

## MONOMIX WS

### USES

**MONOMIX WS** is a low density, high strength, shrinkage compensated mortar, which can be applied by wet process spraying techniques for the structural repair, rendering and profiling of vertical, horizontal and overhead surfaces.

### 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 a mortar, which can be applied by wet process techniques with a maximum application thickness in excess of 80mm in vertical, horizontal and overhead situations.
SHRINKAGE COMPENSATED:	Enables high bond strength, superior to tensile strength of concrete, to be maintained and ensures monolithic performance of the repair.
LOW PERMEABILITY:	Dense matrix provides excellent protection from the ingress of acid gases, moisture and chlorides.
FIBRE REINFORCED:	Improved tensile and impact strength. Excellent low sag properties.
COMPLIANCE:	Fully complies with the Highways Agency Standard BD 27/86 for the repair of Highway Structures.
SAFE:	Non-toxic when cured and is listed as authorised under Regulations 31 for use in the supply of water for drinking.
COST EFFECTIVE:	High performance, polymer modified, fibre reinforced cementitious mortar requiring no inter-layer priming. Part bags can be mixed.
OVERCOATING:	Easily overcoated with specialist membranes to provide further protection and aesthetic quality.

### PRODUCT DESCRIPTION

**MONOMIX WS** is a single component cementitious mortar, which incorporates the most advanced cement chemistry, microsilica, fibre and styrene acrylic copolymer technology. This results in a rapid hardening, low density, high strength mortar with enhanced polymer properties. The thixotropic nature of the product enables easy high build spray application for the structural repair of voids and the rendering and re-profiling of vertical, horizontal and overhead surfaces. 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:	1750kg/m <sup>3</sup> .
Minimum Application Thickness:	5mm.
Maximum Application Thickness:	>80mm per layer.
Minimum Application Temperature:	5°C.
Maximum Application Temperature:	40°C.
Working Life:	Approx. 60 minutes at 20°C and 30 minutes at 40°C.

### MECHANICAL CHARACTERISTICS (TYPICAL)

<b>Compressive Strength:</b> BS 4551 Tested at 20°C:	
1 day	25.0N/mm <sup>2</sup> .
7 days	39.0N/mm <sup>2</sup> .
28 days	45.0N/mm <sup>2</sup> .
<b>Flexural Strength:</b> BS 4551 Tested at 20°C and 90% R.H.	
7 days	7.9N/mm <sup>2</sup> .
28 days	8.2N/mm <sup>2</sup> .
<b>Bond Strength:</b> Pull-Off Test.	
28 days	3.0N/mm <sup>2</sup> .
<b>Electrical Resistivity:</b> 4-Point Wenner Probe.	
	10,000ohm-cm
Suitable for use in conjunction with CP Systems	

## APPLICATION DATA

Application Guide available on request.

## PREPARATION

Mechanically remove all damaged concrete back to a sound core. Wherever possible, the full circumference of the steel reinforcement should be exposed to at least 25mm behind the bars and 50mm beyond the point at which corrosion is visible. On cutting back, feather edges must be avoided. The perimeter of the repair area should be stepped to a depth of 10mm by means of saw or 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, organic growth. Smooth cut surfaces should be roughened, all loose material and surface laitance removed and reinforcement cleaned to bright metal. For large areas grit/water jetting or mechanical scabbling is recommended. For smaller areas, needle gunning or bush hammering is effective. The strength of the concrete sub-base should be a minimum of 20N/mm<sup>2</sup>.

The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

## PRIMING

The pre-dampened concrete surface should, if highly porous, be primed with the **BONDING BRIDGE 842**. Two coats of **STEEL REINFORCEMENT PROTECTOR 841** should be applied to the prepared steel by brush.

For further information please refer to relevant data sheets.

## MIXING

**MONOMIX WS** should be mechanically mixed using a forced action pan mixer. A normal concrete mixer is **NOT** suitable.

For normal applications, use from 3.25-3.75 litres of clean water per 25kg bag depending upon the desired consistency. Typically, for high build applications, use 3.5 litres of clean water per sack which gives a water:powder ratio of 0.14. Normal mixing time depends on the type of mixer used, 2-3 minutes is average. Mix so as to entrain as little air as possible. Use without delay.

## PLACING

**MONOMIX WS** can be applied using wet process spray techniques, resulting in application thicknesses in excess of 80mm, even in soffit situations. If necessary, support with shuttering to allow for compaction if working to reveals, etc. The application thickness achievable is dependent upon the substrate and care must be taken to ensure that an initial 5-10mm thickness of mortar is well placed and adhered before building up to larger depths.

For repairs that require multi-layer applications, it is important to ensure that previous layers are well keyed and stable but not fully set prior to the application of subsequent layers. No inter-layer priming is required. Final profiling of a high quality is easily achieved with a steel float.

## CURING

Normal concreting procedures should be strictly adhered to. 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 sacks at 20°C.

## PACKAGING AND COVERAGE

Pack Size:	25kg.
Yield:	16.25 litres per 25kg pack.
Coverage:	1.75kg/mm/m <sup>2</sup> , i.e. 1m <sup>2</sup> at 10mm thickness = 17.5kg.

## SAFETY DATA

Safety Data Sheet available on request.

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