Penapatch Panel LW

High Build Polymer Modified Light Weight Repair Mortar

DESCRIPTION

Penapatch Panel LW is a fine filled, polymer modified, cementitious mortar, specifically formulated to provide cover for joiner plates in tilt slab or pre-cast construction. Panel LW is also used for repair of damaged concrete. The light weight aggregates used in Panel LW allow for a build up to 100mm in one application.

The specially selected cements and polymers contained in Panel LW provide a mortar with strong adhesion to concrete and masonry on vertical substrates with negligible shrinkage. Panel Patch LW requires the addition of water only.

Panel LW may be sanded to produce a smooth surface texture prior to painting or application of a render.

RECOMMENDED USES

- Patching repairs and covering metal joining plates in tilt up or pre-cast panels
- Repairing any damaged concrete or pre-cast or tilt-up panels that is non-structural
- Repairs requiring high build application up to 100mm for vertical applications
- General high build repairs where a non-structural repair mortar is required

FEATURES & BENEFITS

- High build application up to 100mm for vertical applications
- Good adhesion to substrates, high bond strength
- High build repairs can be completed in one application
- Eliminates the need for formwork
- Shrinkage compensated resulting in long term dimensional stability
- Excellent workability
- May be coated with the Aftek range of protective and decorative coatings
- Fast drying
- Finishes off to a smooth surface
- Easy to use, just add water
- Australian made

APPLICATION INSTRUCTIONS

Surface and Substrate Preparation.

All surfaces must be free of oil, grease, dust, plaster, paint and any other contamination that will inhibit the bond.

Any cracked or weakened surface should be removed and repaired to provide a solid foundation.

It is recommended that for large areas a minimum depth of 5mm be prepared as 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 is effective in removing corrosion, and all steel including rebars should be cleaned to a bright condition.

Immediately after cleaning steel, the steel should be treated with Aftek Zinc Rich Primer, this will stop further oxidation and corrosion.

Priming.

Concrete/Masonry: Priming is not necessary. The substrate should be pre-soaked with water and excess water removed prior to application of Penapatch Panel LW.

For very porous substrates all masonry surfaces should be primed with Aftek Rendergrip B, allow the primer to reach a tacky consistency before applying Penapatch Panel LW.

Steel/Rebar: Exposed steel and rebar should be primed with Aftek Zinc Rich Primer.

Mixing.

Penapatch Panel LW is ready to use. Simply add the powder to 3.1 to 3.6 litre of water and mix using a mechanical forced action mixer with a high shear spiral mixing paddle.

Always add the powder to the pre-measured water and mix until a homogenous mix is obtained which is lump free.

Penapatch Panel LW can also be mixed using approximately 4 parts powder by volume to 1 part water by volume (4:1).

DO NOT MIX BY HAND.

DO NOT ADD EXCESS 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 that can be used within the set time of the material. 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 substrate and around the exposed steel reinforcement and rebars.

A smooth surface can be obtained using a steel trowel.

DO NOT OVERWORK THE SURFACE

Low Temperature Application

Do not apply at temperatures below 5º C and falling. All temperatures of 5º C and below, the use of warm water is recommended.

High Temperature Application

Do not apply at temperatures above 35º C as initial set will commence early and the product will be difficult to apply. It is recommended that chilled/cold water be used to mix the product.

Curing.

Curing should be conducted is accordance to good concrete practise and Aftek recommend the use of suitable curing compound, Curecon A, applied in accordance to Technical Data Sheet.

TYPICAL PROPERTIES	
Appearance	Light grey powder
Fresh wet density	Approx 900 kg/m³
Application Temp	Minimum 5º C Maximum 35º C

SETTING TIMES 20º C	
Initial	3 Hours
Final	5 Hours

COMPRESSIVE STRENGTH MPa AS 1012.9, AS2073 @ 20º C and 50% RH Flexural Strength C 348-86		
Age (Days)	Compressive Strength MPa	Flexural Strength MPa
1	4.0	3.0
7	18	5.0
28	20	7.1
Tested AS 1012.9 and AS2073 at 20ºC for compressive strength Tested to ASTM C348-86 at 20 degrees for flexural strength		

APPLICATION INSTRUCTION		
	Horizontal	Vertical
Maximum	100mm	100mm
Minimum	5mm	5mm
Youngs Modulus approx 26GPa		
Coefficient of thermal expansion 7-10 x10¯6mm/ºC		

YIELDS	
Consistency	Mortar
Water per 10kg Bag (litres)	3.5
Yield per bag (litres)	15
Fresh wet density kg/m³	900
Bags required per cubic metre (m³)	66

1 bag will yield 15 litres at 3.5 litres water per 10kg bag.

PACKAGING

Penapatch Panel LW is supplied in 20kg bags. Item no. 306101

STORAGE-SHELF LIFE

Penapatch Panel LW has a shelf life of up to 12 months if stored in the original sealed packing, in a dry, low humid environment.

PRECAUTIONS

- Penapatch Panel LW is not intended for load bearing and is not to be used as a structural repair mortar
- Penapatch Panel LW is not designed or recommended for pedestrian or vehicle traffic
- Addition of excess water, other than specified, will lead to extended cure times and low strength development
- If the substrate into which the Penapatch Panel LW is applied move or cracks, reflective cracking will occur in the Penapatch Panel LW
- Ensure existing concrete surfaces/substrates are at least 21 days old prior to application of Penapatch Panel LW
- Do not apply Penapatch Panel LW in areas less than 5mm thick, occasional thickness less than 5mm is acceptable only in localised areas
- In application where high width and exposed areas are present, ensure curing compound is applied after final trowel
- Protect from direct sunlight/heat
- Ensure Penapatch Panel LW does not come into contact with water or rain for a minimum of 24 hours
- Do not use on horizontal surfaces subject to foot or vehicle traffic

For more detailed information, please read the MSDS for this product.

CLEAN UP

Wash all tools and equipment with fresh clean water immediately after use. Penapatch Panel LW can only be removed mechanically.

HEALTH AND SAFETY

Avoid contact with skin, protective gloves and clothing are recommended when mixing or using this product. Please refer to full MSDS (material safety data sheet) for this product, available from Aftek upon request or available through www.aftek.com.au

TECHNICAL SUPPORT

Aftek manufactures a comprehensive range of high quality, high performance construction products. In addition, ITLS offers technical support and on-site advice to specifiers, end users and contractors.

Please contact your ITLS/AFTEK sales representative or ITLS Head Office for this service.

For Further Information
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