EPIREZ

TECHNICAL DATA SHEET

NON-SAG EPOXY MORTAR BINDER (633)

EPOXY BINDER FOR OVERHEAD OR VERTICAL APPLICATIONS

POTABLE APPROVED WATER EXCEEDS AS/NZS4020 2018

DESCRIPTION

EPIREZ® Non-Sag Epoxy Mortar Binder is a solventless binder suitable for application to overhead, vertical or inclined surfaces.

EPIREZ® 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.

EPIREZ® Non-Sag Epoxy Mortar Binder (633) has been independently tested and meets the requirements of AS/NZS 4020 - 2018 for use in contact with potable water.

EPIREZ® Non-Sag Epoxy Mortar Binder was previously named **EPIREZ® 633**

INTENDED USE

- Bonding of new to old concrete on vertical surfaces
- Protecting exposed re-bar
- Preparation of thixotropic epoxy mortars for vertical / overhead repairs
- Grouting bolts and anchors in vertical surfaces
- Underwater and splash zone repairs
- Bonding precast concrete units
- Bonding steel and timber to concrete
- Structural repair of spalled concrete and masonry

PRODUCT FEATURES

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

ESTIMATING DATA

1L **EPIREZ® Non-Sag Epoxy Mortar Binder** = 1 m^2 at 1 mm thick

1 L **EPIREZ® Non Sag Epoxy Mortar Binder** + 2 L **EPIREZ® Patching & Flooring Mortar Aggregate (QA2)** = 1 m^2 at 2 mm thick.

TYPICAL PHYSICAL PROPERTIES

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

Colour (mixed)	Grey
Mixing Ratio by Volume	1 Part Hardener : 3 Parts Compound
Work Time @ 25°C	30 minutes
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	Paste
Application temperature	10 – 30°C
Cured 7 days @ 24°C	
Compressive Strength, Ultimate	95 MPa
Compressive modulus	3.4 GPa
Tensile Strength, Ultimate	62 MPa
Water permeability	2.0×10^{-17} m.s^{-1}
Temperature Resistance	Wet: 65°C; Dry: 120°C
Bond Strength: New to old concrete	105% University of Arizona Test

CHEMICAL RESISTANCE

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

Sulphuric Acid 98%	Good
Sulphuric Acid 30%	Good
Hydrochloric 32%	Very good
Nitric Acid 20%	Excellent
Mineral Spirits	Excellent
Acetic Acid 10%	Poor
Lactic Acid 5%	Very good
Phosphoric Acid 20%	Very good

Sodium Hydroxide 20%	Excellent
Sodium Hydroxide 50%	Very good
Sodium Hypochlorite	Very good
Ammonia Solution 10%	Very good
MEK	Very good
Hexane	Very good
Toluene	Very good
Ethyl Acetate	Very good

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 INSTRUCTIONS

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

If extending with **EPIREZ® Patching and Flooring Mortar Aggregate (QA2)** add in appropriate volumes to fully mixed hardener and compound as indicated below.

APPLICATION INSTRUCTIONS

Vertical and Overhead Concrete Repairs

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

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

Grouting on Vertical Surfaces

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

Pull out Strength in Concrete (embedded 150 mm)

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

Underwater and Splash Zone Repairs

Typically use **Non-Sag Epoxy Mortar Binder (633)** and **EPIREZ® Patching and 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 **EPIREZ® Non-Sag Epoxy Mortar Binder** and **EPIREZ® 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

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.

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.

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

Item No.	Package Size
E906334	1Ltr
E906332	4Ltr
E906333	20Ltr

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For Health & Safety information, refer to Safety Data Sheet available from ITW Polymers & Fluids upon request or available on our website.