

# Technical Data Sheet

## LW MORTAR

### **PRODUCT**

Sure Level LW Mortar is a high strength polymer modified cementitious structural repair mortar.

### **DESCRIPTION**

LW Mortar is a heavy-duty polymer modified reinstatement mortar with high ultimate compressive strength and abrasion resistance. LW Mortar is shrinkage compensated which allows it to be used for vertical, horizontal and overhead application for large or small repairs.

### **RECOMMENDED USES**

- Patching and repairing damaged concrete.
- Structural repairs in horizontal, vertical and overhead surfaces subjected to high load bearing.
- Terraces, balconies and facades.
- For repairs where high compressive strength and abrasion resistance is required.
- Repairs to Spalled concrete caused by corrosion of steel reinforcement.
- For repairs to damaged industrial flooring.
- High build application for repairs 15mm to 75mm on vertical substrates.
- Repairs to sewer tunnels, dams, bridges, power stations, concrete tanks.
- Repairing concrete areas subject to chemical corrosion.
- For below or above ground structures.
- In repairs where high resistance to chlorides and carbon dioxide is required.

### **FEATURES & BENEFITS**

- Shrinkage compensated allows for long term dimensional stability.
- One component product, just add water and mix.
- High ultimate strength. Ideal for structural repairs.
- High build repairs can be completed in a single application.
- Excellent workability.
- Easy to use.

## **FEATURES & BENEFITS continued**

- Excellent bond strength to concrete substrates.
- High abrasion and impact resistance.
- Low permeability.
- Extremely durable.
- High build repairs with exceptional performance characteristics.
- Reduces the need for formwork.

## **PERFORMANCE PROPERTIES**

### **MIXING CONSISTENCY**

	<b>Mouldable</b>	<b>Trowellable</b>
Litres	2.0 – 2.4	2.6 – 3.4

### **TYPICAL COMPRESSIVE STRENGTH**

Tested in accordance with AS1012.9 at 20°C and AS2073

<b>Age</b>	<b>Mouldable</b>	<b>Trowellable</b>
7 days	>40 Mpa	>30 Mpa
28 days	>60 Mpa	>40 Mpa

### **APPROXIMATE SETTING TIMES**

Vicat setting times at 20°C

Initial Set	20°C	2 - 3 Hours
	30°C	1.5 - 2 Hours
Final Set	20°C	4 - 5 Hours
	30°C	2 - 3 Hours

## **YIELDS**

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 20kg bag of LW Mortar with 2.5 litres of water will yield approximately 12 litres.

## **PACKAGING**

LW Mortar is supplied in a 20kg polylined bag.

## **APPLICATION INSTRUCTIONS**

### **SUBSTRATE & SURFACE PREPARATION**

Saw, cut or cut back the extremities of the repair locations to a depth of at least 15mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 15mm up to sawn edge. Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or gritblasting. Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition, paying particular attention to the back of exposed steel bars. Gritblasting is recommended for this purpose.

### **PRIMING**

Where greater bond is required to the prepared substrate, priming may be done with suitable Epoxy Primer, or Acrylic Primer.

### **LOW TEMPERATURE WORKING**

In cold conditions down to 5°C, the use of warm water (up to 30°C) is advised to accelerate strength development. Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrates or air temperature is 5°C and falling.

### **HIGH TEMPERATURE WORKING**

At ambient temperatures above 35°C, the material should not be used as this will cause premature setting and make working with the product difficult.

### **MIXING**

Care should be taken to ensure that LW Mortar is thoroughly mixed. LW Mortar must be mixed with a mechanical forced action mixer with a high shear stirrer.

Add required volume of drinking quality water into the mixing vessel and, with the mixer in operation, add one full 20kg bag of LW Mortar and mix for 3 to 5 minutes until fully homogeneous.

Note that powder must always be added to water. Dependant on the ambient temperature and the desired consistency, the amount of water required will vary slightly.

DO NOT MIX BY HAND.

