TECHNICAL DATA SHEET

Conbextra GP

General purpose non-shrink cementitious grout

Uses

Conbextra GP is used for general purpose, non-shrink cementitious grouting of gap thicknesses 10 to 75 mm. Recommended applications at flowable consistency include stanchion base plates, bolt pockets and void filling. At trowellable consistency Conbextra GP is recommended for bedding load bearing components.

Advantages

Non-shrink

Simply add correct quantity of water

Can be used at flowable or trowellable consistency

Chloride free

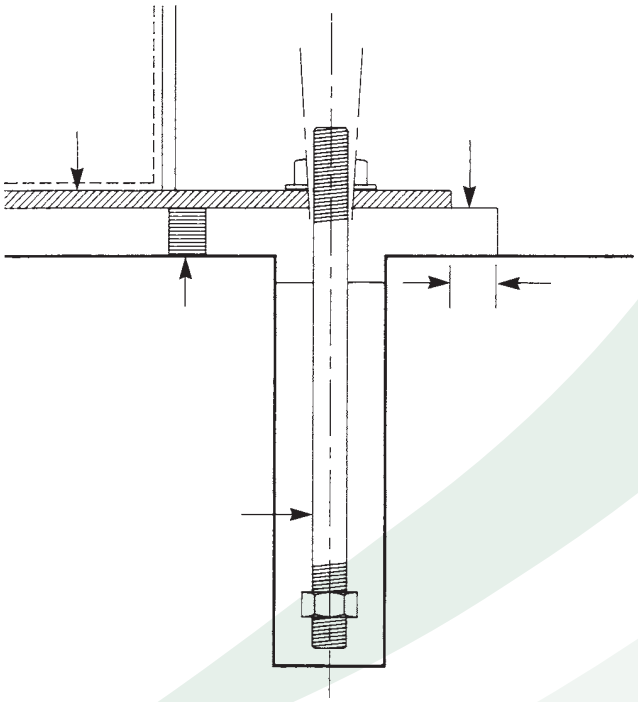
Non-staining

Description

Conbextra GP is supplied as a ready to use dry powder. The addition of a controlled amount of clean water produces a flowing non-shrink grout for gap thicknesses 10 to 75 mm.

Conbextra GP is a blend of Portland cements, graded fillers and chemical additives. The low water demand ensures high early strength. The graded filler is designed to assist uniform mixing and produce a consistent grout.

Typical detail of stanchion base plate



Technical support

Fosroc offers a comprehensive range of high quality, high performance construction products. In addition, Fosroc offers a worldwide technical support and on-site service to specifiers, end-users and contractors.

Properties

The following results were obtained at flowable consistency (ie 4.5 litres of water per 25 kg bag) and at a temperature of 20°C.

Test method for	Typical result
Compressive strength (BS 1881, Part 116: 1983):	26 N/mm² @ 1 day 55 N/mm² @ 7 days 64 N/mm² @ 28 days
Flexural strength (BS 4551: 1980):	2.5 N/mm² @ 1 day 9.0 N/mm² @ 7 days 10.0 N/mm² @ 28 days
Time for expansion —	
Start:	15 minutes
Finish:	2 hours
Fresh wet density:	Approximately 2170 kg/m³ depending on actual consistency used
Young's modulus (ASTM 469-83):	28 kN/mm²
Expansion characteristics:	An expansion of up to 1% overcomes plastic settlement in the unset material

Specification clauses

Performance specification

All grouting must be carried out with pre-packaged non-shrink cementitious grout manufactured and supplied by a registered firm.

It shall be mixed with clean water to the required consistency. The grout must not bleed or segregate.

A volumetric expansion of up to 1% shall occur while the grout is plastic by means of a gaseous system.

The compressive strength of the grout must exceed 40 N/mm² at 7 days and 60 N/mm² at 28 days.

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The compressive strength of the grout must exceed 40 N/mm² at 7 days and 60 N/mm² at 28 days.

The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

Supplier specification

All non-shrink cementitious grouting must be carried out using Conbextra GP manufactured by Fosroc and used in accordance with the manufacturer's data sheet.

Instructions for use

Preparation

Foundation surface

The substrate surface must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes and fixing pockets must be blown clean of any dirt or debris.

Pre-soaking

For a minimum of 2 hours prior to grouting, the area of cleaned foundation should be flooded with fresh water. Immediately before grouting takes place any free water should be removed with particular care being taken to blow out all bolt holes and pockets.

