



EPIREZ®

TECHNICAL DATA

Non-Sag Epoxy Mortar Binder

EpiRez® 633

Description



Non-Sag Epoxy Mortar Binder (633) is a solventless binder suitable for application to overhead, vertical or inclined surfaces. **Non-Sag Epoxy Mortar Binder (633)** can be applied to damp or wet surfaces. It combines the outstanding properties of **General Purpose Epoxy Mortar Binder (133)** with a non-sag consistency. **Non-Sag Epoxy Mortar Binder (633)** has been independently tested and meets the requirements of AS/NZS 4020 - 2002 for use in contact with potable water.

Areas of Application

- Bonding new to old concrete on vertical surfaces
- Preparation of thixotropic epoxy mortars for easier vertical and overhead repairs to concrete
- Grouting bolts and anchors in vertical surfaces
- Underwater and splash zone repairs
- Bonding precast concrete units
- Bonding steel and timber to concrete

Features

- Multi-purpose use
- Non-sag consistency
- Excellent adhesion to wet or dry concrete
- Low temperature cure
- High chemical resistance
- High mechanical strength
- Non-shrink
- Aggregate extendible
- Approved for use in contact with potable water

The information contained in this Technical Bulletin is as up to date and correct as possible as at the time of issue. The data provided should be used as a guide only as the performance of the product will vary depending on differing operating conditions and application methods.

The sale of any product described in this Technical Bulletin will be in accordance with ITW Polymers & Fluids Conditions Of Sale, a copy of which is available on request. To the extent permitted by law, ITW Polymers & Fluids excludes all other warranties in relation to this product.

General Properties (Binder Only)

Shelf Life	: 2 Years
Appearance of Hardener	: Colourless liquid
Appearance of Compound	: Grey paste
Mixing Proportions	: 1 Hardener to 3 Compound
Solids Content	: 100%
Work Time	: 30 minutes at 25°C
Tack Free Time as Coating	: 6 hours at 25°C
Hardening Time	: 24 hours at 25°C
Compressive Strength, Ultimate	: 95 MPa
Compressive Modulus	: 3.4 GPa
Tensile Strength, Ultimate	: 62 MPa
Bond Strength, New to Old Concrete	: 105% University of Arizona Test

Estimating Data

1 Ltr Non-Sag Epoxy Mortar Binder (633) = 1 m² at 1 mm thick

1 Ltr Non-Sag Epoxy Mortar Binder (633) + 2 Ltr Patching & Flooring Mortar Aggregate (QA2) = 1 m² at 2 mm thick

Application Directions

Surface Preparation

Remove all loose, crumbly and drummy areas to ensure a sound concrete surface. Captive blast clean or acid etch to expose firmly held aggregate. Ascertain that surfaces are free of dust, oil or grease. Dampness can be tolerated. For critical applications prime porous concrete first with **Epirez® Epoxy Primer/Sealer (123)**.

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

Measure sufficient Hardener and Compound to be used in 30 minutes. Mix thoroughly using a stirrer fitted into a low speed power mixer. Ensure that all the material on the sides, under the lip of the container and on the stirrer is incorporated. Take care to avoid air entrapment into the mix.

If extending with **Epirez® Patching & Flooring Mortar Aggregate (QA2)**, add in appropriate volumes to fully mixed Hardener and Compound as indicated below.

Applications

Vertical and Overhead Concrete Repairs

Typically use **Non-Sag Epoxy Mortar Binder (633)** and **Patching & Flooring Mortar Aggregate (QA2)** at 1:2 by volume.

Compressive Strength	: 85 MPa
Tensile Strength	: 12 MPa
Water Permeability	: 2×10^{-17} m/s

Grouting on Vertical Surfaces

Typically use **Non-Sag Epoxy Mortar Binder (633)** and **Patching & Flooring Mortar Aggregate (QA2)** at 1:1 by volume.

Pull out Strength in Concrete (embedded 150mm)

12mm Deformed bar	: Bar Failure
18mm Deformed bar	: Concrete Failure

Underwater and Splash Zone Repairs

Typically use **Non-Sag Epoxy Mortar Binder (633)** and **Patching & Flooring Mortar Aggregate (QA2)** at 1:2 by volume.

Tensile Bond Strength, Concrete (placed and cured under sea water)	: 2.4 MPa (Concrete Failure)
Compressive Strength (placed and cured under sea water)	: 50 MPa

Pile Restoration Repairs

Typically use **Non-Sag Epoxy Mortar Binder (633)** and **Patching & Flooring Mortar Aggregate (QA2)** at 1:1 by volume. Based on Compressive Strength of the piles.

Concrete Piles

Eroded Pile	: 71% of new pile
Non-Sag Epoxy Mortar Binder (633) repaired pile	: 113% of new pile

Timber Piles

Eroded Pile	: 26% of new pile
Non-Sag Epoxy Mortar Binder (633) repaired pile	: 102% of new pile

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 and Shelf Life

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.

Packaging

Non-Sag Epoxy Mortar Binder (633) is available in 1 litre, 4 litre and 20 litre packs. Each pack contains Hardener and Compound in correct proportions for use.

Ordering Information:

1 litre	#E906334
4 litre	#E906332
20 litre	#E906333

MANUFACTURED BY
ITW Polymers & Fluids
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Wetherill Park NSW 2164

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Safety Information

Avoid contact with skin and avoid breathing vapour. Wear gloves and goggles when mixing and using. Keep away from children. Provide adequate ventilation if applied in confined spaces. If poisoning occurs call Doctor or Poisons Information Centre. If swallowed **DO NOT** induce vomiting. Give plenty of water or milk. If skin contact occurs remove any contaminated clothing and wash affected areas thoroughly with soap and water.

TDG Code: Hardener - UN 1760 Compound - Not Classified

Note

The figures quoted for work time, tack free time and hardening time are not definitive. They are dependent on job site conditions and will vary accordingly. In all cases we endeavour to provide typical figures for use as a guide.

Health & Safety Information

The product is hazardous. A Material Safety Data Sheet is available from the ITW Polymers & Fluids Technical Department upon request or available on our website www.epirez.com.au.

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