September 2022

ULTRA HIGH BUILD EPOXY COATING (733)

Protects & Repairs Concrete From Flow Wear & Chemicals

Description:

EPIREZ® Ultra High Build Epoxy Coating (733 UHB) is a high performance self-priming poxy coating for application to steel and concrete. It is very suitable for long term protection and chemical resistance to infrastructure assets, services and splash zone areas. It is applied by heavy-duty spray equipment in one application to at least 3mm DFT. Single applications of this thickness or more minimise application costs and times.

EPIREZ® Ultra High Build Epoxy Coating (733 UHB) will cure underwater and stand early immersion making it an ideal maintenance coating for splash zone piling. It can be applied at low tide and will continue to cure under immersed conditions ensuring continual protection of wharf piling, old or new.

EPIREZ Ultra High Build Epoxy Coating (733 UHB) has been independently tested and meets the product performance requirements of:

- AS/NZS 4020 - 2018 for use in contact with potable water
- Sydney Water SPEC 204 – Rehabilitation and Corrosion Protection of Sewers Using Epoxy Coating.
- Water Service Association Australia WSA201:2021 v2.3 - Manual for selection and application of protective coatings (C8 –Ultra High Build Epoxy / polyurethane mortar)

EPIREZ® Ultra High Build Epoxy Coating was previously named **EPIREZ® 733**

Intended Use:

- Splash zone piling
- Sewer and Manhole lining
- Off-shore oil and gas installations
- Transmission pipelines
- Heavy duty applications in chemical plants
- Protective bunding
- Sewer and wastewater piping
- Water reservoir repairs

Product Features:

- **Excellent adhesion**
- **Chemically resistant ***
- **Approved for use in contact with Potable Water**
- **Minimal labour costs and times**
- **Abrasion, Erosion and Impact resistant**
- **Excellent adhesion to wet or dry concrete**
- **Low temperature cure**
- **Excellent mechanical properties**
- **Solven Free**
- **Non-shrink**
- **Approved for use in potable water applications**

Estimating Data:

16 L **EPIREZ® Ultra High Build Epoxy Coating** = 5.3 m^2 (2 x 1500 µm DFT)

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Typical Physical Properties:

Technical data should be considered representative or typical only and should not be used for specification purposes.

Pot Life @ 25°C	30 minutes	
Mixing Ratio	1 Part Hardener : 3 Parts Compound	
Tack Free Time @25°C	6 hours	
Hardening Time @25°C	24 hours	
Full Chemical Resistance	7 days @ 25°C	
Solids Content	100%	
VOC Content	0 g per L	
Mixed Viscosity	12 000 – 18 000 cP	ASTM D2196
Application temperature	10 – 30°C	
Coverage per 16 L Kit	5.3 m^2 @ 3 mm thickness	
Cathodic Disbondment	Complies with requirements of AS 3750.2/AS 4352-2005	

Cured 7 days @ 24˚C

Compressive Strength, Ultimate	>75 MPa	ASTM C579 (mod)*
Flexural Strength	> 10 MPa	
Tensile Strength	> 10 MPa	
Tensile Bond Strength (concrete)	3.8 MPa (concrete failure)	ASTM 3894.9
Water permeability	1.2 x 10^{-16} $m.s^{-1}$	

* Note: ASTM C579 (MOD): Epoxy grouts cure by a chemical reaction that produces exothermic heat. The 50 mm cube samples specified by ASTM C 579 Test Method B do not produce enough exotherm to provide full cure in an efficient timeframe. To improve efficiency in testing, product samples are heated to 77°C for four (4) hours. This forces the sample to cure to the same degree as a larger grout pour. ASTM permit modifications of this test as long as they are noted in the report.

Surface Preparation:

Concrete

Remove prior coatings and all loose material. New concrete must be at least 28 days old. Remove any oil or grease contamination by washing with a suitable surface degreaser. Hose off with high pressure water. Alternatively, high pressure water, abrasive blast or similar to expose firmly adhered aggregate. Allow to dry before application.

Alternatively, acid etch using 1-part commercial Muriatic Acid and 2 parts clean water. Neutralise surface by washing with fresh water and allow to dry.

Steel

Abrasive blast to AS 1627 Part 4 – 2005 to class 3 white metal and achieve profile height minimum 75 - 100 microns.

Surface preparation guidelines cannot cover all site or field contingencies and it is always recommended that an on-the-spot adhesion test be performed as part of the Standard Quality Assurance audit for the project.

Mixing Instructions:

It is strongly recommended that full units be mixed, as ratios are pre-measured.

Proper homogenous mixing of resin, thinner and hardener at the correct ratio is essential for the curing and development of stated properties.

For large projects **Epirez® Ultra High Build Coating (733UHB)** is best applied by plural component airless spray equipment. This product is not ideal for application by conventional spray, brush or roller. However, if plural component equipment is not available, the following mixing method should be used.

Measure sufficient Hardener and Compound to be used in 30 minutes. Mix thoroughly using a stirrer fitted into a low speed (400 rpm) power mixer. Ensure that all the

material on the sides, under the lip of the container and on the stirrer is incorporated.
Note: Take care to avoid air entrapment into the mix. Keep propeller below liquid line, as additional air can be added to mixture, resulting in air bubbles on the surface of the finished product.

Application Instructions:

Epirez® Ultra High Build (733 UHB) can be applied with appropriate spray equipment using "wet-on-wet" passes to achieve a DFT of 3mm or greater.

FOR ± 21°C APPLICATIONS
Applying epoxy at temperatures below 21°C lengthens functional cure and pot life times. Conversely, applying above 21°C shortens functional cure and pot life.

Clean Up:

Tools and equipment may be cleaned before hardening commences by washing in EPIREZ Clean Up Solvent. Do not use for cleaning hands or mixing with product.

Chemical Resistance:

Chemical resistance tested after 112 day, room temp. cure @ 25° C

Sulphuric Acid 98%	Good	Sodium Hydroxide 20%	Excellent
Sulphuric Acid 30%	Good	Sodium Hydroxide 50%	Very Good
Hydrochloric 32%	Very Good	Sodium Hypochlorite	Very Good
Nitric Acid 20%	Excellent	Ammonia Solution 10%	Very Good
Mineral Spirits	Excellent	MEK	Very Good
Acetic Acid 10%	Poor	Hexane	Very Good
Lactic Acid 5%	Very Good	Toluene	Very Good
Phosphoric Acid 20%	Very Good	Ethyl Acetate	Very Good

Storage:

Store in dry conditions between 10°C and 30°C, away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers, the minimum shelf life is two years.

Precautions:

Do not apply at temperatures below 10°C.
Do not apply at relative humidity above 85% (50% in confined spaces) or when the surface is less than 3°C above the dewpoint.

Warranty:

Epirez® will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

Disclaimer:

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Polymers & Fluids and EPIREZ® makes no representations or warranties of any kind concerning this data.

Order Information:

16Ltr E907332

Health & Safety Information:

For Health & Safety information, refer to Safety Data Sheet available from ITW Polymers & Fluids upon request or available on our website www.epirez.com.au or www.epirez.co.nz

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