

Flo-Add C

Free flow non-shrink grout additive for post tensioned cables



Description

Flo-Add C is a pre-packed powder consisting of selected admixtures and expansive material. The addition of Flo-Add C to grout mixes produces high flow, non-shrink, and non-segregated grout.

Flo-Add C reduces the water demand at the desired flow, producing high strength grout with low permeability and excellent bond to the steel. The low permeability grout produced with the aid of Flo-Add C reduces the ingress of harmful agents and protects the cables from corrosion.

Applications

Flo-Add C is ideally designed for 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.

Advantages

- ▲ Will produce a non-shrink grout which is compensated for shrinkage and settlement in the plastic stage.
- ▲ Will produce a high flow grout without water bleeding.
- ▲ Will produce 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 free.

Standards

The use of Flo-Add C enables grout mixes to comply with ASTM C1107, Type A.

Method of Use

- ▲ 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
Compressive strength: ASTM C109	≥ 40 MPa @ 7 days ≥ 60 MPa @ 28 days
Early volume change: ASTM C940	Up to +2.0%
Flow characteristics: ASTM C939	Initial flow ≤ 30 sec Within 30 min from mixing ≤ 30 sec "re-mixing is needed to keep the needed flow"
Bleeding: ASTM C940	Pass, no bleeding
Fresh wet density:	2.1 ± 0.1 g/cm ³
VOC:	< 10 g/ltr

Note: Strength results were obtained when OPC or PPC with compressive strength @ 28 days > 42.5 MPa is used in the mix.

It is important to conduct trials so as to choose the best source of cement and mixing water quantity to achieve the best flow and strength characteristics. Compressive strength specimens should be kept under restraint for the first 24 hours.

Compressive strength at 7 and 28 days should be kept under wet cure.

The material must be re-mixed immediately before placing to insure the best flow characteristics.

Mixing Proportion

Cement	Flo-Add C	Water*	Yield
100 kg	3 kg	35 ± 2 ltr	64 ± 3 ltr

* Actual water quantity depends on the type of cement (i.e. OPC or PPC) as well as the desired flow characteristics. Representative trials should be done onsite to determine the optimum water content, if any bleeding is observed in the mix, water quantity should be reduced.



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Mixing

- ▲ To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.
- ▲ While mixing, add 3 kg of Flo-Add C to 33 - 37 litre of clean water, then slowly add the cement and mix continuously for around 5 - 7 minutes until a uniform consistency is obtained.

Placing and Finishing

In case of pumping, use a suitable diaphragm pump (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 30 minutes of mixing.

Curing

Self curing, only exposed areas should be properly cured with water.

Cleaning

Clean all tools immediately after application using fresh water. Clean hardened materials mechanically.

Packaging

Flo-Add C is available in 6 kg bags.

Yield

Approximately 64 litre of mixed grout is obtained when mixing 3 kg Flo-Add C, 100 kg cement and 35 litre water.

Storage

Flo-Add C 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-Add C is alkaline and should not come into contact with eyes and skin. 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-Add C is nonflammable.

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Note:

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