

# Expanmortar\* SLM

High strength, surface lining mortar for emergency or fast concrete repair

## Uses

For fast and emergency reinstatement of concrete, bedding, jointing, and re-profiling of concrete surface, repair of damaged concrete in precast units, jointing between precast units, repair of stair treads, fixing tiles, cladding, repairs of kerbstone, man hole covers, door and window frames etc.

## Advantages

- **Durable** - Stronger than concrete, highly chemical abrasion and oil resistant. Excellent bond strength.
- **Ease of application** - Mix and apply, No primer is required.
- **Quick** - Finish job operation in 2 - 3 hours.
- **Versatile** - Can be poured, trowelled, filled with coarse aggregates. Will cure in dry, wet, damp, and under water conditions. Can be used at down to 0 °C or up-to 60 °C.
- Pre-weighed components ensure consistency.

## Description

Expanmortar\* SLM products are based on a special resin system, and available in two grades.

**Expanmortar\* SLM:** The standard material for general purpose use, suitable for 1 mm to 10 mm application.

**Expanmortar\* SLM Concrete:** A special grade allowing users to add suitable aggregate, thereby substantially reducing the cost of infilling larger voids, suitable for 10 mm to 50 mm.

Winter versions of Expanmortar\* SLM is available, which are faster setting at low ambient temperatures. Both grades of Expanmortar\* SLM are supplied as two-component products with pre-weighed quantities of liquid resin and powdered hardener, ready for on-site mixing and use. The hardener system enables the mix to be varied from a pourable consistency to a trowelable mortar without significantly affecting the setting times or strengths achieved.

## Properties

The following properties were obtained at a temperature of 25 °C unless otherwise specified.

<b>Compressive strength</b>	<b>: 85 N/mm<sup>2</sup></b>
<b>at 7 days BS 6319 Pt.2</b>	
<b>Flexural strength</b>	<b>: 25 N/mm<sup>2</sup></b>
<b>BS 6319, Pt 3</b>	
<b>Tensile strength</b>	<b>: 12 N/mm<sup>2</sup></b>
<b>BS 6319, Pt 7</b>	
<b>Young's Modulus</b>	<b>: 16 kN/mm<sup>2</sup></b>
<b>of Elasticity</b>	
<b>Thermal conductivity</b>	<b>: 1.0 Watt/m/°C</b>
<b>Coefficient of</b>	
<b>thermal expansion</b>	<b>: 30 x 10<sup>-6</sup> per °C</b>
<b>Pot life</b>	<b>: 30 min</b>

The mixing of resin and hardener starts a polymerization process resulting in excellent mechanical properties like high compressive strength, high flexural and tensile strength, chemical resistance of the cured material to chemicals like acids, mild alkalis, oil and petrol.

## Specification clauses

The high strength concrete repair mortar shall be Expanmortar\* SLM, a two component resin base surface lining and repairing compound. The mortar shall be capable of use at a wide range of consistencies without significantly affecting setting times or strengths. When applied at a mortar consistency, the cured product shall exhibit a compressive strength of more than 75 N/mm<sup>2</sup>, a flexural strength of 20 N/mm<sup>2</sup> and tensile strength of 10 N/mm<sup>2</sup> at 7 days.

## Application instructions

### Preparation

All surfaces must be preferably dry and free from oil, loose particles and laitance, clean the surface with wire brush and then clean with soft brush to remove dust and loose material.

### Mixing

The required quantity of resin shall be poured into a plastic bucket/bowl and then powder hardener shall be added slowly with stirring thoroughly until uniform consistency is obtained. It is recommended that small quantities be mixed at a time and used since pot life of the mixed material decreases at elevated temperatures.

### Placing

Apply the mixed Expanmortar\* SLM to the prepared substrate by steel trowel, pressing firmly into place to ensure positive adhesion and full compaction. In the case of repairs to very dense or non-absorbent substrates, the first layer of Expanmortar\* SLM should be made slightly 'resin-rich' to ensure that the surface to be bonded is properly 'wetted-out'.

Thoroughly compact the mortar around any exposed reinforcement, if the exposed steel reinforcement is corroded/rusted must be treated with a single coat of Expancote Zinc-rich Primer, maximum application thickness of Expanmortar SLM in one layer is 10 mm, minimum application thickness is 1 mm. (If thickness more than 10 mm is required the same is achieved in two or more layers with a gap of at-least 2 - 3 hours between each layer)

### Finishing

Expanmortar\* SLM is finished by the use of a steel trowel which may be wiped from time to time with a cloth moistened with Fospak Solvent 105. The completed surface should not be overworked.

### Low temperature working

Expanmortar\* SLM can be applied in cold conditions down to 0°C. The material should not be applied when the substrate and/or air temperature is below freezing or where the substrate is contaminated with frost or ice. In cold conditions, the winter grade may be more appropriate. Consult the local Fospak Expanchem office for further information.

### High temperature working

At ambient temperatures above 30°C, Expanmortar\* SLM will have shorter pot life and working time. The material should not be used at ambient or surface temperatures above 55°C. At elevated temperatures, the product should be stored in the shade or in an air-conditioned environment for 24 hours prior to use.

### Curing

Curing protection is not necessary for Expanmortar\* SLM

### Cleaning

Expanmortar\* SLM should be removed from tools, equipment and mixers with Fospak Solvent 105 immediately after use.

### Limitations

The products should not be applied to the wet surfaces where there is total reliance on bond nor should they be exposed to moving water during application. Exposure to heavy rainfall prior to the final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, consult the local Fospak Expanchem office for assistance.

### Packing / Coverage

#### Supply

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Expanmortar\* SLM : 1 Ltr. Pack

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#### Coverage

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Expanmortar\* SLM : 1 Ltr. / Sq.mt. @ 1 mm  
thickness

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## Storage

All products have a shelf life of 6 months at 20°C if kept in a dry store in the original, unopened bags or packs.

## Precautions

### Health and safety

Expanmortar\* SLM should not come in contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapors. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. In case of skin contact, remove immediately with resin removing cream followed by washing with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately — **do not** induce vomiting.

### Fire

Expanmortar\* SLM products are flammable. Keep away from sources of ignition. No Smoking. In the event of fire, extinguish with CO<sub>2</sub> or foam. Do not use a water jet.

## Additional Information

Fospak manufactures a wide range of products which include:

- waterproofing membranes & waterstop
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Systematic approach to concrete repair features the following:

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fospak Expanchem office - as below.

\* Denotes the trademark registered

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