

# Construction Grout

**Economical, class A shrinkage compensated grout (10 mm to 100 mm thickness)**

## SECTION A: GENERAL COMMENTS

This method statement should be read in conjunction with the "Application Instructions" section of the relevant Technical Data Sheet(s). Please refer to Parchem for advice on selection of the most appropriate product for your application.

### HIGH AND LOW TEMPERATURE WORKING

It is suggested that, for temperatures above 35°C or below 10°C, the following guidelines are adopted as good working practise:

- I. Store unmixed materials in dry conditions, in original unopened packs, avoiding exposure to direct sunlight.
- II. In high temperature environments, keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment that come into direct contact with the material itself.
- III. Try to avoid application during the hottest times of the day, arrange temporary shading as necessary.
- IV. At lower temperatures, *Construction Grout* should be applied only when the substrate temperature and the ambient temperature is above 5°C and rising.
- V. Make sufficient material, plant and labour available to ensure that application is a continuous process.

### EQUIPMENT

It is suggested that the following list of equipment is adopted as a minimum requirement for the correct application of this material (N.B. Product users must adhere to current OH&S requirements applicable to their site and all statutory legislation):

Protective clothing : - Protective overalls, safety helmet and safety shoes  
 - Good quality gloves, goggles and face mask

Preparation equipment : - Electric / pneumatic breaker

Mixing equipment : - Measuring jug  
 - 1 KW slow speed drill, 400 or 500 rpm, plus Parchem mixing paddle and mixing pail, or  
 - Festo drill fitted with Parchem mixing paddle and mixing pail

Application equipment : - Formwork  
 - Pouring or proprietary pumping equipment

### APPLICATION – POINTS OF NOTE

Parchem operates a policy to encourage the use, where possible, of recommended applicators, since the long-term performance of the materials is dependant upon proper application. For contractors who wish to apply the materials themselves, Parchem is also able to offer technical assistance.

## SECTION B: APPLICATION METHOD

### 1.0 SUBSTRATE PREPARATION

Attention to full and proper preparation is essential to successful grouting.

1.1 The substrate shall be scabbled to provide a clean surface, free from laitance, oil, grease and any other contamination.

1.2 Bolt holes or fixing pockets must be blown clean of any dirt or debris.

### 2.0 BEARING PLATE / BASE PLATE

2.1 The underside of the base plate should be clean and free from oil, grease, rust, scale, or other loosely adherent material.

2.2 It may be necessary to provide air-pressure relief holes to allow venting of any isolated high spots.

2.3 The base plate shall be located to line and level and braced to minimise movement of the baseplate during the cure period of the grout. If levelling shims are to be removed once the grout has hardened, then they should be pre-treated with a thin layer of grease.

### 3.0 FORMWORK - GENERAL

3.1 Before fixing any formwork, ensure that the area to be grouted is clean.

3.2 The formwork shall be designed so that the grout must flow beneath the base plate to reach the side furthest from the pouring hopper and not have any easier routes around the sides.

3.3 The formwork itself must be constructed to be leak-proof, to prevent any possible grout loss. This can be achieved by using a foam rubber strip or Parchem *Construction Silicone* beneath the formwork, and at any joints of the formwork. It shall, however, also be provided with drain holes and plugs.

3.4 Grouting of holding-down bolts at the same time as under-plate grouting shall not be allowed. All bolt pockets and sleeves shall be grouted with a proprietary anchoring material, such as Resibolt EASE.

3.5 The formwork shall be constructed in such a way as to keep the final, unrestrained surface area of the grout to a minimum, to avoid problems with cracking at a later stage. Wherever possible unrestrained "shoulders" are to be avoided. These have a tendency to crack and / or debond, due to their unrestrained nature.

3.6 Formwork will be coated with a suitable mould release agent where necessary to enable the easy removal of the shuttering. It should be done in such a way as to allow easy stripping, without causing damage or distress to the grout – particularly if this is to be done whilst the grout is still 'green'.

3.7 All dirt and debris are to be removed from the grout area before the last piece of formwork is fixed, to facilitate pre-soaking (see below).

