

## KONSTRUKT LWR MORTAR

High Build Polymer Modified Fire rated,  
Light Weight Repair Mortar

Product Code:  
MORTARLWR20

Issue Date: 21/08/2015

### DESCRIPTION

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

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

Konstrukt LWR Mortar 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 panel
- 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 up repairs where a non-structural repair mortar is required

### FEATURES AND 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
- Fire rated
- 4 hour fire rating to AS1530.4

### 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 re-bars 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 Konstrukt LWR Mortar

For very porous substrates all masonry surfaces should be primed with Aftek Rendergrip B.

Allow the primer to reach a tacky consistency before applying Konstrukt LWR Mortar.

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

### MIXING

Konstrukt LWR Mortar is ready to use- simply add the powder to 3.1 - 3.6 litres 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.

Konstrukt LWR Mortar 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 re-bars.

A smooth surface can be obtained using a steel trowel.

DO NOT OVERWORK THE SURFACE

#### Low Temperature Application:

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

#### High Temperature Application:

Do not apply at temperatures above 35° 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 in accordance to good concrete practise and Synergy recommend the use of suitable curing compound, Curecon A, applied in accordance to Technical Data Sheet.

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**TYPICAL PROPERTIES**

|                   |                               |
|-------------------|-------------------------------|
| Appearance        | Light grey powder             |
| Fresh wet density | Approx. 900 kg/m <sup>3</sup> |
| Application Temp  | Minimum 5° C<br>Maximum 35° C |

**SETTING TIMES 20° C**

|         |         |
|---------|---------|
| Initial | 3 hours |
| Final   | 5 hours |

**COMPRESSIVE STRENGTH**

| Age (Days)  | Compressive Strength MPa | Flexural Strength MPa |
|---|--------------------------|-----------------------|
| 1   | 4                        | 3                     |
| 7   | 18                       | 5                     |
| 28  | 20                       | 7.1                   |
| Tested AS 1012.9 and AS2073 at 20°C and 50% RH for compressive strength |                          |                       |
| Tested to ASTM C348-86 at 20°C for flexural strength                    |                          |                       |

**APPLICATION INSTRUCTION**

|   | Horizontal | Vertical |
|---|------------|----------|
| Maximum   | 100mm      | 100mm    |
| Minimum   | 5mm        | 5mm      |
| Youngs Modulus approx. 26GPa                                  |            |          |
| Co-efficient of thermal expansion 7-10 x10 <sup>6</sup> mm/°C |            |          |

**YIELDS**

| Consistency                                     | Mortar |
|---|--------|
| Water per 10kg Bag (litres)                     | 3.5    |
| Yield per bag ( litres)                         | 15     |
| Fresh wet density kg/m <sup>3</sup>             | 900    |
| Bags required per cubic metre (m <sup>3</sup> ) | 66     |

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

**PRECAUTIONS**

- Konstrukt LWR Mortar is not intended for load bearing and is not to be used as structural repair mortar
- Konstrukt LWR Mortar 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 Konstrukt LWR Mortar is applied moves or cracks, reflective cracking will occur in the Konstrukt LWR Mortar
- Ensure existing concrete surfaces/ substrates are at least 21 days old prior to application of Konstrukt LWR Mortar
- Do not apply Konstrukt LWR Mortar in areas less than 5mm thick, occasional thickness less than 5mm is acceptable only in localized 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 Konstrukt LWR Mortar 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.

**PACKAGING**

Konstrukt LWR Mortar is supplied in 10kg bags-  
Item no. MORTARLWR20

**STORAGE-SHELF LIFE**

Konstrukt LWR Mortar has a shelf life of up to 12 months if stored in the original sealed packing, in a dry, low humid environment.

**CLEAN UP**

Wash all tools and equipment with fresh, clean water immediately after use. Konstrukt LWR Mortar 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, which is available from Synergy upon request or through [www.synergysystems.com.au](http://www.synergysystems.com.au)

**TECHNICAL SUPPORT**

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

Please contact your Local Synergy Member for this service.

The information and any recommendations relating to the application and end-use of all Konstrukt products are provided in good faith based on Synergy knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by Synergy. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.