



# MONOLEVEL 844SP

## Class R4 Waterproof Screed & Pore Filler

### USES

**MONOLEVEL 844SP** is a fully waterproof, engineering quality fairing coat for filling minor blow holes and defects, and for repairing surface cavities and honeycombed concrete. Thin screed applications can be used to level both vertical and horizontal concrete surfaces and to reinstate cover while providing a fair faced anti-carbonation finish.

### ADVANTAGES

- Incorporates the latest proven cement chemistry, microsilica, fibre and styrene acrylic copolymer technology.
- Pre-packaged material requiring mixing with clean water on-site to give an adhesive mortar which can be rapidly applied in vertical, horizontal and overhead situations.
- High bond strength exceeds tensile strength of concrete thus ensuring monolithic performance of the repair.
- Dense matrix offers low permeability to water, even at 10 bar pressure, and very high diffusion resistance to acid gases and chloride ions.
- Non-toxic when cured and is listed as authorised under Regulation 31 for use in the supply of drinking water.
- Economic mortar requiring no substrate or inter-layer priming. Part bags can be mixed. Suitable for feather edging.
- Easily overcoated with specialist membranes to provide further protection and aesthetic quality.

### COMPLIANCE

CE marked in accordance with BS EN 1504 Part 3. Fully complies with the Highways Agency Standard BD 27/86 for the repair of Highway Structures. Listed under DWI Regulation 31 for drinking water applications. Compliant with LU Standard 1-095 'Fire Safety Performance of Materials'.

### PRODUCT DESCRIPTION

**MONOLEVEL 844SP** is a single component, thixotropic, polymer modified, cementitious repair mortar with high adhesive properties, allowing it to be used as a waterproof screed, as well as a filler, for filling minor voids and defects to provide a fair faced finish. It incorporates the most advanced microsilica, polymer and fibre technology, curing to provide high waterproofing properties, excellent protection from acid gases, chlorides and freeze/thaw cycles as well as enhanced chemical resistance. The product is supplied as a single component system requiring only the addition of clean water.



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 0086-CPD-530942

EN1504-3: Concrete repair product for structural repair  
 PCC mortar (based on hydraulic cement polymer modified)

Compressive Strength:	Class R4 ≥ 45 MPa
Adhesive Bond:	Class R4 ≥ 2.0 MPa
Chloride Ion Content:	≤ 0.05%
Carbonation Resistance:	Passes
Elastic Modulus:	17.3 GPa
Thermal Capability Part 1:	Class R4 ≥ 2.0 MPa
Capillary Absorption:	0.047 kg.m <sup>-2</sup> .h <sup>-0.5</sup>
Dangerous Substances:	Complies with 5.4
Reaction to Fire:	Euroclass A2-s1, d0

### TECHNICAL DATA

Mixed Colour:	Concrete Grey
Mixed Density:	1860 kg/m <sup>3</sup>
Max Application Thickness:	6mm per layer
Min Application Temperature:	5°C
Max Application Temperature:	35°C
Working Life (Approx):	30 minutes at 20°C

### MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength:	BS 4551 Tested at 20°C
1 day	23 MPa
7 days	46 MPa
28 days	60 MPa
Flexural Strength:	BS 4551 at 20°C, 65% R.H.
28 days	10.5 MPa
Water Permeability Coefficient:	
Taywood Test by Penetration:	6.94 x 10 <sup>-16</sup> m/sec
i.e. 1mm of <b>844SP</b>	= 1000mm of typical concrete
Oxygen Diffusion Coefficient:	
Taywood Test:	D <sub>O2</sub> = 4.90 x 10 <sup>-5</sup> cm <sup>2</sup> /s <sup>-1</sup>
Normal concrete:	D <sub>O2</sub> = 2.12 x 10 <sup>-3</sup> cm <sup>2</sup> /s <sup>-1</sup>
i.e. Equivalent concrete thickness	= 250mm

## APPLICATION DATA

Application Guide available on request.

## PREPARATION

Mechanically remove all damaged concrete back to a sound core. The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be cleaned to remove release agents, curing compounds and surface laitance, preferably using wet grit or water blasting techniques or equivalent approved methods, and any steel cleaned to bright metal. The concrete sub-base should be a minimum of 20 MPa.

The prepared substrate should be thoroughly soaked (preferably 24 hours before) with clean water until uniformly saturated without any standing water.

## PRIMING

**MONOLEVEL 844SP** is highly polymer modified and as a result concrete surfaces do not generally require a primer. Two coats of **STEEL REINFORCEMENT PROTECTOR 841** should be applied by brush to any exposed steel. For further information, please refer to relevant data sheets.

## MIXING

**MONOLEVEL 844SP** should be mechanically mixed using a forced action mixer or in a clean drum using a drill and paddle. A normal concrete mixer is NOT suitable.

For normal application, use from 2.8 to 3.2 litres of clean water per 25kg bag depending upon desired consistency. For part bags, this equates to approximately 6.5 volumes of powder to one volume of water. Typically for screeding applications use 3 litres of clean water per sack, which gives a water:powder ratio of 0.12. Normal mixing time depends on the type of mixer used but 2 minutes is average. Mix so as to entrain as little air as possible. Use without delay.

## PLACING

**MONOLEVEL 844SP** can be applied to localised minor voids and surface defects using a palette knife. For large areas of pore filling, work well into the prepared substrate using a wooden float or "bag rubbing" techniques.

When used as a highly alkaline thin screed for the protection of concrete and for structural waterproofing, **844SP** should be applied to the prepared surface using a steel float to provide a smooth, polymer rich surface finish. An initial thin layer should be worked well into the surface to fill blow holes and minor defects prior to building up the thickness to a maximum of 6mm. Alternatively spray techniques can be used.

For repairs which require multi-layer applications it is important to ensure that previous layers have been finished with a wood or plastic float and are stable, but not fully set, prior to the application of subsequent layers. No inter-layer priming required. Once the last layer has stabilised, trowel marks can be removed using a wooden float or damp sponge to produce a surface comparable to emery paper, which provides an excellent finish for the subsequent application of a surface coating.

## CURING

Particular attention should be paid to adequate curing of **844SP**. It is important that the surface of the mortar is protected from strong sunlight and drying winds with **FLEXCRETE CURING MEMBRANE WB**, polythene sheeting, damp hessian or similar.

## CLEANING

All tools should be cleaned with water immediately after use.

## SHELF LIFE

12 months in dry, frost free conditions with unopened bags at 20°C.

## PACKAGING AND COVERAGE

Pack Size: 25kg  
Yield: 15 litres per 25kg pack  
Coverage: A 25kg pack covers 5m<sup>2</sup> at 3mm thickness

## SAFETY DATA

Safety Data Sheet available on request.

The information herein is correct to the best of our knowledge, but it does not necessarily refer to the particular requirements of the customer. If the customer has any particular requirements it should make them known in writing to Flexcrete Technologies Limited, and obtain further advice accordingly.



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