Base plate

It is essential that this is clean and free from oil, grease or scale. Air pressure relief holes should be provided to allow venting of any isolated high spots.

Levelling shims

If these are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

Formwork

The formwork should be constructed to be leakproof. This can be achieved by using foam rubber strip or Silicone Sealant 33 beneath the constructed formwork and between joints.

In some cases it is practical to use a sacrificial semi-dry sand and cement formwork. The formwork should include outlets for pre-soaking.

Unrestrained surface area

This must be kept to a minimum. Generally the gap width between the perimeter formwork and the plate edge should not exceed 150 mm on the pouring side and 50 mm on the opposite side. It is advisable where practical to have no gap at the flank sides.

Mixing and placing

Mixing

For best results a mechanically powered grout mixer should be used. When quantities up to 50 kg are used, a Bosch (or equivalent) 1150 watt, 280/640 rpm, 110 volt drill fitted with a Conbextra mixing paddle is suitable. Larger quantities will require a high shear vane mixer. Do not use a colloidal impeller mixer.

To enable the grouting operation to be carried out continuously, it is essential that sufficient mixing capacity and labour are available. The use of a grout holding tank with provision to gently agitate the grout may be required.

Consistency of grout mix

The quantity of clean water required to be added to a 25 kg bag to achieve the desired consistency is given below.

Trowellable:	3.4 to 3.6 litres
Flowable:	4.0 to 4.5 litres

The selected water content should be accurately measured into the mixer. The total contents of the Conbextra GP bag should be slowly added and continuous mixing should take place for 5 minutes. This will ensure that the grout has a smooth even consistency.

Placing

At 20°C place the grout within 20 minutes of mixing to gain the full benefit of the expansion process.

Conbextra GP can be placed in thicknesses up to 75 mm in a single pour when used as an underplate grout. For thicker sections it is necessary to use Conbextra TS (thick section) grout.

Any bolt pockets must be grouted prior to grouting between the substrate and the base plate.

Continuous grout flow is essential. Sufficient grout must be prepared before starting. The time taken to pour a batch must be regulated to the time to prepare the next one.

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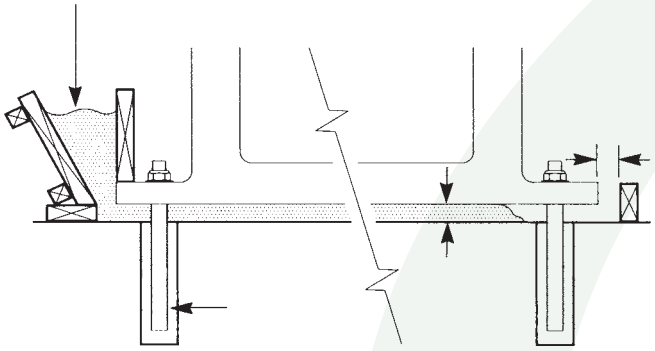
Typical hopper system

Removable hopper: For larger pours the grout may be hand placed or pumped into a removable hopper (trough)

Conbextra GP poured into removable hopper (second stage)



Pouring should be from one side of the void to prevent any air or pre-soaking water becoming trapped under the base plate. It is advisable to pour the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved.

Curing

On completion of the grouting operation, exposed areas should be thoroughly cured with Concure curing membrane, continuous application of water and/or wet hessian.

Cleaning

Conbextra GP should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically, or with Fosroc Acid Etch.

Limitations

Low temperature working

When the air or contact surface temperatures are 5°C or below on a falling thermometer, warm water (30°C to 40°C) is recommended to accelerate strength development.

For ambient temperatures below 10°C the formwork should be kept in place for at least 36 hours.

Normal precautions for winter working with cementitious materials should then be adopted.

High temperature working

At ambient temperatures above 35°C cool water (below 20°C) should be used for mixing the grout prior to placement.

Estimating

Supply

Conbextra GP is supplied in 25 kg moisture resistant bags.

Yield

Allowance should be made for wastage when estimating quantities required. The approximate yield per 25 kg bag is:

Consistency	Trowellable	Flowable
Yield:	12 litres	13.25 litres

Storage

Shelf life

All products have a shelf life of 6 months, if kept in a dry store away from any moisture and in the original, unopened bags or packs in a covered area.

Storage conditions

Store in dry conditions in the original, unopened bags or packs. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to 4 months.

Precautions

Health and safety

Conbextra GP contains cement powders which, when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately — **do not** induce vomiting.

Fire

Conbextra GP is non-flammable.

Conbextra is the trade mark of Fosroc International Limited

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