HYCHEM WE500

Waterbased self-smoothing epoxy

Product Description

WE500 is recommended for use as a medium - heavy duty floor topping for industrial and commercial applications.

Typical Applications

- Schools, hospitals and public buildings
- Prisons
- Retail areas
- Domestic and commercial garages
- Back of house areas
- Stock & Plant rooms
- Workshops
- Pharmaceutical Industry
- Laboratories
- Areas of higher than normal moisture

Features & Benefits

- Water based
- Excellent adhesion to damp concrete
- Good curing properties at low temperatures
- High water vapour permeability
- Very good early water resistance
- Very good heat resistance
- High impact resistance
- Very low VOC emission (Green Star VOC content certificate available)
- Very low odour
- Good UV resistance
- Matt finish
- Wide colour range

Technical Data

Application thickness	4 mm
Properties measured at	25°C

Physical Properties

Hardness Shore D - 7 days	75
Adhesion	>3 MPa
Compressive strength	40 MPa

APPLICATION GUIDELINES

Substrate Preparation

Prior to the application of WE500, the substrate must be adequately prepared.

- The concrete 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. WE500 may be able to be applied to concrete earlier than 28 days, contact Hychem for advice.
- Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak or loose materials.
- Prepare the concrete surface by Grinding, Light Shot Blasting or High Pressure Water Blasting to provide the appropriate concrete surface profile (CSP) for optimum mechanical keying.

The choice of preparation method will depend on the finish of the concrete.

- The extent of surface preparation required is dependant upon but not limited to the thickness of the coating system to be applied. It is highly recommended surface prepation is carried out in accordance with industry standards and publications such as NACE 02203 item No. 22420 or ICRI Technical Guideline No.

03732.

Applying

Prior to the application of WE500, prime the concrete with 2 coats of WE70. Please see WE70 TDS for more details.

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Self-smoothing floor topping

- Mix the hardener and ESL500 aggregate together thoroughly until a uniform consistency is achieved, and no clumps or dry powder exist in the mix. Mix at low speed to minimise the incorporation of air.
- Now add the resin to the hardener/ESL500 mixture, and mix thoroughly until a uniform consistency is achieved, Mix at low speed to minimise the incorporation of air for 3 minutes.
- Pour the wet mix on the floor. Spread evenly over the floor area to a thickness of 4mm using a notched or flat blade trowel or a pin-rake set to the correct thickness.
- Ensure to maintain continuity of wet material between pours.
- Roll the surface with a spike roller immediately to remove entrapped air.

It is recommended to topcoat WE500 with WE90. if increased slip resistance is required then an appropriate grit and size needs to be selected. Please see WE90 TDS for more details. HYCHEM WE500 is a pigmented, water-based epoxy self-smoothing topping. It has very low odour and very low VOC (volatile organic compound). It offers excellent early water resistance, good curing at low temperature and excellent adhesion to green concrete.

Component mixing ratios

Part A Resin	2 Litre
Part B Hardener	5 Litre
Part C ESL500	15 Kilograms

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.

Curing conditions

To minimise an unsatisfactory cure the following indicative application conditions should be observed with respect to temperature and humidity levels.

- 21° C and less than 80% humidity
- 10° C and less than 75% humidity

Application Information

Pot life	20 minutes
Recoat time	8 - 72 hours
Application Temperature	5 - 30 °C
Humidity	80% - Sufficient air exchange needed to maintain appropriate moisture levels
Cure time - lower temperatures will increase these times.	24 hours - foot traffic 3 days - light mechanical traffic 7 days - full cure

Packaging

WE500	11.5 Litre kit

CONSUMPTION RATES 1 Kit of WE500 will cover 2.85 m2 when applied at 4mm.

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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 appropriate personal protection equipment. Gloves, eye protection, mask and overalls should be used during mixing and application. Ensure there is adequate ventilation and avoid breathing the vapour. Refer to the Safety Data Sheet for this product before use.

Shelf Life

4 months from date of manufacture, stored under shelter at 25ºC in the original un-opened container. Store the material in a stable stationary environment to reduce the settling of fillers and aggregates.

Chemical Resistance

Different epoxy products vary in their resistance to chemicals. Always ensure that the correct product is chosen for the service environment to be encountered. If in doubt contact your Hychem representative or the Hychem technical department for advice. Chemical spillage of acids and sanitizing agents may attack the pigments used in the coating and result in discolouration.

Colour

WE500 is an industrial flooring finish which may discolour on exposure to UV light from the sun or an artifical source. The severity of discolouration is dependant on colour choice. Any such discolouration has no effect on the performance of the product.

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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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

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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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