EPILOX EPOXY BINDER

MULTI PURPOSE EPOXY BINDER SYSTEM

DESCRIPTION:

RLA EPILOX EPOXY BINDER is a two part, solvent free epoxy resin binder system designed for use with selected fillers and aggregates to produce epoxy mortars of various consistencies. Ideal for bonding, sealing, priming, coating and grouting applications, or as a structural epoxy adhesive paste and filler to vertical or horizontal surfaces.
Epilox Epoxy Binder is also used as a primer for Epilox floor coating systems, toppings and Epilox mortars.

RECOMMENDED USE:

- Preparing high strength mortar for repair of damaged concrete or masonry in vertical or horizontal surfaces
- Grouting starter bars, load bearing bolts and base plate supports in concrete
- Sealing cracks in concrete
- Filling voids in spalled concrete to restore to original condition with enhanced strength performance
- As a repair mortar where high chemical and abrasion resistance is enquired
- Patching large areas where high strengths are required
- Structural bonding new to old concrete
- Structural repair to spalled concrete
- As a primer for Epilox floor coatings
- Combined with Epilox Fillers to produce Epoxy mortars/ grouts

FEATURES AND BENEFITS:

- 100% solids epoxy
- Solvent free
- Low VOC
- High tensile and compressive strength
- Bonds to damp concrete
- High mechanical strength
- Excellent adhesion to most substrates
- Cures at temperature down to 5˚C
- High chemical resistance
- Unfilled system
- Allows for mortars and grouts to be mixed to any desirable consistency
- Typically 3-4 times stronger than typical concrete
- Convenient mix ratio- (2 parts Resin- 1 part hardener)

SURFACE/SUBSTRATE PREPARATION:

All surfaces must be clean, sound and free from oil, grease, curing compounds, laitance, loose materials and general contaminants. All contaminants to be mechanically abraded back to a sound concrete surface. Bolts or anchor holes must be clean and free from dust or loose material.
Steel surfaces such as reinforcement bars should be grit-blasted or scabbled to remove any corrosion.
Any steel reinforcement and formwork should be prepared, cut to size and shape and made ready for assembly before mixing commences

MIXING:

The mix ratio is 2:1 by volume

2 parts Part A
1 part Part B

- Pour the entire contents of the hardener (Part B) tin into the base (Part A) tin a
- Using a suitable slow-speed drill and high shear mixing paddle, thoroughly mix the two components for 2 minutes until a fully uniform grey colour is obtained
- Scrape sides of the pail to incorporate all material, and mix for a further 2 minutes until well combined and a uniform consistency is achieved

IMPORTANT:

- Do not over mix as this may incorporate air bubbles
- Only mix as much Epilox Epoxy Binder that can be used within the Pot Life (20-25 minutes @ 25˚C).
- DO NOT dilute Epoxy Binder with solvents as this will severely affect the ultimate performance of the product
- Epilox Epoxy Binder when mixed in large volumes, greater than 10 litres is highly likely to cure faster reducing the pot life of the mixed material in the tin
- Epilox Binder (unfilled) will exotherm at large volumes

High temperature working:
At ambient temperatures above 30˚C, the material should be stored in the shade or in an air-conditioned environment for 12 hours before use

Low Temperature working

- To facilitate mixing and application at temperatures below 10˚C, individual Part A and Part B components should be warmed in hot water bath or conditioned to room temperature up to a maximum temperature of 25˚C before mixing
- Alternatively, the material should be stored in an environment controlled to 20˚C and only removed immediately before use.

NOTE: If heated to 25˚C, the mixed material will have a pot life that will be reduced to 45 minutes.

APPLICATION:

Priming System for Repair Mortars

- Epilox Epoxy Binder should be applied as soon as the mixing process has been completed.
- Apply by brush, roller or spray to the prepared surface at the rate of 5 - 7m² per litre in an even coating over the substrate.
  Note: Coverage will vary according to the porosity and texture of the substrate.
- The new concrete or screed should be applied to the coated substrate within 60-90 minutes at 20˚C or when the surface is tacky, but not wet.
- As soon as the Epilox Epoxy Binder is applied, any required steel reinforcement and/ or formwork should be erected and fixed securely in place.
- Ensure the Epilox Epoxy Binder is tacky prior to application of repair mortar.
- If the application of the Epilox Epoxy Binder has cured and is touch dry, DO NOT apply cementitious repair mortar. Re-apply with a second coat of Epilox Epoxy Binder to be the first coat and allow reaching a tacky consistency before applying the cementitious repair mortar.

Grouting bolts or starter bars

- Where Epilox Epoxy Binder is to be used for grouting bolts or starter bars on horizontal surfaces, the hole diameter must be approximately 1.5 times the diameter of the actual bolt to be grouted.
- Set the bolt in the clean, contamination free hole and pour the mixed Epilox Epoxy Binder from one side only in a continuous operation to avoid air entrapment, and to ensure complete coverage around the bolt or starter bar

Epoxy Binder System

Epilox Epoxy Binder may also be used as a Binder to obtain a specific consistency when mixed with RLA F4 Fillers – see table below.

