HYCHEM

HYCHEM Hycrete PU-TC Solar

UV-stable, gloss top coat for Hycrete Polyurethane Cement floor system

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. Hycrete TC Solar is typically applied as a final coat over Hycrete SL or Hycrete TC. Please read these data sheets for recommended application of each product. PRODUCT CHARACTERISTICS (A) Technical data Liquid mixture (A+B+C)
- Solids content 99%
- Density (25°C) 1.34 g/cm3
- Viscosity (25°C) A+B: 1000–1500 mPa's
- Packaging size (3-component + pigment pack)

Features & 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.
- 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

Technical Data

Storage	Dry at 10–30°C, avoid direct sunlight

Physical Properties

Adhesive strength (DIN ISO 4624)	<1.5 N/mm2 (concrete failure)
Hardness (DIN EN ISO 868)	Shore D52 after 7 days Shore D60 after 28 days

APPLICATION GUIDELINES

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.

Curing and Accelerating

Hycrete TC Solar is by nature relatively slow curing, it is therefore recommended to add 20ml AC20 per kit where temperatures are below 20°C.

10ml AC20 may also be added at temperatures 20-30°C for quicker curing.

Do not apply over damp or wet surfaces.

Do not apply where there is water vapour transmission.

(C) Technical data

- Mixing ratio A : B : C : CP 1 : 1.3 : 1 : 0.175 by weight (kg)
- Working time (25°C) Approx. 20–25 minutes
- Application temperature 10–30°C (min. 3°C above dew point)

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- Material consumption approximately 0.15–0.5 kg/m2
- Cure time 20°C to withstand:

Foot traffic

Heavy traffic

Exposure to chemical note: with AC20.

48 hours after 4 days after 7 days

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. If using AC20 add and mix for 30 seconds.

Hychem HYCRETE PU-TC-SOLAR is a 3-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 is an ultra-low yellowing UV stable semi-gloss top coat.

Overcoating

Overcoating: within 24 hours of the previous coat of Hycrete Solar. Refer technical data sheet curing of other products if Hycrete TC Solar is applied over another product.

Application Information

Packaging size (3-component + pigment pack)	3.3 kg (+0.175 kg colour paste) (1 kg A + 1.3 kg B + 1 kg C + 0.175 kg colour paste)
Shelf life	9 months in closed original container

Coverage

The following information is a guide only.

Over a smooth surface the expected coverage is about 8–10 m2/litre. When applied over a broadcast surface the consumption will depend on the profile, however, approximately 3-5 m2/litre can be expected.

Packaging

HYCRETE PU-TC-SOLAR is a 3-component neutral product consisting of a resin, hardener and blended fillers. A pigment pack needs to be added for colour.

Component breakdown

Part A – 1 kg

Part B – 1.3 kg Part C – Aggregate 1 kg + 0.175 kg pigment The mixed product will yield approximately 2.5 litres.

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.

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Safety Precautions

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

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.

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.

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