

DATA Sheet



MONOLEVEL 844SP

USES

MONOLEVEL 844SP is an 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, waterproof and anti-carbonation finish.

ADVANTAGES

INNOVATIVE:	Incorporates the latest proven cement chemistry, microsilica, fibre and styrene acrylic copolymer technology.
EASE OF USE:	Materials are pre-packaged and only require mixing with clean water on-site to give an adhesive mortar which can be rapidly applied in vertical and horizontal situations.
SHRINKAGE COMPENSATED:	Maintains high bond strength superior to tensile strength of concrete, thus ensuring monolithic performance.
SAFE:	Non-toxic when cured and is listed as authorised under Regulations 31 for use in the supply of water for drinking.
LOW PERMEABILITY:	Dense microsilica modified matrix has high diffusion resistance to acid gases, moisture and chlorides.
COMPLIANT:	Cements used are quality assured, complying with BS 12.
COST EFFECTIVE:	Economical low density, polymer modified cementitious mortar requiring no priming. Part bags can be mixed.
OVERCOATING:	Easily overcoated with specialist membranes to provide further protection and aesthetic quality.

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 and improved chemical resistance. The product is supplied as a single component system, ready for on-site mixing and use, requiring only the addition of clean water.

TECHNICAL DATA

Mixed Colour:	Concrete Grey.
Mixed Density:	1800-1900kg/m ³ .
Maximum Application Thickness:	6mm per layer.
Minimum Application Temperature:	5°C.
Maximum Application Temperature:	35°C.
Working Life:	Approx. 30 mins. at 20°C.

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength: BS 4551 Tested at 20°C	
1 day	23N/mm ² .
7 days	46N/mm ² .
28 days`	60N/mm ² .
Flexural Strength: BS 4551	
28 days	10.5N/mm ² at 20°C, 65% RH.
Bond Strength: BS 6319 – Part 4 Slant Shear Method	
28 days	50N/mm ² .
Young's Modulus of Elasticity (E): BS 1881 – Part 121	
	22.1kN/mm ² .
Water Permeability Coefficient: Taywood Test by Penetration	
	6.94 x 10 ⁻¹⁶ m/sec.
	i.e. 1mm of 844SP = 1000mm of typical concrete.
Oxygen Diffusion Coefficient: Taywood Test	
	D _{O₂} = 4.90 x 10 ⁻⁵ cm ² s ⁻¹ .
	(Normal concrete D _{O₂} = 2.12 x 10 ⁻³ cm ² s ⁻¹ .)
	Equivalent concrete thickness = 250mm.

APPLICATION DATA

Application Guide available on request.

PREPARATION

Mechanically remove all damaged concrete back to a sound core. On cutting back, feather edges must be avoided. The perimeter of the repair area should be stepped to a depth of 5mm by means of saw, disc cutting or preferably using a power chisel. The areas to be repaired must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be roughened and all loose material and surface laitance removed, preferably using grit or water blasting techniques or equivalent approved methods. The strength of the concrete sub-base should be a minimum of 20N/mm².

PRIMING

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

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, the mixed material should be worked 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. For repairs which require multi-layer applications it is important to ensure that previous layers are well keyed using a combing technique and 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 with thin screed applications of **844SP**. It is important that the surface of the mortar is protected from strong sunlight and drying winds with **FLEXCRETE CURING MEMBRANE**, 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 containers at 20°C.

PACKAGING AND COVERAGE

Pack Size: 25kg.
Yield: One 25kg pack yields 15 litres of mortar.
Coverage: 1.8kg/mm/m², i.e. one 25kg pack at 1mm thickness will cover 15m².

SAFETY DATA

Safety Data Sheet available on request.

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