

HYCHEM E500T

Epoxy Patching Mortar Binder

Product Description

HYCHEM E500T is an epoxy binder with a paste like consistency to be used as a concrete patching compound. E500T is designed to be used as a fairing mortar for application to prepared concrete surfaces which are to be coated with a protective coating. The product is used for the filling and sealing of small holes formed by the removal of cement paste during water blasting and other surface preparation methods. E500T can also be used as a general purpose patching compound for rendering or making good the surface prior to the application of a protective top coat. It is the ideal product for sealing and making good uneven and rough surfaces such as concrete block walls prior to the application of subsequent protective coatings.

Typical Applications

- Concrete structures exposed to acidic or alkaline effluent
- Concrete structures exposed to mineral oils and petroleum products
- Concrete structures exposed to animal and vegetable fats and oils
- Concrete structures exposed to salts, sanitisers and detergents
- Lining of containment structures in the mineral resources sector, paper and pulp mills and the sewage processing industry

Features & Benefits

- Tougher and faster curing than cement/sand mortar screeds
- Contributes to the adhesion of the coatings system
- Light weight and easy to apply
- Resistant to dilute mineral acids
- Tenacious adhesion to concrete and primed surfaces
- Can be applied as a thin scratch coat over the whole surface
- Can be used to fill holes up to 10mm in diameter
- Ideal for vertical and horizontal surfaces

Technical Data

Composition	Epoxy (2-part)
Solids Content	100 %
Chemical Resistance	N/A refer to top coats

APPLICATION GUIDELINES

Surface Preparation

Prior to the application of HYCHEM E500T, the substrate must be thoroughly prepared.

- E500T would normally be used as a patching compound over a substrate that has already been primed with the E500P product. See the E500P technical data sheet for surface preparation instructions.
- To ensure that all holes have been filled it will be necessary to apply E500T over the entire primed surface before the application of the protective topcoat.
- If it is not practical or possible to do so within the maximum recoat window then it will be necessary to abrade the entire surface to provide a suitable key.

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 be pre-conditioned, ideally to 20-25°C, to ease mixing and 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

HYCHEM E500T Epoxy Mortar is prepared by mixing the A and B components at a mix ratio of 2:1 by volume.

Application

The wet mortar mix is applied to a hand trowel and then skimmed over the entire surface at an approximate coverage rate of 4 square metres per litre. After application the mortar filled holes are allowed to cure for a minimum of 8 hours. The designated coating is then applied within 24 hours of the E500T application.

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Application Information

Mix Ratio (Part A to Part B)	2 : 1 by volume
Application Temperature	10 °C to 30 °C, until cured
Relative Air Humidity	< 50 % RH
Pot Life / Working Time @ 23°C	30 minutes
Tack Free Time @ 23°C	8 hours
Recoat Window	8 - 24 hours
Packaging — 30L kit	N/A — no colour pack required
Consumption (trowel)	4 sqm/L (= 250 microns) · 1L provides 1mm over 1 sqm
Cure Time @ 23°C – Pedestrian	8 – 12 hours

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

Wear gloves, eye protection, mask and overalls during mixing and application. Ensure there is adequate ventilation and avoid breathing the vapour.

Shelf Life

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

Storage Conditions

The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between 5°C and 30°C.

Chemical Resistance

HYCHEM E500T has much superior resistance to water based chemicals than concrete. It is important to note however that in containment structures it is the actual coating material that is the protective agent. The patching material simply performs the function of filling the holes and, in the absence of a surface coating, will simply perform equal to or better than the concrete substrate itself.

Important Considerations

- To ensure that all holes have been filled it will be necessary to apply E500T over the entire primed surface before the application of the protective topcoat.
- The designated coating must be applied within 24 hours of the E500T application.
- To minimise an unsatisfactory cure, observe 21°C and less than 85% humidity, or 10°C and less than 75% humidity.
- Attention 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.

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.

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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.