



Acid Resistant Ultra High Build Epoxy Coating

EPIREZ[®] 733AR

Description:

Acid Resistant Ultra High Build Coating (733 AR) is a high performance self-priming novolac epoxy 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.

Acid Resistant Ultra High Build Coating (733AR) resists a wide range of acids as well as alkalis and solvents.

Acid Resistant Ultra High Build Coating (733AR) is particularly suited to protection and repair of sewer linings where resistance to Hydrogen Sulphide is required.

Acid Resistant Ultra High Build Coating (733AR) has been independently tested and meets the product performance requirements of Sydney Water SPEC 204 – Rehabilitation and Corrosion Protection of Sewers Using Epoxy Coating.

Intended Use:

- Sewer and Manhole lining
- Off-shore oil and gas installations
- Transmission pipelines
- Heavy duty applications in chemical plants
- Protective bunding
- Sewer and wastewater piping
- Paper manufacturers
- Pharmaceutical industries
- Mining industries
- Plating shops
- Chemical industries
- Waste water treatment
- Battery manufactures and recyclers
- Bund and pit linings
- Bleaching areas
- Chemical containment

Product features:

- **Monolithic Protection**
- **Excellent adhesion**
- **Broad chemical resistance**
- **Abrasion, Erosion and Impact resistant**
- **Excellent mechanical properties.**
- **Solvent Free**
- **Resists 98% sulphuric acid***

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 |
| Application temperature | 10 – 30°C |
| Coverage per 16 L Kit | 5.3 m² @ 3 mm thickness |

Cured 7 days @ 24°C

| | |
|---|--|
| Compressive Strength, Ultimate | >75 MPa |
| Flexural Strength | > 10 MPa |
| Tensile Strength | > 10 MPa |
| Tensile Bond Strength (concrete) | 3.8 MPa (concrete failure) |
| Water permeability | 1.2 x 10⁻¹⁶ m.s⁻¹ |
| Temperature Resistance | Wet: 65°C; Dry: 150°C |

* When fully cured resistant to the splashes and spills of many chemicals. Surface staining may result from exposure to some aggressive chemicals. Good housekeeping practice requires that spills are quickly removed and washed away.

AUSTRALIA

ITW Polymers & Fluids
100 Hassall Street
Wetherill Park NSW 2164
Phone (02) 9757 8800 Fax (02) 9757 3855
www.itwcpf.com.au

NEW ZEALAND

ITW Polymers & Fluids
Unit 2 / 38 Trugood Drive
East Tamaki 2013, Auckland
Phone (09) 272 1945 Fax (09) 273 6489
www.itwcpf.co.nz



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. Captive blast clean 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 Acid Resistant Ultra High Build Coating (733 AR) 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:

Apply with the following equipment using "wet-on-wet" passes to achieve a DFT of 3mm or greater.

- Graco 63:1 King pump with Graco "silver" airless gun, 27 thou tip 150-200 mm fan. Hoses should be 13 mm with 9 mm whip end.
- Kremlin Airless Pump, type Airmix 60,121, with Airless Gun type MD401 and No. 41-49 Titan adjustable tip, 13 mm ID product line and 420-560 kPa inlet pressure.

Acid Resistant Ultra High Build Coating (733 AR) should not be applied at temperatures below 5°C

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.

Cleaning:

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.

Storage:

Store at room temperature.

Compliances :

Sydney Water SPEC 204 – Rehabilitation and Corrosion Protection of Sewers Using Epoxy Coating

Chemical Resistance:

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

| | | | |
|-------------------------|-----------|----------------------|-----------|
| Potassium Hydroxide 40% | Excellent | Sodium Hydroxide 10% | Excellent |
| Sodium Hydroxide | Excellent | Sodium Hydroxide 50% | Excellent |
| Hydrochloric 10% | Very good | Sodium Hypochlorite | Very good |
| Kerosene | Excellent | Sulfuric 10% | Very good |
| Mineral Spirits | Excellent | 20% Sulphuric | Very Good |
| Nitric 50% | Poor | Sulfuric 50% | Fair |
| Phosphoric 10% | Very good | Toluene | Excellent |
| Xylene | Fair | | |

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Technical Data Sheet

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|---------------------------|--|
| Precautions: | Please refer to appropriate material safety data sheet (MSDS) prior to using this product. For technical assistance, please call 1800-063-511 FOR INDUSTRIAL USE ONLY |
| Warranty: | Devcon 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 Devcon makes no representations or warranties of any kind concerning this data. |
| Order Information: | E100407 Acid Resistant Ultra High Build Epoxy Coating (733AR) 16 L |

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