HYCHEM Universal

Pre-tinted, 100% solids epoxy coating

Product Description

Hychem Universal is a multi-purpose, heavy-duty epoxy coating designed for use in a wide range of industries. Universal is supplied in convenient, pre-tinted kits with an extended pot-life for simple on-site mixing and application. Composed of 100% solids epoxy technology, Universal provides exceptional longevity in high-use environments. Hychem Universal is Low-VOC, Critical Radiant Flux Tested to AS ISO 9239.1 and can be used in conjunction with hard-wearing aggregates to produce a range of slip-resistance ratings in accordance with AS/NZS 4586.

Typical Applications

- Hychem Universal is recommended for use as a coloured, heavy-duty floor coating for commercial, industrial and residential applications.
- Garages
- Warehouses
- Schools, hospitals and public buildings
- Prisons
- Retail areas
- Domestic and commercial garages
- Back of house areas
- Stock & Plant rooms
- Workshops
- Pharmaceutical Industry
- Laboratories
- Food and Beverage Industry

Features & Benefits

- Convenient pre-tinted kits for ease of application
- Extended pot life
- Available with rapid cure hardener for quick return to service
- Anti-slip applications possible
- High resistance to mineral acids
- High resistance to caustic and salt solutions
- High resistance to petroleum oils
- Versatile
- Abrasion and impact resistant
- High mechanical strength
- Non flammable
- Cures rapidly
- Seamless
- Excellent resistance to early water spotting

Technical Data

Test conditions	@ 25°C - (Standard Hardener)
Pot Life	45 minutes
Tack Free time	8 hours
Recoat time	8 - 24 hours
Application temperature	10°C - 30°C
Cure time	24 hours - foot traffic 3 days - light mechanical traffic 7 days - full cure
Hardness Shore D - 7 days	78
Compressive strength	75 MPa
Available Colours	Neutral Grey AS N23, Light Grey AS N35, Koala Grey, N45 Bridge Grey N44, Dark Grey AS N64 other colours can be made to order and require a minimum order of 30+ kits.

APPLICATION GUIDELINES

Surface Preparation

Prior to the application of Hychem Universal, the substrate must be thoroughly 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.
- Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak or loose materials.
- Hychem Universal is a self-priming floor coating. For excessively porous substrates it is recommended to prime with Hychem E100.

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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 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.

Application

The moisture content of the concrete must be below 6%. Mix only enough material that can be applied within the working time which is temperature dependent.

Roller Application

- Mix Part A with Part B in accordance with mixing ratios using a mechanical stirrer until complete uniformity is achieved. This should be achieved in approximately 3 minutes.
- Apply the mixed product at a rate of approximately 6-8m²/litre. If applying over an anti-slip base later where the base has been broadcast with an aggregate, the consumption will increase to approximately 2-3m2/litre but this will obviously vary depending on the size of aggregate used.
- To assist workability under certain conditions Hychem Universal can be diluted using Xylene at a maximum rate of 10% by volume where necessary. Please note this may effect pot life and cure times slightly.

Mixing Ratio

3:1 ratio, Part A: Part B by volume.

Fast Cure Option

The Bolt Part B Hardener may be used with Universal Part A which will significantly reduce the cure time.

Cure times @25°C using the Bolt Part B Hardener

Pot life	15 minutes
Tack free time	2 - 3 hours (approximately)
Re-coat time	3 - 24 hours (approximately)
Cure time — 6 Hours	Light foot traffic
Cure time — 24 Hours	Light mechanical traffic
Cure time — 7 Days	Full cure
Application Temperature	10°C - 30°C
Mixing ratio using Bolt hardener	3:1 - Part A : Part B by volume

Coverage

6 - 8m² /L.

Packaging

- 20L Pre tinted Kit - Part A 15L + Part B 5L
- 6L Pre-tinted kit - Part A 4.5L + Part B 1.5L

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

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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.

Shelf Life

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

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

Hychem Universal is an industrial flooring finish which may discolour on exposure to 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.

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.