

Method Statement

Cebex 100

A: General Comments

This method statement should be read in conjunction with the “*Application criteria*” section of Cebex 100 data sheet. Please refer to the local Fosroc office for advice on selection of the most appropriate product for your application.

High temperature working

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

- (i) Store unmixed materials in a cool (preferably temperature controlled) environment, avoiding exposure to direct sunlight.
- (ii) Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- (iii) Try to avoid application during the hottest times of the day.
- (iv) 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 :

Protective clothing	:	Protective overalls
	:	Good quality gloves, goggles and face mask
Preparation equipment	:	Electric or pneumatic breaker
	:	Hammer and chisel
Mixing equipment	:	Measuring jug
	:	1 KW slow speed drill, 400 or 500 rpm, plus
	:	Fosroc mixing paddle and mixing vessel, or
	:	Forced-action mixer, fitted with a suitable paddle
Application equipment	:	Formwork
	:	Pouring equipment

Application - points of note

Fosroc operates a policy to encourage the use, where possible, of approved or licensed applicators. This ensures that works are completed satisfactorily so that the long term performance of the materials is assured.

B: Application Method

1.0 Surface Preparation

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

- 1.1 The substrate surface must be free from oil, grease or any loosely adherent material.
- 1.2 If the concrete surface is defective or has laitance, it must be cut back to a sound base.
- 1.3 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 Ensure that the gap width to be grouted is within the parameters of the selected product i.e. between the minimum and maximum values stated on the relevant data sheet. This should be checked across the entire area of the base plate, taking into account all high spots and low spots.
- 2.3 It may be necessary to provide air pressure relief holes to allow venting of any isolated high spots.
- 2.4 If leveling 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 itself must be constructed to be leakproof, to prevent any possible grout loss. This can be achieved by using foam rubber strip or mastic sealant beneath the formwork, and at any joints in the formwork. It shall, however, also be provided with drain holes and plugs.
- 3.3 The formwork should also 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.
- 3.4 It should be fixed 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'.
- 3.5 All dirt and debris 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

(See sketch AGF/SK/99/001 - last page)

- 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 the plate edge
 - erected a minimum of 25 mm from the underside of the 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 area should be saturated with clean, fresh water for a minimum period of 24 hours prior to grouting.
- 5.2 Immediately before grouting takes place, any free water should be removed. Particular care should be taken to blow out all bolt holes and pockets.

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 - 22 litres.
- 6.3 Measure out the full quantity of water (see "*Water addition*" in the "**Dosage**" section of the data sheet) into the mixing vessel.
- 6.4 Slowly add the full quantity of powder to the water and mix continuously for 3 to 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 Fosroc'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. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process.
- 7.3 Any bolt pockets must be grouted prior to grouting between the substrate and the base plate.
- 7.4 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.
- 7.5 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.
- 7.6 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.

8.0 Finishing

- 8.1 Wherever possible unrestrained “shoulders” are to be avoided. These have a tendency to crack and/or debond, due to their unrestrained nature.

9.0 Curing

- 9.1 On completion of the grouting operation, all exposed areas of grout should be thoroughly cured. For best results, curing should be done by means of water application, Concure curing membrane or wet Hessian.

C: Approval and variations

This method statement is offered by Fosroc as a ‘standard proposal’ for Cebex 100. It remains the responsibility of the Engineer to determine the correct method for any given grouting operation.

Where alternative methods are to be used, these must be submitted to Fosroc for approval, in writing, prior to commencement of any work. Fosroc will not accept responsibility or liability for variations to the above method statement under any other condition.