### **PLACING**

Exposed steel reinforced bars should be firmly secured to avoid movement during the application process as this will affect mortar compaction, built and bond. Apply the mixed LW Mortar to the prepared substrate by gloved hand or trowel. Thoroughly compact the mortar on to the primed substrate and around the exposed reinforcement. LW Mortar can be applied to 75mm thickness in vertical sections, but up to 100mm thickness in smaller pockets or with the use of formwork. If formwork is used, it should have properly sealed

faces to ensure that no water is absorbed from the repair material. In horizontal locations, LW Mortar can be applied up to 100mm in thickness.

If sagging occurs during application to vertical surfaces, the LW Mortar should be completely removed and re-applied at a reduced thickness or lower consistency on to the correctly re-primed substrate.

Note: The minimum applied thickness of LW Mortar is 20mm.

DO NOT ADD EXCESS WATER.

## **FINISHING**

LW Mortar is finished by striking off with a straight edge and closing with a steel float. Wooden or plastic floats, or damp sponges, may be used to achieve the desired surface texture. The completed surface should not be overworked.

## **CURING**

All cementitious based mortars have to be protected against too rapid surface drying and evaporation. LW Mortar must be cured immediately after finishing in accordance with good concrete practice. The use of Primer sprayed, brushed or rolled on the surface of the finished LW Mortar in a continuous film, is recommended.

## **APPLICATION OF COATING**

LW Mortar, when cured, has good resistance to water penetration. However, if areas are subject to continuous water immersion or chemical attack from solvents or acids etc, an Epoxy or Acrylic coating, will act as a sealer and dust proofer which may be easily cleaned and is resistant to oil or chemical spills.

## **PRECAUTIONS**

- LW Mortar should not be used when the temperature is below 5°C. LW Mortar should not be used in temperatures greater than 35°C.
- LW Mortar should not be applied less than 20mm thickness in any given application.
- For concrete substrates subject to rising damp or moisture, a water proof membrane is required.
- It is recommended that Sure Level Moisture Barrier be used as a primer (consult technical data sheet or Sure Level office).
- New concrete surfaces must be at least 14 days old prior to application of LW Mortar.
- To avoid too rapid drying protect LW Mortar from direct sunlight or drying winds during actual application, and while curing for up to 24 hours.
- If the substrate on to which LW Mortar is applied moves or cracks, reflective cracking will occur in the LW Mortar.

## **POT LIFE**

Setting begins after 45 minutes (at 25°C substrate and ambient temperature). Sure Level LW Mortar should not be used after 45 minutes from time of mixing.

The addition of water to the mortar after it has started to stiffen is not recommended, and the product should be discarded.

## **CLEAN UP**

Sure level LW Mortar should be removed from tools and equipment with clean water immediately after use.

## **STORAGE**

LW Mortar has a shelf life of approximately 8 months, if kept in a dry environment completely away from moisture.

## **HEALTH & SAFETY**

This product is classified as hazardous according to criteria of Work Safe Australia. Material containing Portland Cement and sand now fall into this category.

Continuous or extended contact with this product may cause irritation as well as respiratory issues such as bronchitis or silicosis.

- During use avoid inhalation of dust, contact with skin and eyes.
- Suitable protective clothing, dust masks, gloves and eye protection should be worn.
- Continual or extended contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes. Contact Poisons Information Centre or consult medical adviser.
- Material Safety Data Sheets (MSDS) are available on request from the office. Read the MSDS and product data sheet carefully before using any product.

## **DISCLAIMER**

Please Note: Recommendation and advice regarding the use of this product is to be taken as a guide only and Sure Level shall not be liable for any inaccuracy in the information or for any loss, injury or damage whatsoever resulting from its use. To the full extent permitted by law, Sure Level liability is limited at its discretion, to the replacement of the goods or the supply of equivalent goods.

## **FIRE**

LW Mortar is non flammable.

## **DOCUMENT DATE**

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## **CONTACT DETAILS**

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