

POLYGROUT MC

Free-Falwing, Non-Shring, Micro-Concrete

Product Description

POLY GROUT MC is ready to use cement based compound, which requires only addition of water to produce high performance free flowing, non-shrink micro-concrete.

Typical Application

POLY GROUT MC is formulated from applications where micro concrete is needed to be pumped or poured into restricted spaces. Typical applications include grouting, bedding for the following:

- Structural elements such as recast walls, beams & columns.
- Milling equipment.
- Gas & steam turbines.
- Crane rails.
- Filling voids around doorframes, recast walls & panels.
- Narrow or confined areas in concrete structures.
- Reinstatement of damaged, affected concrete by partial or total replacement.
- Anchor bolts.
- It is recommended to be used for sections exceeding 60mm.

Product Features

- Fiber reinforced cementations grout, with none staining.
- Easy to use, just requires the on-site addition of water.
- Excellent flow ability, which facilitates complete filling of narrow voids.
- Shrinkage compensated system.
- Contains special graded hard inert aggregates which enhance pump ability reduces segregation.
- High bond strength to steel as well as concrete .
- Durable concrete with low permeability.
- Carbonation & chloride ingress resistant.
- Excellent thermal compatibility with the concrete substrate .
- Provides early strength development.
- Formulated to be suitable for the Middle east conditions.

Standards

POLY GROUT MC complies with
The requirements of ASTM C 1107, CRD C621

Properties

Appearance

Grey powder free from lumps

Fresh wet Specific Gravity

2,20+- 0,05 @ 20°C

Chloride Content

Nil

Setting Time

Initial: 3 hours.

Final: 5 hours.

Linear coefficient of Thermal

Expansion

$11 \times 10^{-6} / 0 C$

Expansion Behavior

The expansion will occur during plastic state between 20-120min at @ 20 ° C, this duration will be decreased in higher temperatures.

POLY GROUT MC is recommended to be used within this period.

Volume Change (Unrestrained)

Tested according to ASTM C -827

1-2 % by volume

Expansion

(ASTM C- 827)

+ 0, 02% AFTER 28 DAYS

Bond Strength.

- To concrete

6,8 N/mm² after 28 days (by the load applied to cause depending of the contact surface.

- To steel

21N/mm² after 28 days (pull -out test)

Compressive Strength

(ASTM C -942)

After 24 hours:

45 N/mm² (Plastic Consistency)
30 N/mm² (Flow able Consistency)

After 3 days:

60 N/mm² (Plastic Consistency)
43 N/mm² (Flow able Consistency)

After 7 days:

70 N/mm² (Plastic Consistency)
51 N/mm² (Flow able Consistency)

After 28 days

83 N/mm² (Plastic Consistency)
70 N/mm² (Flow able Consistency)

Flexural Strength

(ASTM C-78)

After 7days:

7.1 N/mm²

After 28 days:

8.7 N/mm²

Resistance to temperatures

High Temperatures

It can withstand to high temperatures, up to 405^oC for long period without deterioration.

Low Temperatures

It passes 310 freeze/thaw cycles

Guide for Applications

Surface Preparation

The surfaces should be clean, sound, free from oil & grease and contaminants.

Mixing

The exact amount of water added to the pre-mixed powder in a quantity sufficient to achieve the required consistency.

Plastic Mix Consistency

3.5 lit. /25 kg bag

Foldable Mix Consistency

4.75 Lit. / 25 kg bag.

Use clean, potable water for mixing. Place carefully the measured water into the mixing container, and then add Powder gradually. Use a mechanical mixer of low speed drill, mix for approximately 5 minutes until a smooth even consistency is achieved.

It is not recommended to mix more than what can be placed in 60 mm. and no remembering (Adding water) to restore workability.

Placement

Flow able grout should be placed continuously from one side, avoiding the entrapment of air pockets.

Provide vent holes for large base plates. Voids should be removed rodding, strapping or vibrating, (avoid excess vibration).

Yield

12.7-13 liters/25 kg (bag) depending upon consistency achieved.
78 bags after mixing with water will yield one cubic meter.

Curing

After placement, keep exposed surface damp. Cure grout at least three days by applying a membrane curing compound such as POLYCURE WB (See separate data sheet).

Protect the placed micro concrete from extreme heat or cold & drying for at least 3 days.

Cleaning

Clean all the tools and the equipments immediately after use with clean water.

Packaging

POLY GROUT MC is supplied in 25 kg well sealed bag.

Shelf Life

12 months when stored as recommended.

Storage

It should be kept in dry warehouse away from any source of moisture.

Guarantee / Warranty

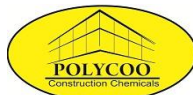
We warrant our products to be of good quality and manufactured to rigid standards. This warranty is in lieu of any and all other warranties expressed or implied.

This data sheet is published for information only. It is believed to be correct but no liability is accepted for it or the suitability of the product for any particular purpose.

POLYCOO services are free and the company dose not accepts liability for any loss arising from it.

Technical Services

For any further technical advice and recommendation for the use of all POLYCOO products, please consult the nearest POLYCOO technical office.



Under technical collaboration with

Polycoo Industries Ltd.

Sole distributor in Egypt: Polycoo Company

www.polycoo.com

5 Kamel Sedki Street, Ramsis Square, Cairo, Egypt

Sales Tel.: ++202-5918653/++2025918053/++20-122-3102700 Fax: ++202-5918053