

# Flo-Grout CR

Free flow non-shrink grout for post tensioned cables and anchors



## DESCRIPTION

Flo-Grout CR is a pre-packed powder consisting of selected cement, admixtures and expansive material. Flo-Grout CR reduces the water demand at the desired flow, producing high strength grout with low permeability and excellent bond to steel. The low permeability grout produced will reduce the ingress of harmful agents and will protect the steel from corrosion.

## APPLICATIONS

Flo-Grout CR is ideally designed as free flow grouting in post tensioned cables used in bridges, deck ducts, etc. It is also suitable for use in cable ducts and pre-stressed structural elements.

In addition, Flo-Grout CR can be used in rock bolt anchoring, cable anchors, grouting micropiles and forepoles, as well as retaining wall tie backs.

## ADVANTAGES

- › A non-shrink grout which is compensated for shrinkage and settlement in the plastic stage.
- › An extremely low permeability grout at low water to cement ratio.
- › Reduces the ingress of harmful substances.
- › High bond to steel.
- › High initial and ultimate strength.
- › Chloride and hydrogen free.
- › Flo-Grout CR can be supplied with an Anti-corrosion impregnating additive.

## STANDARDS

Flo-Grout CR complies with standard requirements of:

- › ASTM C1107-02, Type C
- › ASTM C1107-14a, and
- › EN 447.

## METHOD OF USE

### SUBSTRATE PREPARATION

- › Sufficient materials should be available on site to ensure continuous grouting.
- › Cables should be carefully cleaned prior to grouting.
- › Cable anchorage should be sealed prior to duct grouting.

## TECHNICAL PROPERTIES:

Colour:	Grey
Flow: ASTM C939	
	Initial 22 ± 2 sec
@ 30 min after (re-mixing)	23 ± 2 sec
Compressive strength: ASTM C109/109M	≥ 20 MPa @ 1 day ≥ 45 MPa @ 7 days ≥ 50 MPa @ 28 days
Flexural strength: ASTM C348	> 5 MPa @ 28 days
Fresh wet density:	2.0 ± 0.1 g/cm <sup>3</sup>
Bleeding: ASTM C940	Nil
Fresh state height change: ASTM C940	Up to +2%
Hardened state height change: ASTM C1090	Up to +0.3%
Setting time: ASTM C191	Initial set 6 - 8 hr Final set 18 hr

*Note: Typical properties @ 7.5 litre per 25 kg @ 25°C.  
Compressive strength @ 1 day is under restraint.  
Compressive strength @ 7 & 28 days is under wet cure @ 25°C.  
Flexural strength @ 28 days is under wet cure @ 25°C.*

## MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

25 kg of Flo-Grout CR should be added slowly to 7.25 - 8.00 litre of water and mixed continuously for 5 minutes with speed between 500 - 600 rpm until a uniform consistency is obtained.

*Note: For optimum flow, Flo-Grout CR may need conditioning before mixing in very hot or cold climate conditions, also chilled or warm water is recommended to be used for mixing depending on the ambient temperature. (consult DCP Technical department for more information).*

## DCP Saudi Co.

Sulay, Industrial Area, Istanbul St., Riyadh  
Industrial City 3, Jeddah  
Saudi Arabia  
info.saudi@dcp-int.com  
www.dcp-int.com



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## PLACING AND FINISHING

In case of pumping, a suitable diaphragm pump must be used (screw and piston pump may also be suitable).

The mixed grout should be pumped from one point only to eliminate air entrapment. The mixed grout should be pumped within 20 - 30 minutes of mixing.

Please contact your local DCP Technical Representative for further information on the placement of grout, depending on the area of application.

## CURING

Only exposed areas should be properly cured with water.

## CLEANING

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

## PACKAGING

Flo-Grout CR is available in 25 and 50 kg bags.

## YIELD

Approximately 16.25 litre of mixed grout is obtained when mixing 25 kg Flo-Grout CR with 7.5 litre water.

## STORAGE

Flo-Grout CR has a shelf life of 12 months from date of manufacture if stored at temperatures between 5°C and 35°C in original unopened bags.

If these conditions are exceeded, DCP Technical Department should be contacted for advise.

## CAUTIONS

### HEALTH AND SAFETY

Flo-Grout CR contains Portland cement, Flo-Grout CR may cause irritation to skin or eyes.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advise if necessary.

For further information refer to the Material Safety Data Sheet.

### FIRE

Flo-Grout CR is nonflammable.

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- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

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[www.dcp-int.com](http://www.dcp-int.com)

### Note:

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