

DATA Sheet



MONOGUN

USES

MONOGUN is a fully pre-bagged sprayed mortar, suitable for machine application using the dry process. The product is ideal for treating large areas of repairs particularly on bridges, marine structures and coastal defences.

ADVANTAGES

INNOVATIVE:	Incorporates the latest proven cement, microsilica, fibre and styrene acrylic copolymer technology.
SIMPLE:	MONOGUN consists of a unique blend of polymer, cement, microsilica and admixtures, which is supplied fully pre-bagged, with a non-reactive limestone aggregate for complete quality assurance.
COMPATIBLE:	Physical properties of the cured material are designed to match the base concrete as near as possible, ensuring a homogeneous repair.
THIXOTROPIC:	Allows easy application to achieve high application thicknesses of over 150mm in both vertical and horizontal situations with low rebound losses.
RAPID CURE:	Rapid curing gives excellent resistance to wash-out. Please consult the manufacturer on quick setting requirements in aggressive tidal environments.
FIBRE REINFORCED:	Polypropylene fibres give improved tensile and impact strength. Please consult the manufacturer when steel fibre reinforcement is required.
SAFE:	MONOGUN exhibits low dusting and is non-toxic when cured.

PRODUCT DESCRIPTION

MONOGUN is a special blend of Portland cement, microsilica, fibres, dust suppressants, chloride-free admixtures and the latest generation spray dried styrene acrylic copolymer. It contains a non-reactive limestone aggregate complying with Clause 1704 - Control of Alkali-Silica Reactions in the Highway Agency "Specification for Highway Works" and is ideally suited for work in restricted areas or where maximum quality control is required.

The blended materials enable high build applications with low rebound losses at low water:cement ratios, and can easily be profiled and finished with a steel or wooden float. The enhanced polymeric properties ensure high adhesion, low shrinkage and excellent resistance to freeze-thaw attack. Once applied, they have excellent resistance to wash-out and cure rapidly to form a dense, impermeable matrix which provides a high diffusion resistance to oxygen, acid gases and chloride ions.

TECHNICAL DATA

Mixed Colour:	Concrete Grey.
Applied Density:	2200-2300kg/m ³ .
Minimum Application Temperature:	5°C.

MECHANICAL CHARACTERISTICS (TYPICAL)

Compressive Strength: BS 1881: Part 120	
1 day	20-25N/mm ² .
7 days	40-45N/mm ² .
28 days	50-60N/mm ² .
Bond Strength:	2-3N/mm ² .
Young's Modulus of Elasticity: BS 1881 : Part 121	25.5kN/mm ² .
Coefficient of Thermal Expansion:	11-12 x 10 ⁻⁶ /°C. (16-45°C)

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, 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 steel using wet grit blasting techniques or other approved methods. After preparation, the strength and stability of the substrate should be checked to ensure that it is capable of supporting the **MONOGUN**. If the substrate is cracked and fissured or has a strength of less than 20N/mm², suitable anchors and additional reinforcement must be provided. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated without any standing water.

PLACING

MONOGUN should be added at a controlled rate into the feed hopper of conventional dry process equipment. Trials may be needed to establish the optimum feed chamber arrangement and supply pressure combination. It is important that the compressor is capable of supplying the required pressure and volume of air, particularly when it is driving additional plant. The water, which must be clean and supplied at constant pressure, is controlled at the nozzle to provide a cohesive non-slumping mortar. Experience has shown that this will result in a water:cement ratio in the range of 0.35-0.4. Surface profiling and finishing should be carried out as soon as practicable after application using a steel or wooden float.

CURING

Normal concreting procedures should be strictly adhered to. It is important that the surface of the **MONOGUN** 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 sack at 20°C.

PACKAGING AND YIELD

Pack Size: 25kg or 1 tonne bulk bags.
Yield: 12 litres per 25kg pack. (Typical)

SAFETY DATA

Safety Data Sheet available on request.

FURTHER INFORMATION

Please consult the "Code of Good Practice" issued by the Sprayed Concrete Association and the "Specification for Sprayed Concrete" issued by EFNARC for more detailed advice.

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