IMPORTANT:

- Do not attempt to rework or retemper any partially set product.
- Avoid waste by using all the kit within the specified pot life/working time

COVERAGE/YIELD

1m2/ litre @ 1mm thickness (with addition of Epilox Fillers- refer to coverage tables.

CLEAN UP:

- Clean up uncured material and equipment immediately after use with a suitable solvent.
- Cured Epilox Epoxy Binder can only be removed mechanically

SHELF LIFE/STORAGE:

- 12 months when stored in original unopened packaging
- Best stored in a dry area between 10ºC and 30ºC
- Keep out of direct sunlight

PACKAGING:

- 6litre kits
- 30litre kirs

LIMITATIONS:

- Do not apply when surface or ambient temperatures are below 5°C
- Epilox Binder when mixed in large volumes greater than 10 litres unfilled will cure at a very fast rate with reduced pot life
- Epilox Binder (unfilled) will exotherm at large volumes
- Epilox Binder is non UV stable and will yellow if exposed to sunlight
- DO NOT dilute Multipurpose Epoxy with solvents as this will severely affect the performance of the product
- Only mix as much Multipurpose Epoxy that can be used within the Pot Life (20-25 minutes @ 25˚C)
- Contact RLA Technical department for additional information

HEALTH & SAFETY

For information and advice on the safe handling, first aid, storage and disposal of chemical products, users must refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data

TECHNICAL DATA:

PHYSICAL PROPERTIES	
Appearance	Part A: Clear flowable liquid Part B: Amber flowable liquid
Viscosity	300cps
Specific Gravity	1.14kg/litre
Solids Content	100%
Pot Life @ 25°C	25-35 minutes @

PERFORMANCE Tested to ASTM D570	
Chemical resistance	Excellent (Refer chart)
Heat Distortion Temp	90°C
Tensile Bond Strength	15MPa approx.
Service Temp	-20°C to +70°C
Hardness	>80 Shore A
Water Absorption	<0.20% (10 days @ 25

STRENGTH		
	Filled	**Unfilled**
Tensile Strength	14MPa	45MPa
Compressive Strength	70MPa	100MPa
Flexural Strength	24MPa	50MPa

CHEMICAL RESISTANCE Tested to ASTM D570	
Citric Acid 100%	Excellent
Acetic Acid 5%	Excellent
Sodium Hydroxide 30%	Excellent
Diesel Fuel/Petrol	Excellent
Sugar Solutions	Very Good
Tartaric Acid 100%	Very Good
Hydrocarbons	Very Good
Phosphoric Acid	Very Good

***Resistant to spillage. Surface staining may result from exposure to some aggressive chemicals. All spills should be quickly removed and washed. Over exposure may result in surface degradation**

The following may be used as guide for the quantity of Epilox F4 Course Filler required to obtain a specific consistency when Epilox Epoxy Binder is used as a binder.						
Litres of Epilox Epoxy Binder	1	1	1	1	1	1
Approx. Weight of Epilox F4 Fillers	1.5	2.5	3	4.5	6.0	7.5
Approx. Yield (Litres) Resin + Fillers	2	2.5	3	4	5	6
Mixed Consistency	**Very Fluid Grout**	**Fluid Grout**	**Pourable Grout**	**Stiff Paste**	**Trowellable Mortar**	**Dry Mortar Trowellable**
Pot Life @ 20°C (minutes)	35-45	45-50	55-65	55-65	55-64	65-70
Tensile Strength @ 7 days (MPa)	16	14	13	11	11	10
Flexural Strength @ 7 days (MPa)	28	26	26	25	24	21
Compressive Strength @ 7 days (MPa)	80	75	70	70	70	65

WARRANTY STATEMENT:

RLA Polymers guarantees this product against manufacturing defects and guarantees it to be manufactured to our published specification.
We certify that this product is suitable for use when fully cured and will perform as described in our technical data sheet or other published materials.
RLA Polymers will replace the product free of charge when purchased from any legally verifiable source and where a product is proven to have been stored, handled, and install according to instructions published on our packaging and within the stated shelf life. The Installation of all materials must be carried out in accordance with relevant Australian Standards.
Warranty doesn't apply if damage, loss, failure to follow instructions, or other circumstances are out of our control.
Sufficient time and access to investigate any complaint must be accorded to RLA Polymers.
The consumer is responsible for any expenses incurred in making a claim.
A claim form can be requested by:

PHONE: 1800 242 931
EMAIL: info@rlapolymers.com.au
MAIL: 215 Colchester Road Kilsyth Victoria 3137 (Attention Customer Service)
WEBSITE: www.rlapolymers.com.au

AUSTRALIAN CONSUMER LAW:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality, and the failure does not amount to a major failure. The benefits under our warranty are in addition to other rights and remedies available to the consumer under the law in relation to the goods and services to which the warranty relates.

DISCLAIMER:

All statements and technical information contained herein are based on tests we believe to be reliable, but the accuracy thereof is not guaranteed.
Users assume all risk and liability resulting from the use of the product and must confirm the suitability thereof by their own tests. Conditions of Sale contain a limited warranty against manufacturing defects.

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