



Multi-purpose, Cement-based Non-shrink Grout

Description

Grout GP is a high performance, non-shrink, non-metallic and non-corrosive, high fluidity grout that is designed to provide controlled, positive expansion with high strength values that does not cause shrinking, disintegration and bleeding.

Grout GP incorporates specially graded aggregates and advanced new generation polymers to give a cementitious grout that can be used for gap thicknesses from 10 - 100 mm.

Uses

- General purpose grouting applications.
- Anchoring works.
- Base plates, machine plates, equipment support.
- Fixing columns to the foundation in steel structures.
- For fixing crane rails and machinery to concrete.
- Road and bridge connections.
- Caulking of joints and pipes.

Characteristics / Advantages

- Versatile - packable, pourable, pumpable.
- Positive expansion in plastic state.
- Shrinkage compensated in hardened state.
- High strength.
- Suitable for applications from (10 – 100) mm.
- Easy to prepare and apply.
- Resistant to water, frost, and severe weather conditions.
- High adherence performance and strength.
- Resistant to chloride and sulphate attack.
- Does not cause cracks or shrinkage.
- Protects steel reinforcement against corrosion.

Standard Compliance

- **ASTM C1107/C1107M – 20**



Typical Properties

Fresh Properties

Color / Appearance	: Grey powder
Maximum Aggregate Size	: 1.0 mm
Application Thickness	: 12 - 100 mm
Fresh Wet Density	: 2.32 g/ml
Time for Expansion	: Start 15 - 20 minutes Finish 1.5 – 2 hours
Water Ratio	: Flowable 3.5 Liters Fluid 4.3 Liters
Yield / 25 kg Bag	: Flowable ~12 Liters Fluid ~12.5 Liters
Early Age Height Change (ASTM C827/C827M)	: ≥ 1.5%

Hardened Properties

	Age	Flowable	Fluid
Compressive Strength	: 7 days	≥ 67 MPa	≥ 60 MPa
ASTM C109/C109M	28 days	≥ 85 MPa	≥ 70 MPa
Flexural Strength	: 7 days	≥ 9 MPa	≥ 7 MPa
ASTM C348	28 days	≥ 14 MPa	≥ 12 MPa
Hardened Height Change (ASTM C1090/C1090M)	: ≥ 1.5%		

Application Instructions

1. Substrate Temperature

+5°C to +40°C

2. Surface Preparation

Concrete surfaces should be clean, sound and free from oil, grease, cement laitance and all loosely adhering particles.

Thoroughly saturate the surface of the concrete with clean water to provide a saturated surface dry condition (SSD). Poor quality concrete may require soaking for a significant length of time. Any surface water should be removed using an oil free compressed air jet. Metal surfaces (iron and steel) should be free from scale, rust oil and grease.

3. Mixing

Grout GP requires between 3.5 – 4.0 liters of potable water per 25 kg bag, depending on the desired consistency.



MICSHIELD™



Grout GP

For optimum results, mixing should be performed using a proprietary grout mixer or, for small amounts a forced action high-shear stirrer powered by a heavy-duty electric mixing drill.

- Add the pre-measured amount of water to a clean mixing bucket.
- Add the **Grout GP** powder slowly to the water whilst mixing and mix continuously for 3 – 5 minutes until a smooth, homogenous, lumps-free consistency is achieved. Allow the mixed material to stand for 1 – 2 minutes prior to use.

It is essential that the grouting operation is continuous hence ensure sufficient labor and mixing capacity is available.

4. Application

The desired ambient temperature for pouring is approximately 20°C. At this temperature it is essential the grout is placed within 25 minutes of mixing as this will ensure the expansion process is maximized.

The following shall be done to ensure the entire grouted area is filled completely:

- Ensure all formwork is leak free.
- Use a suitable head box to ensure continuous flow of grout.
- Place / pour grout from one side, minimizing the likelihood of trapped air.
- The grout head must be always maintained so that a continuous grout front is achieved.
- Do not use mechanical vibrators to assist in flow as this will cause segregation of aggregate.
- Discard any material that shows signs of stiffening.

5. Cleaning

All mixing and application equipment should be cleaned immediately with clean water. Hardened material should be mechanically removed.

6. Curing

Treat exposed surfaces with a curing compound or use other approved curing methods such as polyethylene sheeting or wet hessian.

Packaging

Grout GP is supplied in 25 kg bags.

Shelf Life and Storage

Grout GP has a shelf life of 12 months when stored in its original unopened packing in cool and dry conditions, protected from direct sunlight, heat and moisture.

Shelf life may reduce if the recommended storage conditions are not followed.

Safety Instructions

Grout GP contains hydraulic cement and may cause irritation to skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage and disposal of the product.

Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions store the material in a cool environment prior to mixing and use chilled mixing water.

This Product is Environmentally Friendly



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Manaseer Industrial Complex
is a member of US Green Building

