

## Product Codes

DH50, DH51 Packaging listed overleaf.

## Description

Super FG 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 15N/mm<sup>2</sup> and 23N/mm<sup>2</sup> within 3/4 hour depending on the mix design used.

Super FG is a self contained product only needing to be mixed with water on site to produce a firm mortar. The addition of further water will produce a grout. Addition of aggregate to the grout will produce a workable concrete. The product is chloride free and can be safely used with cast iron and steel units. The mortar can be placed in sections of 8mm 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 coarser grade, Super C 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 and levelling shall be carried out using Super FG as manufactured by Parex Ltd. The product must be stored, handled and placed strictly in accordance with the manufacturer's instructions.

## Quality Assurance

Parex Limited has an integrated business management system. This is externally accredited by UK CARES to BS EN ISO 9001:2015, BS EN ISO 14001:2015, BS ISO 45001:2018 and BES 6001.

## Standards:

Epoxy Putty has been tested in accordance with the relevant parts of the following standard:  
BS 6319

## Typical Grout Properties @ 20°C

### Compressive Strength

**Mortar**, water content 1.5 litres per 25kg Super FG

3/4 Hour	2 Hours	7 Days	28 Days
15N/mm <sup>2</sup>	25N/mm <sup>2</sup>	48N/mm <sup>2</sup>	55N/mm <sup>2</sup>

**Grout**, water content 2.25 litres per 25kg Super FG

3/4Hour	2 Hours	7 Days	8 Days
14N/mm <sup>2</sup>	24N/mm <sup>2</sup>	33N/mm <sup>2</sup>	37N/mm <sup>2</sup>

**Concrete**, water content 2.0 litres per 25kg Super FG

3/4Hour	2 Hours	7 Days	28 Days
13N/mm <sup>2</sup>	23N/mm <sup>2</sup>	34N/mm <sup>2</sup>	37N/mm <sup>2</sup>

Density:	2200kg/m <sup>3</sup>
Shrinkage:	Volume stable
Bond strength – slant shear:	40N/mm <sup>2</sup>
Mix designs given overleaf.	

## 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.

## Instructions For Use

### Mix Designs

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

Mortar consistency 1.50 to 1.75 litres

Grout consistency 2.00 to 2.25 litres

Concrete mix 1.75 to 2.00 litres

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

### 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 FG. 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 FG 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 FG as either a grout or concrete mix.

### 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 the 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 FG 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 FG is non-flammable.

### Yield

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

### Storage And Shelf Life

Super FG will have a shelf life of 6 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 FG is supplied in 25kg valvesack bags and 25kg tubs

25kg valvesack bags    Product Code DH50

25kg tubs                    Product Code DH51

For further information and sales, please contact your local Parex office as listed below.

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