RLA PENAPATCH HB80

High Build High Strength Polymer Modified Structural Repair Mortar



DESCRIPTION:

RLA PENAPATCH HB80 is a high-strength, high-build, shrinkage compensated structural repair mortar designed for vertical and horizontal applications.
The specially selected blend of cements and polymers in RLA PENAPATCH HB80 provide a mortar with strong ultimate compressive strength, high abrasion resistance, and tenacious adhesion to concrete and masonry surfaces.

FEATURES AND BENEFITS:

- High ultimate compressive strength.
- High build repairs achievable in a single application
- Low permeability protecting from chloride attack and carbonation
- High strength and high abrasion resistance.
- Dimensionally stable
- Excellent workability
- Shrinkage compensated, allowing for long term dimensional stability
- Eliminates the need for formwork.
- Can be applied by dry or wet process, achieving high build with exceptional compaction and enhanced performance
- May be coated with RLA range of protective coatings
- Exceptional bond strength to concrete substrates.
- Internal or external applications
- Pre-bagged eliminates any on-site mixing variation.
- Easy to use- add water and mix
- Australian-made

USES:

- High build repairs for vertical, overhead and horizontal repairs
- Repairs requiring high compressive strength.
- Repairing damaged concrete panels were structural strength is required
- High build repair applications from 5mm to 80mm to vertical surfaces
- May be applied in verticals up to 160mm in small pockets or with the aid of formwork
- Repairs to spalled or deteriorated concrete caused by corrosion of steel reinforcement
- Repairs requiring low permeability and high resistance to chlorides and carbon dioxide
- Can be applied up to 180mm to horizontal surfaces

SURFACE PREPARATION:

All surfaces must be free of oil, grease, dust, plaster, paint, and any other contamination inhibiting the bond.
Any cracked or weakened surface should be removed and repaired to provide a solid foundation.

It is recommended that a minimum depth of 5mm be prepared for large areas to avoid excessive feather edging or skim coating.
Break out the repair area to a minimum of 5mm up to the saw cut edge.
Scabbing or high-pressure water blasting should be used to remove laitance and provide a mechanical key.

If any corroded steel is present, remove all loose scale and corrosion/rust deposits. Grit blasting effectively removes corrosion, and all steel, including re-bars, should be cleaned to a bright condition.

Immediately after cleaning the steel, the steel should be treated with RLA ZINC RICH PRIMER. This will stop further oxidation and corrosion.

PRIMING

All surfaces must be primed with **RLA RENDERGRIP A** BONDING AGENT AND PRIMER.
Allow the primer to reach a tacky consistency before applying RLA PENAPATCH HB80.
For very **POROUS** substrates, the substrate should be pre-soaked with water and excess water removed before the application of RLA RENDERGRIP A
For dampness or repairs exposed to occasional or permanent water, the substrate must be primed with **RLA EPILOX BINDER.**
STEEL/REBAR: All exposed steel and rebar should be primed with **RLA ZINC RICH PRIMER.**
Remove all loose corrosion deposits on steel. Steel should be cleaned to a bright condition; on completion of cleaning, prime steel with RLA ZINC RICH PRIMER immediately. Note: care must be taken to avoid contact of RLA ZINC RICH PRIMER with host concrete.

NOTE

If the RENDERGRIP A dries before the application of PENAPATCH HB80, re-apply RENDERGRIP A and allow to reach a tacky consistency before applying PENAPATCH HB80.

If RENDERGRIP A is too wet, the ultimate build-up of the PENAPATCH HB80 will be difficult as a slump will occur at the interface of the concrete substrate and repair mortar.
If EPILOX BINDER is used as a primer, the EPILOX BINDER must be tacky, NOT DRY, before applying PENAPATCH HB80

MIXING:

- PENAPATCH HB80 can be mixed by mechanical forced action mixer with a high-shear spiral mixing paddle. DO NOT USE FREE FALL MIXERS.
- Use **3.6 litres of water per 20kg bag** of PENAPATCH HB80
- Place clean water into a clean pail and slowly add powder to the water while mixing on slow/medium speed. Continue mixing until a smooth, soft mortar consistency is formed
- Mixing typically takes 3-5 minutes. A shorter mixing time will result in an inconsistent mix.