### 4.0 FORMWORK - GEOMETRY

#### 4.1 POURING SIDE

- set up so that grout will be poured the shortest distance across the base plate
- erected a maximum of 150 mm from the base plate edge
- erected a minimum of 150 mm higher than the underside of the base plate

#### 4.2 OPEN SIDE

- set up directly opposite the pouring side
- erected a maximum of 50 mm from plate edge
- erected a minimum 25 mm higher than the underside of the base plate

## 4.3 FLANKING SIDES

- set up flush with the plate edge
- close attention to 'grout tightness' of the formwork

## 5.0 PRE-SOAKING

- 5.1 All concrete surfaces within the formwork should be saturated with clean, fresh water for several hours prior to grouting.
- 5.2 Immediately before grouting takes place, any free water should be removed using an air lance and the shutter checked for stability.

## 6.0 MIXING

- 6.1 For best results a mechanically powered grout mixer should be used – do not use a colloidal impeller mixer.
- 6.2 For small quantities of grout a slow speed drill (400/500 rpm) fitted with a high shear paddle is acceptable, but mixing should be restricted to one bag at a time in a container of minimum capacity 20 litres.
- 6.3 The quantity of clean water, required to be added to a 20 kg bag of *Construction Grout* to achieve the desired consistency is:
- |               |                   |
|---------------|-------------------|
| - Dry Pack    | 2.0 to 2.4 litres |
| - Trowellable | 2.4 to 3.2 litres |
| - Flowable    | 3.2 to 4.0 litres |

Carefully measure out appropriate quantity of clean water and pour into the mixing vessel first.

- 6.4 Slowly add the full pack of *Construction Grout* powder to the water and mix continuously for 3- 5 minutes, until a smooth, free flowing consistency is obtained.
- 6.5 Under no circumstances should part bags be used, or additional water employed. Either of these two actions will change the water:powder ratio, adversely affecting material performance and automatically invalidating Parchem's standard product guarantee.

## 7.0 PLACING

- 7.1 It is essential that the machine mixing capacity, material supply and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank, with provision for gentle agitation to maintain fluidity.
- 7.2 Immediately prior to placement, the mixed grout should be briefly agitated to release any surface tension. At 25°C, place the grout within 15 minutes of mixing to gain the full benefit of the expansion process.
- 7.3 The grout shall be placed in accordance with good grouting practise and within the time restraints of the selected product.
- 7.4 *Construction Grout* can be placed in thicknesses from 10 mm minimum up to 100 mm in a single pour when used as an under-plate grout. For thicker sections, it is necessary to fill / bulk out *Construction Grout* with well graded, silt free aggregate such as *Conbextra Grout Aggregate*, to minimise heat build up. Filling / bulking out of the grout should not exceed a ratio of 2:1 grout to aggregate (N.B. the addition of aggregate will change the characteristics and properties of the grout).
- 7.5 Any bolt pockets must be grouted / anchored, prior to grouting between the substrate and the base plate.
- 7.6 Continuous grout flow during the grouting operation is essential. Sufficient grout must be available prior to starting, and time taken to pour a batch must be regulated to the time taken to prepare the next one.
- 7.7 The mixed grout should be poured only from one side of the void to eliminate the entrapment of air, or surplus pre-soaking water. The grout head must be maintained at all times so that a continuous grout front is achieved.
- 7.8 When the grout reaches the open side of the formwork, and rises above the underside of the base plate, pouring should continue slowly down the length of the base plate until completed.

7.9 If any leaks occur from the formwork shuttering these shall be immediately plugged with an appropriate quick setting compound such as *Vandex Plug*.

## 8.0 CURING

8.1 Following the grouting operation, the formwork shall be left in place for a minimum of 24 hours if ambient and substrate temperatures are above 10°C and a minimum of 48 hours if the temperatures are 5-10°C.

8.2 On completion of the grouting operation, all exposed areas of grout should be thoroughly cured. For best results use of a *Fosroc Concure* curing membrane is recommended. Alternatively, the grout may be cured via continuous application of water and / or wet hessian for a period of 7 days.

8.3 Once formwork is removed, all exposed faces of the grout should be thoroughly cured as per section 8.2.

## SECTION C: IMPORTANT INFORMATION

This method statement is offered by Parchem as a 'standard proposal' for the application of *Construction Grout*. It remains the responsibility of the Customer to determine the correct method for any given application.

Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



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<b>METHOD STATEMENT</b>	<b>APRIL 09</b>			
<a href="http://www.parchem.com.au">www.parchem.com.au</a>	<b>7 Lucca Road, Wyong NSW 2259</b>	<b>Phone 1300 737 787</b>		ABN 80 069 961 968 <b>4</b>