

SUPER C

Product Codes

DH55, DH56 Packaging listed overleaf

Description

Super C is a pre-mixed magnesium phosphate cement blended with specially selected aggregates. The resulting mix produces a mortar which gives rapid setting and high early strength properties suitable for works carried out in raising or lowering carriageway frames and covers. Repairs can be carried out on concrete surfaces and with the speed of hardening, these may be brought into early use. The chemical mechanism will continue at temperatures down to 0°C thus enabling repairs to be carried out on floor areas in cold stores. Using suitable protection cold store area repairs may be carried out at temperatures down to -20°C. The mixed mortar, when placed, will harden in approximately 10 minutes. The compressive strength gain will reach between 14N/mm² and 22N/mm² within ³/₄ hour depending on the mix design used.

Super C is a self contained product only needing to be mixed with water on site to produce a firm mortar. The product is chloride free and can be safely used with cast iron and steel units. The mortar can be placed in sections of 20mm to 50mm in thickness and greater thicknesses can be built up in layers. After placement no special curing is required in moderate ambient conditions. A fine grade, Tecroc FG is available.

Uses include: Re-bedding of raised manhole frames
Bedding of frames in new roads
Support of road furniture
Rapid repairs to concrete surfaces
Repairs to cold room areas

Specification Outline

Bedding, levelling and concrete repairs shall be carried out using Super C as manufactured by Tecroc Products Ltd. The product must be stored, handled and placed strictly in accordance with the manufacturer's instructions.

Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The company's quality system conforms to BS EN ISO 9002:1994 and is assessed by SGS Yarsley International Certification Services Ltd.

Standards

Super C has been tested in accordance with appropriate parts of BS 1881 BS 6319.

Typical Mortar Properties @ 20°C

Compressive Strengths

Mortar, water content 1.5 litres per 25kg Super C

³ / ₄ Hour	2 Hours	7 Days	28 Days
14N/mm ²	26N/mm ²	52N/mm ²	57N/mm ²

Concrete, water content 2.0 litres per 25kg Super C

³ / ₄ Hour	2 Hours	7 Days	28 Days
13N/mm ²	23N/mm ²	45N/mm ²	49N/mm ²

Density: 2200kg/m³
Shrinkage: Volume stable
Bond strength – slant shear: 40N/mm²

Mix designs given overleaf:

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Instructions For Use

Preparation

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be pre-wetted taking care to remove any standing water.

Mix Designs

The water requirement for each 25kg bag of Super C to attain the designed consistency is:-

Mortar consistency: 1.25 to 1.50 litres

Concrete mix: 1.50 to 1.75 litres

To use as concrete add 10kg of 10mm pea shingle (avoid limestone) to each 25kg bag of Super C.

Mixing

Excess mixing water should not be used. When mechanical mixing is used wet down the mixing vessel then drain all free water. Add the measured quantity of mixing water. Add the full bag of Super C. Mix for at least one minute. Suitable mixers include a slow speed high torque drill and Mortar Stirrer.

For mixing at temperatures below 5°C, pre-warm the mixing vessel with warm water and use warm mixing water. Suitable water temperatures are approximately 25-30°C.

Placing And Setting Frames

Place the mixed mortar as soon as mixing is complete. The chemical setting of Super C is rapid and all mixed material should be placed within 10 minutes of adding the mixing water. Set frames by "the drop bed method" or by shimming with hard ceramic tiles to line and level followed by "mortar packing". The mortar should be fully compacted to obtain maximum strength. In both methods the mortar may be face finished using normal steel trowelling. Once the frame has been set, the outer area can be filled to the required thickness using Super C as either a mortar or concrete mix.

Repair of Concrete

Apply the Super C to the repair area and use a gloved hand to place mortar behind steel and into narrow corners and edges. Full compaction may be achieved using a dampened steel trowel or tamping bar. Thick sections may be built up in layers, the additional layer being placed as soon as the previous material has hardened sufficiently not to distort with additional work.

Curing

No special curing is required at temperatures between 5°C and 35°C. For placing temperatures outside this range contact the Technical Service Department. The reinstatement of road surfaces may be undertaken within one hour of placing. The road may be opened to vehicular traffic within two hours of placing.

Precautions

Health and Safety

Super C is a slight irritant when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

Full health and safety details are given in Product Safety Data Sheet.

Fire

Super C is non-flammable

Yield

Each 25kg bag or tub of Super C will yield approximately 11.5 litres of mixed material at mortar consistency.

Storage And Shelf Life

Super C will have a shelf life of 12 months when kept in dry conditions at a temperature of 5°C to 45°C. Storage at higher temperatures and high humidity may reduce the shelf life.

Packaging And Ordering

Super C is supplied in 25kg valvesack bags and 25kg tubs.

25kg valvesack bags: Product Code DH55

25kg tubs: Product Code DH56

For further information and sales please contact your local Tecroc Products Office as listed below.

Tecroc Products Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Tecroc Products Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Tecroc Products Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.