

# PermaCEM Anchor Grout



## Description

PermaCEM Anchor Grout is a premixed cementitious shrink compensated anchoring grout with a specially developed blend of polymeric reinforcing resins. PermaCEM Anchor Grout can be applied by a grout injection gun or by trowel into surfaces to bond masonry and steel components.

PermaCEM Anchor Grout's unique formulation requires only the addition of a measured amount of clean water to produce a high strength cementitious anchoring and stitching grout.

Once injected PermaCEM Anchor Grout will tighten in the anchor hole and fix the bolt, tie or other unit into the substrate.

PermaCEM Anchor Grout is suitable for fixing into most construction materials including concrete, rock, brickwork, masonry blockwork or other substrates capable of carrying the design load.

PermaCEM Anchor Grout can be used to fix:

- Helical Spiral Stitching Bars
- Anchors, Bolts and Starter Bars
- Masonry Reinforcing Bars
- Remedial Wall Ties

## Advantages

- Single component, simply add water on site to create cohesive anchoring grout.
- Conforms to EN 998-2: 2010.
- High early strength develops 30% compressive strength after 24 hours.
- High strength, sets at 60 mpa.
- Cementitious and therefore performs in fire conditions similarly to concrete.
- Delivery cartridges can be cleaned with water and reused many times.
- A true non-gaseous grout, free of bleeding and settlement with long term stability over a wide range of temperatures.
- Good cohesive fluidity, whilst remaining thixotropic, for easy application in difficult access areas.
- Shrink compensated and maintains maximum contact with bearing surfaces.
- Mixes with clean water so as much or as little that is required can be mixed at one time.
- All in one product, no need for additives or separate liquid admixtures.

## Preparation

All holes/ voids shall be clean and free of dust and residue from the drilling/ cutting operation. Holes shall be pre-wetted with a spray lance at least within one hour of the grout insertion and the surface contact area must be in a moist condition throughout placement. Very dry materials should receive a second wetting to further reduce initial suction. Surface water should be removed or allowed to drain before application.

## Mixing

Clean water should be added at a rate of 200ml per 1kg of grout, and mixed with a grout mixer for 2 minutes. This will produce a smooth and cohesive grout. Do not add more than the specified quantity of water otherwise loss of properties will result.

Care should be taken not to mix more PermaCEM Anchor Grout than can be used in 20-30 minutes from mixing. Prior to each cartridge loading, the material in the pail should be re-mixed to maintain grout workability.

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## Placing

### Anchors, Bolts, Ties

Load the mixed PermaCEM Anchor Grout into the cartridge of the injection gun. Use an extension tube for the cartridge to allow filling of the hole from the bottom to the mouth.

Immediately after placing PermaCEM Anchor Grout, insert the bolt, bar, wall tie, slotting or other fixing. Gently agitate the inserted fixing to ensure complete contact by the anchor grout. Once placed do not disturb before the anchor grout has hardened.

For best tensile anchorage results a minimum embedment depth of 100mm is recommended. Hole diameters may be varied but a minimum of 2mm all-round clearance should be used. This clearance may be increased for ease of placing fixings into deep holes.

### Stitching Bars

Load the mixed PermaCEM Anchor Grout into the cartridge of the injection gun. Use a thin nozzle for the cartridge to allow filling of the chase from the back. In general place a 10mm bead into the chase, then immediately after placing insert the masonry reinforcing bars/ helical spiral bars. Gently tap the inserted fixing into the grout to ensure complete contact by the anchor grout. Immediately apply a second 10mm bead over the top of the reinforcement bar and allow to dry. Once placed do not disturb before the anchor grout has hardened.

In both scenarios each cartridge filling should be used within 5 minutes. The total working life of the mix will be approximately 30 minutes. Prior to each cartridge loading, the material in the pail should be re-mixed to maintain grout workability.

### Application Notes

In all scenarios PermaCEM Anchor Grout should be installed into a clean damp substrate that has been prewetted as per the preparation section. Never install into dry masonry.

PermaCEM Anchor Grout has a total working life of approximately 30 minutes. Prior to each cartridge loading, the material in the pail should be re-mixed to maintain grout workability.

PermaCEM Anchor Grout should not be applied to frost filled surfaces or when the temperature is 5°C and falling or 25°C and rising.

### Curing

PermaCEM Anchor Grout is a cement based anchoring grout so will dry with the same characteristics as concrete. It is essential that the grout does not dry too fast as cracking could occur.

## Technical Properties

Mechanical strength profile (+20°C / 90% RH) (Mpa)			
Age/ days	1	7	28
Compressive	20	50	60
Flexural	3	6	7

EN 998-2 Designed general purpose masonry mortar for external use in elements subject to structural requirements		
Compressive strength	EN 1015-11	Class M50
Chloride ion content	EN 196-2	0.02%
Adhesive bond	EN 998-2	≥ 0.15MPa
Water absorption	EN 1015-8	0.135 kg/(m <sup>2</sup> .min <sup>0.5</sup> )
Water vapour permeability	EN 998-2	P=50%1.11 [W/(m.K)] P=90%1.21 [W/(m.K)]
Density	EN 1015-10	2150kg/m <sup>3</sup>
Thermal conductivity	15/35μ	
Durability	Suitable for constructions subjected to severe exposure	
Dangerous substances	Complies	
Reaction to fire	Euroclass A1	

### Packaging

5kg (3 litre), 10kg (6 litre) and 25kg (15 litre) buckets.

### Coverage

Approximately one 3 litre (5kg) bucket per 5 - 8 x 1 m long Helical Bars.

1 Litre of mixed PermaCEM Anchor Grout will fill approximately one hundred 10mm x 100mm round holes.

### Storage and Shelf Life

PermaCEM Anchor Grout has a minimum shelf life of 12 months in the original bucket fully sealed, when kept in dry conditions at a temperature of 5°C to 25°C.

### Health and Safety

Refer to latest health and safety data sheet.