Technical Data Sheet

MONOPOUR

Pourable Repair Mortar

USES

MONOPOUR is a high performance, polymer modified, non-shrink, cementitious formulation supplied in two grades. **MONOPOUR PG** is a flowing grout and **MONOPOUR PC6** is a micro concrete. Both grades can be pumped, poured or trowelled for large areas of concrete repair and heavy duty applications beneath base plates, plinths and stanchion bases.

ADVANTAGES

- Incorporates the latest proven cement chemistry, microsilica and styrene acrylic copolymer technology.
- Pre-packaged material requiring mixing with clean water to give the required consistency for pouring, pumping or trowelling.
- Dual expansion mechanism compensates for shrinkage in the plastic and hardened state.
- Ultra-fine Portland cement cures rapidly to give high early and long term strength development, enabling quick reinstatement.
- Dense matrix provides excellent protection from the ingress of acid gases, moisture and chlorides.
- The gaseous expansion mechanism is non-metallic and relies upon nitrogen gas formation which eliminates the risk of staining and degradation resulting from corrosion.
- All admixtures used are chloride-free. The alkali content is controlled to less than 3kg/m³ and non-reactive aggregates are used.
- Easily overcoated with specialist membranes to provide further protection and aesthetic quality.

COMPLIANCE

Fully complies with the Highways Agency Standard BD 27/86 for the repair of Highway Structures.

PRODUCT DESCRIPTION

MONOPOUR formulations incorporate the most advanced cement chemistry, microsilica, shrinkage compensating and styrene acrylic copolymer technology. This results in a rapid hardening, high strength, non-shrink material with enhanced polymeric properties. The product is supplied as a one component system which is mixed with clean water to give the required consistency for application by pumping, pouring or trowelling. The aggregate shape and grading have been specially chosen to facilitate mixing and to maximise flow and minimise the risk of segregation and bleeding. The product is supplied in two grades containing different aggregate gradings:

MONOPOUR PG: Grout with a maximum aggregate size of 2.5mm for application thicknesses up to 100mm.

MONOPOUR PC6: Micro concrete with a maximum aggregate size of 6mm for larger depths in excess of 50mm.

GENERAL NOTES

When working at ambient temperatures above 35ºC, the grout should be stored in the shade and cool, sweet water used for mixing. **MONOPOUR** is suitable for use in low temperatures provided the normal precautions for use of cement based products are taken. Warm water is recommended to assist strength development.

TECHNICAL DATA

Mixed Colour:	Concrete Grey	
Mixed Density:	2225-2275 kg/m³	
Min Application Thickness:	**PG**	5mm
	PC6	50mm
Max Application Thickness:	**PG**	100mm
	PC6	200mm
Min Application Temperature:	5°C	
Max Application Temperature:	40°C	
Working Life (Approx):	30 minutes at 40°C	

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength:	Tested at 20°C	
	PG	**PC6**
1 day	15-20 MPa	20-25 MPa
7 days	47-52 MPa	50-55 MPa
28 days	60-65 MPa	65-70 MPa
Bond Strength:	BS 6319 - Part 4 Slant Shear Method	
28 days	>50 MPa/mm²	
Expansion:	ASTM C 827 An expansion of 1-4% is measured in the plastic state.	

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 5mm (PG) 15mm (PC6).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, all loose material and surface laitance removed, and reinforcement cleaned to bright metal using wet grit blasting techniques or equivalent approved methods. The strength of the concrete sub-base should be a minimum of 20 MPa. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water. The faces of formwork should be treated with a proprietary form release agent.

PRIMING

Concrete does not require priming. 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

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

Measure out the required water content for the selected consistency given in the table, and pour ¾ into the mixing vessel. With the mixer running, slowly add a full bag of powder and mix for a minimum of 1 minute before adding the remaining water. Continue mixing for a further 2-3 minutes, making sure that a smooth, even consistency is achieved. Mix so as to entrain as little air as possible. Pass the mixed material through a suitable coarse metal screen to remove any lumps or contaminants prior to placing. Place within the working life of the product and throw away any material remaining after this period. It is essential that these mixing instructions are strictly adhered to, otherwise significantly lower levels of performance or possible failure will result.

CONSISTENCY ON MIXING	**MONOPOUR PG** (litres/25kg sack)	**MONOPOUR PC6** (litres/25kg sack)
Trowellable	2.5	2.2
Flowable	3.2	2.8
Fluid	3.5	3.1

PLACING

The area to be filled should be shuttered and a header box used to maintain a head of 150-200mm throughout the pour. Continuous grout flow is essential. Ensure sufficient material is available prior to starting and subsequent mixes are carefully sequenced. Pouring should be done from one side only, to avoid the entrapment of air or standing water. Large volumes of **MONOPOUR** may be pumped.

CURING AND OVERCOATING

Normal concreting procedures should be strictly adhered to. It is important that that any exposed surface of the **MONOPOUR** 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 (at flowable consistency):	**MONOPOUR PG:**	12.5 litres per 25kg pack
	MONOPOUR PC6:	12.2 litres per 25kg pack
Coverage:	2.2-2.3kg/mm/m²	(ie. At 10mm thickness = 22-23kg)

SAFETY DATA

Safety Data Sheet available on request.

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