

DATA Sheet



MONOPOUR

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

| | |
|--------------------|---|
| INNOVATIVE: | Incorporates the latest proven cement chemistry, microsilica and styrene acrylic copolymer technology. |
| EASE OF USE: | Materials are pre-packaged and only require mixing on site with clean water to give the required consistency for pouring, pumping or trowelling. |
| NON-SHRINK: | Dual expansion mechanism compensates for shrinkage in the plastic and hardened state. |
| HIGH STRENGTH: | Ultra-fine Portland cement cures rapidly to give high early and long term strength development, enabling quick reinstatement. |
| LOW PERMEABILITY: | Dense matrix provides excellent protection from the ingress of acid gases, moisture and chlorides. |
| PROVEN TECHNOLOGY: | 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. |
| COMPLIANCE: | Fully complies with the Highway Agency Standard Part 4 BD 27/86 for the repair of Highway Structures. The alkali content is controlled to less than 3kg/m ³ and non-reactive aggregates are used. |
| OVERCOATING: | Easily overcoated with specialist membranes to provide further protection and aesthetic quality. |

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 for on-site mixing 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 is a grout with a maximum aggregate size of 2.5mm for application thicknesses up to 100mm.

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

TECHNICAL DATA

| | | |
|----------------------------------|------------------------------|---------|
| Mixed Colour: | Concrete Grey. | |
| Mixed Density: | 2225-2275kg/m ³ . | |
| Application Thickness: | Minimum | Maximum |
| PG | 10mm | 100mm |
| PC6 | 50mm | 200mm |
| Minimum Application Temperature: | 5°C. | |
| Maximum Application Temperature: | 40°C. | |
| Working Life: | 30 minutes at 40°C. | |

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength tested at 20°C:

| | MONOPOUR PG | MONOPOUR PC6 |
|---------|------------------------|------------------------|
| 1 day | 15-20N/mm ² | 20-25N/mm ² |
| 7 days | 47-52N/mm ² | 50-55N/mm ² |
| 28 days | 60-65N/mm ² | 65-70N/mm ² |

Bond Strength: BS 6319 - Part 4 Slant Shear Method.
28 days >50N/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 10mm by means of saw or disc cutting or preferably using a power chisel.

The areas to be repaired, and surfaces in contact with the **MONOPOUR**, must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth.

Where necessary use **FLEXCRETE DEGREASANT** as instructed on the individual data sheet. Smooth surfaces should be roughened, all loose material and surface laitance removed and steel reinforcement surfaces cleaned to bright metal preferably using wet grit or water blasting techniques. The strength of the concrete sub-base should be a minimum of 20N/mm².

The prepared concrete substrate should be thoroughly soaked with clean water until uniformly saturated and any standing water removed.

The faces of formwork should be treated with a light coat of **FLEXCRETE CHEMICAL RELEASE AGENT** as instructed on the individual data sheet.

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 reinforcement by brush.

MIXING

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

Measure out the required water content for the selected consistency given in the table below, and pour three-quarters 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.

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

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.

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 that sufficient material is available prior to starting and subsequent mixes 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.

GENERAL NOTES

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

CURING

Normal concreting procedures should be strictly adhered to. It is important that exposed surfaces are 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 sack at 20°C.

PACKAGING AND COVERAGE

Pack Size: 25kg.
Yield: 12.5 litres per 25kg pack **MONOPOUR PG**.
(at flowable consistency) 12.2 litres per 25kg pack **MONOPOUR PC6**.
Coverage: 2.2 - 2.3kg/mm/m², i.e. at 10mm thickness = 22 - 23kg.

SAFETY DATA

Safety Data Sheet available on request.

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Flexcrete Technologies Limited
Tomlinson Road • Leyland • Lancashire
• PR25 2DY • England

Tel: +44 (0) 845 260 7005 • **Fax:** +44 (0) 845 260 7006
e-mail: info@flexcrete.com
www.flexcrete.com

