HYCLAD E

Epoxy polyurea membrane

DATA SHEET

HYCHEM
INFRASTRUCTURE SOLUTIONS

HYCLAD E is a flexible hybrid product, designed to combine the easy handling properties of epoxy with the high elasticity and good impact resistance of polyurea products.

USE

HYCLAD E is designed for use as a crack bridging, waterproof membrane in situations where the spontaneous flash cure of polyurea membranes is not desired and the high abrasion and wear resistance of polyurethane membranes is not required.

HYCLAD E, unlike polyurea and polyurethane membranes, can be applied to dry concrete surfaces without the use of a primer.

FEATURES AND BENEFITS

- Long pot life, easy hand & spray application
- High elasticity
- Good adhesion to concrete
- Compatible with most coatings
- Convenient mix ratio
- Impact resistant
- High resistance to water and alkaline solutions
- Moderate resistance to dilute mineral acids
- Moderate resistance to petroleum oils & fuels

TYPICAL APPLICATIONS

- Waterproofing concrete roof decks
- Waterproofing plant rooms
- Waterproofing water features
- Waterproofing balconies & patios
- Waterproofing planter boxes
- Sealing cracked concrete structures

PHYSICAL PROPERTIES

The values below are indicative only based on the binder and do not represent a specification

Mix Ratio - volume	2:1 resin to hardener
Specific gravity	1.15:1
Pot life	60 minutes
Tack free time	6-8 hours
Cure time	72 hours
App. temperature	5 to 30°C
Service temperature	-30 to 50°C
Tensile strength	4 MPa @ 20°C
	10 MPa @ 0°C
	20 MPa @ -20°C
Elongation	-20°C – 35%
	0°C – 60%
	10°C – 80%
	20°C – 100%
Hardness ShoreD	35
Adhesion	Dry – 3 MPa (c/f)
	Wet – 1 MPa (a/f)

CHEMICAL RESISTANCE

The chemical resistance of a material can be determined by the wt gain of a sample immersed in the chemical. The greater the wt gain, the poorer the resistance of the material. The table below gives the resistance of HYCLAD E relative to other available epoxy binders. A value of 100 is equal to an absorption gain of 3% after 7 days immersion.

10% Hydrochloric acid	110	50% Sodium Hydroxide	10	10% Ethyl alcohol	125
Petrol	800	Xylene	2000	Water	50

APPLICATION GUIDELINES

Surface Preparation

Concrete surfaces must be clean and free of oils and form release agents. Damp surfaces need to be primed with HYCHEM E100.

Pre-conditioning product

It is important to note that even when the application environment is warm, products which have been stored in cold or cooler conditions should always be pre-conditioned ideally to 20–25°C to ease mixing, application and help avoid other potential issues such as amine bloom or blushing.

Applying a cold product in a warm environment is not recommended.

MIXING

In a clean container, mix HYCLAD E Resin & Hardener @ 2:1 by volume using a mechanical stirrer at slow speed. Move the mixer around from side to side and top to bottom and scrape the sides of the mixing vessel to ensure thorough mixing.

APPLICATION

Apply HYCLAD E at a coverage of 1 litre/sqm by airless spray using a wet on wt technique or apply by brush or roller in 2 to 3 coats to ensure a coverage of 1mm wet film thickness. For surfaces showing extensive surface cracks, repair cracks in excess of 300 microns by routing out the crack and filling it with a paste of HYCLAD E and fine talc filler.

TOP COAT

HYCLAD E will discolour and lose gloss on exposure to sunlight. To avoid this, it is recommended to apply a coat of HYCHEM WP95, UV resistant coating.

CLEAN UP

Xylene or Solvent BGE can be used for cleaning tools and equipment before the mixed compound begins to harden.

COVERAGE

1 litre of HYCLAD E will cover 1 litre.

PACKAGING

Available in 6 litre and 30 litre packs.

SHELF LIFE

12 months from date of manufacture, stored under shelter at 25ºC in original un-opened container.

SAFETY PRECAUTIONS

Epoxy polymer products may cause allergic reactions through skin contact. Goggles and protective gloves and clothing should be worn at all times. Ensure that there is adequate ventilation and air flow and avoid breathing the vapour.

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.

HYCHEM

Head Office
Unit 1, 30 Bluett Drive, Smeaton Grange NSW 2567
T 02 4646 1660 F 02 4647 3700 E admin@hychem.com.au W www.hychem.com.au

ISSUE NUMBER 190416