

Conbextra LJ Grout

constructive solutions

Shrinkage compensated cementitious grout designed specifically for use with Galvashield LJ

Uses

Conbextra LJ is a shrinkage compensated cementitious material used for repair and filling of the gap between the Galvashield LJ system and the surrounded pile/column.

Advantages

- Shrinkage compensated
- Simply add correct quantity of water
- Can be used at flowable or trowellable consistency
- Chloride free
- Non-staining
- Fully compatible with the Galvashield range
- Repairs delaminated concrete and attaches the LJ system in one go

Description

Conbextra LJ is supplied as a ready to use dry powder, requiring only the addition of clean water to produce a flowing, shrinkage compensated grout.

Conbextra LJ is a blend of Portland cement, 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.

Specification clauses

Performance specification

All grouting must be carried out with pre-packaged shrinkage compensated 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. The storage, handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

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 Compressive strength (BS 1881, Part 116: 1983):	Typical result
	18 N/mm ² @ 1 day
	55 N/mm ² @ 7 days
	64 N/mm ² @ 28 days

Flexural strength (BS 6319, Part 3: 1990):	7.0 N/mm ² @ 7 days 13.0 N/mm ² @ 28 days
Young's modulus (BS 6319, Part 6: 1984):	23 kN/mm ²
Time for expansion —	
Start:	15 minutes
Finish:	2 hours
Fresh wet density:	Approximately 2170 kg/m ³ depending on actual consistency used
Expansion characteristics:	An expansion of up to 1% overcomes plastic settlement in the unset material

Application instructions

All areas that are to receive Galvashield LJ and surrounding concrete, should be sound tested to establish the dimensions and extent of breakout required. Breakout concrete which is showing delamination, cracking or which is hollow sounding around visible cracks, via a suitable method. Clean the exposed steel and host concrete using sand/grit blasting to a bright metal finish, removing all residue or marine growth from the proposed installation area. Do not leave any blasted steel unprotected for a period greater than 96 hours prior to Galvashield LJ installation. Wash using clean fresh water immediately prior to jacket installation.

Before application, ensure that all outlets from the jacket including temporary formwork are leak proof. This can be achieved by using a compression joint or Silicone Sealant 33HM. For jackets greater than 2 meters, it may be necessary to pour in a number of smaller stages.

Mixing

For best results a mechanically powered grout mixer should be used. For larger quantities a high shear vane mixer is recommended. 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 grout maybe pumped using a rota stator (worm) pump of suitable capacity.

Water contents

Water content 4.0-4.5 litres of water per bag. The selected water content should be accurately measured into the mixer. Slowly add the total contents of the Conbextra LJ bag and mix continuously for 5 minutes. This will ensure that the grout has a smooth even consistency.

Placing

Conbextra LJ can be pumped from either the top and the bottom of the unit. When pumping from the bottom a 2-

Conbextra LJ grout

inch BSP fitting with a suitable temporary tap is required. When filling is stopped, close the tap and remove the hose, leaving the BSP fitting and tap behind. When pumping from the top the material can be applied direct from the hose. If this is the case then attach the plastic caps to seal the unit. Depending upon the size of the jacket the amount of material that can be applied in a single period will vary. As a general rule, jackets in excess of 2 meters and/or which have poor shuttering, may require pumping in a number of smaller stages. It may be beneficial to cause slight vibration whilst pouring as to get even coverage inside the jacket. If in doubt contact Fosroc who will be able to advise. Once the material has been poured, allow it to cure for a minimum of 24 hours. When pumping from the bottom the taps are removed and replaced by plastic caps. The complete unit can be improved with the application of Renderoc HB25 to create an angled finish of approximately 45° against the column.

Cleaning

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

Estimating

Supply

Conbextra LJ is supplied in 25 kg moisture resistant bags.

Yield

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

Consistency	Flowable
Yield:	13.25 litres

Limitations

Low temperature working

When the air or contact surface temperature is 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.

Storage

Conbextra LJ has a shelf life of 12 months if kept in a dry store in sealed bags. If stored in high temperature and high humidity locations the shelf life may be reduced. Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

Fire

Conbextra LJ is non-flammable.



Fosroc Limited

Drayton Manor Business Park
Coleshill Road, Tamworth,
Staffordshire B78 3TL. UK

www.fosroc.com

Important note

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telephone:
+44 (0) 1827 262222

fax:
+44 (0) 1827 262444

email:
uk@fosroc.com



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