

MasterRoc[®] FLC

(formerly MEYCO Flowcable)

Shrinkage compensating and plasticizing admixture for anchoring and grouting

Product description

MasterRoc FLC is a product in powder form. It is added to cement at a rate of 3 – 6% by weight of cement to make a pumpable, thixotropic grout with a low water/cement ratio.

MasterRoc FLC contains a very efficient water reducing agent, a shrinkage compensating component and thixotropic agents.

Due to the strong water reduction effect a w/c of approximately 0.25 can be used. This allows the grout to achieve very high early and final strengths. However, at the same time, MasterRoc FLC has a very long working time to enable complete filling of the anchor hole or duct.

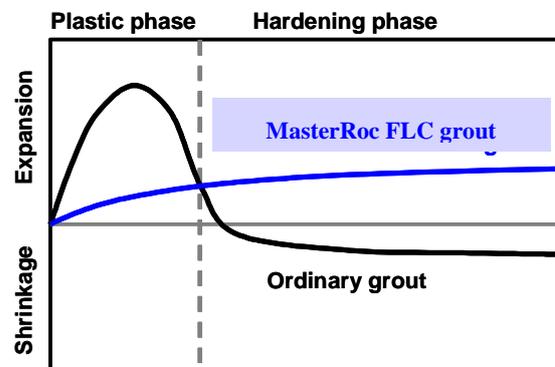
Fields of application

- Rock Bolts
- Anchor and dowel grouting for soil and rock
- Duct and cable grouting

MasterRoc FLC is designed specifically for rock bolts and rock anchors using both, normal steel anchors and tube anchors. It is ideal for overhead applications because of its thixotropic nature.



MasterRoc FLC prevents the grout from running out of the drill hole. This gives a fully grouted and fully bonded anchor. Due to its shrinkage compensating properties, MasterRoc FLC secures the bonding between anchor and rock, and ensures the steel of the anchor or rockbolt is not exposed to chemical attack. In normal cement grouts shrinkage varies according to the water/cement ratio and is usually between 2000 to 3000 microstrain (0.02 – 0.03) which reduces the bonding.



The slight expansion of MasterRoc FLC grout ensures full bonding of steel anchors and rockbolts.

Packaging

MasterRoc FLC is available in 10 kg paper bags.

Technical Data

Typical Strength development
(w/c: 0.25 temperature 20°C)

Age Compressive Strength (N/mm²)

6 hours	>3.0
8 hours	>8.0
10 hours	>12.0
24 hours	>30.0
28 days	>70.0

Form pale grey powder

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pH value	>12 as grout mix (as with all cement grouts)
Solubility	low
Added Chloride	zero

Application procedure

MIXING

25 litres of potable water

5 kg of MasterRoc FLC

100 kg cement

1. Add approximately 95% of the water into the mixer
2. Add 5 kg MasterRoc FLC into the running mixer
3. Slowly add the 100 kg of cement into the running mixer. Mix for 3 minutes until a lump free mixture is formed and adjust to final workability with the remaining water.

Preparation

1. Always use a stiff PVC tube to pump the grout. A normal pump grout should be used (i.e. small piston or worm pump).
2. Flush anchor holes with air or water before installation of the anchors.

Pre-grouted anchors

1. Place the PVC hose in the bottom of the drill hole.
2. Start pumping.
3. Withdraw the pipe slowly. To ensure complete filling of the hole some surplus grout should be allowed to flow out of the hole when the anchor is installed.

4. The thixotropic nature of the grout will ensure that it stays in the hole, even overhead.

5. Install the anchor and lock it into position so that it cannot move.

Pre-grouted anchors, tube anchors:

1. Connect the hose to the anchor and start pumping.
2. Continue until the grout is squeezed out between the disc and the rock. When grouting tube anchors, it may be necessary to make the grout more fluid. However, ensure that the grout is pumped into the hole and does not flow into it or there may be a risk of incomplete filling.

Storage

If stored in unopened bags in a dry cool place MasterRoc FLC has a shelf life of at least 12 months. Do not use the product if the bag has been opened for more than one month.

Safety precautions

MasterRoc FLC is highly alkaline when wet. Avoid contact with the skin and eyes. Wash skin contact with soap and water. Should eye contact occur flush with plenty of clean water and seek medical advice.

During handling wear eye protection and a dust mask. The use of suitable gloves and/or a barrier cream is recommended.

TDS Ref. No: M'Roc FLC/01/0313

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The Chemical Company

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