IMPORTANT:

- DO NOT MIX PART BAGS
- DO NOT MIX BY HAND
- DO NOT ADD EXCESS WATER.
- **DO NOT ADD MORE THAN 3.6 LITRES OF WATER.**
- Excess water will reduce the ultimate (final) strength and extend the drying time of the product.
- Additional or excess water will increase the sag and reduce the build-up of the mortar.
- Only mix the quantity of material used within the set time. Discard partially set or hardened material.

APPLICATION:

- Apply the mixed material to the prepared surface using a trowel or a gloved hand.
- Thoroughly compact the mortar into the prepared and primed substrate and around the exposed steel
- reinforcement and re-bars.
- A smooth surface can be obtained using a steel trowel.

  DO NOT OVERWORK THE SURFACE

Spray Application:

RLA PENAPATCH HB80 can be applied using the wet application technique. The mortar is pre-mixed with the required water dosage and then pumped through a through and delivered through a spray gun with suitable nozzle. Consult RLA for further information.

Low-Temperature Application:

Do not apply at temperatures below 5ºC and falling. For application in colder conditions, warm water is recommended as the mixing liquid

High-Temperature Application:

Do not apply at temperatures above 35ºC as the initial set will commence early, and the product will be difficult to apply. For application in warmer conditions, chilled water is recommended as the mixing liquid

CURING:

Curing should be conducted by good concrete practice. RLA recommends the use of suitable curing compound such as **RLA CURECON A** applied as per Technical Data Sheet.

Overcoating with protective coatings

RLA PENAPATCH HB80 can be over-coated with the RLA range of decorative and protective coatings.
All coatings may be applied over the RLA CURECON A, and removing the curing compound is unnecessary.

CLEAN UP

Clean all equipment with water immediately after use. Cured RLA PENAPATCH HB80 can only be removed by mechanical means.

SHELF LIFE / STORAGE

- 12 months when stored in original unopened packaging
- Best stored in a dry area at room temperature
- Keep off cold floors and out of direct sunlight

PACKAGING

- 20 Kg bags

LIMITATIONS:

- Addition of excess water other than specified will lead to extended cure times and low strength development
- If the substrate into which the PENAPATCH HB80 is applied moves or cracks, reflective cracking will occur in the PENAPATCH HB80.
- Concrete surfaces/substrates to be at least 21 days old before application of PENAPATCH HB80
- Do not apply PENAPATCH HB80 in areas less than 5mm thick; occasional thickness less than 5mm is acceptable only in very localised areas
- In an application where high winds and exposed areas are present, ensure the RLA CURECON A curing compound is applied after the final trowel
- Protect from direct sunlight/ heat
- Ensure PENAPATCH HB80 does not come into contact with water or rain for a minimum of 24 hours after application
- PENAPATCH HB80 should not be used when temperatures are below 5°C and greater than 35°C.
- If PENAPATCH HB80 is to be used in immersed conditions, RLA EPILOX BINDER must be used as a primer

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:

PRODUCT INFORMATION:		
Colour	Grey Powder	
Fresh Wet Density (kg/dm³)	2240kg/m³	
Yield per 20kg bag	10.5litres	
Bags per cubic metre (m³)	95	
Application Temperature	Min 5ºC-Max 35ºC	
Coverage – (Kg/mˆ2/mm	2.2	
Water per 20kg bag	3.6 litres	
PERFORMANCE DATA:		
FLEXURAL STRENGTH MPa-AS 1012-11-2000		
1 day	5.5	
7 days	9	
28 days	10	
COMPRESSIVE STRENGTH MPa-AS1478.2-2005		
1 day	24	
7 days	52	
28 days	68	
SETTING TIMES 20°C		
Initial	1.5 hours	
Final	2.5 hours	
APPLICATION INSTRUCTION		
	Horizontal	**Vertical**
Minimum	10mm	5mm
Maximum	180mm	80mm
Youngs Modulus approximately 26GPa Co-efficient of thermal expansion 7-10x10-6/ºC		
DYING SHRINKAGE		
7 Days	< 100 micro-strain	
28 Days	< 350 micro-strain	
56 days	< 450 micro-strain	
ABRASION RESISTANCE Tested to ASTM CS01-1984 (Tested Abrasion)		
AGE	**WEAR INDEX**	
28 Days	120	
Standard 40-50 MPa-concrete has a wear index of 71		

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 the relevant Australian Standard and the Floorcovering Manufacturer's instructions, and the floorcoverings must have been subject to normal traffic conditions.
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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