

HYCHEM Hyclad E

Epoxy Polyurea Membrane

Product Description

HYCLAD E is designed for use as a liquid applied, heavy duty, wet area waterproof membrane. Hyclad E complies with AS 3740 and AS 4858 as a Class II membrane. Hyclad E is to be used as part of a system to provide waterproofing to seamless resin floors and walls in wet areas.

Typical Applications

- Bathrooms
- Laundries
- Showers
- Kitchens
- Plant rooms
- Chemical bunds with suitable Hychem top coat

Approvals / Certifications

- Passes requirements for AS/NZS 4858 Wet area membranes
- ASTM D3960-05 Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings. ASTM D3960 as detailed for paints as well as South Coast Air Quality Management District (SCAQMD) Rule 1168
- APAS 4003/LMU — Class II Membrane
- Green Star Interiors V1.3-12.1.1B — Green Building Council of Australia
- Green Star Interiors V1.3-13.1.1B — Green Star & As Built
- CRF Compliant

Features & Benefits

- Long pot life
- Easy hand & spray application
- Adhesion to concrete
- Convenient mix ratio
- Impact resistant
- High resistance to water, bleach and detergent solutions
- Moderate resistance to dilute mineral acids
- Moderate resistance to petroleum oils & fuel
- Very low water vapour transmission
- Compatible with range of Hychem recommended products

Technical Data

Composition	Polyurea Modified Epoxy Membrane (2-part)
Colour	Non-descript light grey
Solids Content	100 %
VOC Content	9 g/L
Service Temperature	Up to 65 °C

Physical Properties

Tensile Strength	3.2 MPa @ 23 °C
Elongation	118 % @ 23 °C
Adhesion	>3 MPa
Water Vapour Transmission	1.2 g/m ² /24hrs
Water Absorption	1.6 %

APPLICATION GUIDELINES

Surface Preparation

Prior to the application of Hychem Hyclad E, the substrate must be thoroughly prepared.

- The substrate must be firm, clean and dry with a 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 and moisture content in concrete must be below 5%.
- Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak or loose materials.
- Hychem Hyclad E should always be installed over suitable substrates which have a recommended Hychem primer applied with the relevant method of preparation prior.

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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.

Mixing

In a clean container, mix Hychem Hyclad E Part A Resin & Part B Hardener at 1:1 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 Hychem Hyclad E to achieve minimum 1mm total thickness. This is achieved by applying 1 coat by notch trowel at minimum 1L/sqm or 3 coats at a coverage of 0.33L/sqm per coat by brush or roller e.g. to vertical surfaces. Apply each coat at 90 degrees to the previous coat. Note: For compliance with certified waterproofing of domestic wet areas, Hyclad E must be applied and detailed in accordance with AS3740. This includes but is not limited to, specific film builds and the use of bond breakers suitable for a Class II membrane.

Application Information

Mix Ratio (Part A to Part B)	1 : 1 by volume
Relative Air Humidity	< 75 % RH
Pot Life / Working Time @ 23°C	40 minutes
Recoat Window	6 – 24 hours
Packaging	8L kit · 40L kit
Consumption (at 1mm) — 8L kit	8 sqm
Consumption (at 1mm) — 40L kit	40 sqm
Clean Up	Xylene (Solvent X) or isopropanol (Solvent IPA) can be used for cleaning tools and equipment before the mixed compound begins to harden.
Application Temperature	10 °C to 35 °C
Cure Time – Pedestrian	24 hours
Cure Time – Mechanical	48 hours
Cure Time – Full Chemical	7 days

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

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. If skin contact occurs wash skin with soap and water. If eye contact occurs wash immediately with copious amount of clean water.

Shelf Life

24 months from date of manufacture, stored under shelter at 23°C in original un-opened container.

Chemical Resistance

The chemical resistance of a material can be determined by the weight gain of a sample immersed in the chemical. The greater the weight gain, the poorer the resistance of the material. A value of 100 is equal to an absorption gain of about 3% after 7 days immersion. 10% Hydrochloric acid — 110 · 50% Sodium Hydroxide — 10 · 10% Ethyl alcohol — 125 · Petrol — 800 · Xylene — 2000 · Water — 50 · Detergent — 150 · Bleach — 75.

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Warning — Environmental Conditions

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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.