. Mixing ratio A : B : B : CP	1 : 1.3 : 1 : 0.175 by weight (kg)
2. Working time (25°C)	Approx. 20-25 minutes
3. Application temperature	10-30°C (min. 3°C above dew point)
4. Material consumption	0.5-1.0 kg/m ²
5. Overcoating (25°C)	within 12-24 hours
6. Cure time to withstand:	
Foot traffic	after 12-20 hours
Heavy traffic	after 2 days
Exposure to chemical	after 7 days

OVERCOATING

Overcoating should be carried out within 24 hours after application of HYCRETE PU-TC-SOLAR. If longer than 24 hours, it is necessary to lightly grind the surface before over-coating is carried out.

COVERAGE

The following information is a guide only.

Over a smooth surface the expected coverage is about 4-5 m²/litre. When applied over a broadcast surface the consumption will depend on the profile, however, approximately 2 m²/litre can be expected.

SAFETY PRECAUTIONS

Wear gloves, eye protection, masks and overalls during mixing and application.

PACKAGING

HYCRETE PU-TC-SOLAR is a 4 - component product consisting of a resin, hardener, blended fillers and pigment.

Component breakdown:

- Part A - 1 kg
- Part B - 1.3 kg
- Part C - Aggregate 1 kg
- Part D - 0.175 kg pigment

The mixed product will yield approximately 2.5 litres.

WARNING - ENVIRONMENTAL CONDITIONS

Temperature and the surrounding atmospheric conditions will play a part in the curing process of all epoxy products. Under conditions of low temperatures and high humidity the final cured surface finish can be adversely affected potentially resulting in poor gloss retention, discolouration over time, poor overcoatability and intercoat adhesion. Quite often these conditions will result in the formation of a white film over the surface often evident after contact with water. This chemical reaction with the atmosphere is commonly referred to as "amine bloom" or "amine blush".

If this occurs then 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°C and preferably 5°C above the dew point during the curing phase.

Industry standards recommend the accurate recording of times and dates, batch numbers, consumption rates and environmental conditions including 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.

NOTE: Customer responsibility

The technical information and application advice given here 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 products 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.

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.

If unsure contact Hychem for further technical advice before proceeding.

