



FLOWFILL GROUT GP MY

MULTI-PURPOSE NON-SHRINK CEMENTITIOUS GROUT

KEY FEATURES

- Gaseous expansion system compensates for shrinkage and settlement whilst in the plastic state
- Can be dry packed, rammed, trowelled, poured and pumped
- Economical, low in place cost
- Ready to use, premixed, requires only the addition of water
- No metallic iron content to cause staining
- Lower water / cement ratio reduces drying shrinkage, permeability and increases durability
- Excellent flow characteristics, when used in fluid consistency, will fill intricate cavities
- Complete void filling resulting from gaseous expansion in plastic state

DESCRIPTION

Flowfill Grout GP MY is a multi-purpose non-shrink Class-A cementitious grout. It is based on portland cement, graded aggregate and chemical additives, which impart controlled expansion whilst in the plastic state. The gaseous expansion system compensates for shrinkage and settlement in the plastic state.

RECOMMENDED USES

- All general purpose grouting
- Precast and prestressed panels
- Grouting in column based, base infilling
- Fill core holes, rod holes and defects in concrete
- Fill in grout for hollow block walls
- Joints between precast panels and other joints
- Till slab panels
- Caulking of joints and pipe

SURFACE PREPARATION

The substrate surface must be clean, sound and free from oil, grease, curing compound or any loose materials. It must be mechanically abraded back to a sound concrete. Bolts or anchor holes must be clean and free from dust or loose material. This can be achieved by blowing clean the hole.

PERFORMANCE PROPERTIES

Typical result for Flowfill Grout GP MY added with 8 to 10mm chipping

Powder / Chipping Ratio	1 : 1
Water Consumption	5.0L /25kg powder
Compressive Strength	
- 1 day	~ 20N/mm ²
- 7 days	~ 50N/mm ²
- 28 days	~ 60N/mm ²
ASTM C109 (50 x 50 x 50mm)	
Flexural Strength	
- 1 day	~ 5.0N/mm ²
- 7 days	~ 7.0N/mm ²
- 28 days	~ 8.0N/mm ²
ASTM C348 (40 x 40 x 160mm)	

Pre-soaking

It is essential to pre-soak the concrete substrate prior to application of Flowfill Grout GP MY. Pre-soak substrate with water for a minimum of 6 hours prior to grouting. Immediately before pouring, the excess water should be removed. All water in the anchor and bolt holes must be blown out and no traces of free water present whilst grouting.

Base Plate

All traces of rust, oil or grease must be removed. It is essential to provide air pressure relief holes for venting.

Formwork

It is essential that the formwork shall be leak proof, water tight and constructed to facilitate rapid continuous and complete filling at area to be grouted. Foam rubber strips or suitable sealants underneath the formwork are recommended. Formwork should allow gravity flow of grout between the base plate and foundation ensuring grout is kept in full contact with base plate and concrete substrate.

Unrestrained Surface

As Flowfill Grout GP MY is an expanding grout, unrestrained areas must be kept to minimum. It is advisable not to have any unrestrained areas.

PERFORMANCE PROPERTIES

Typical properties conducted at 25°C

Description	Standard	Dry Pack	Trowellable	Flowable
Water mixing ratio		2.9 to 3.4 L per bag	3.5 to 4.0L per bag	4.1 to 5.0L per bag
Flow Consistency	ASTM C939 ASTM C230	~ 230mm	~ 255mm	10 to 30 seconds > 270mm
Initial Set	ASTM C191	3.5 hours	5.0 hours	5.5 hours
Final Set		4.5 hours	7.0 hours	8.0 hours
Bleeding (%)	ASTM C940	0	0	0
Expansion (%)	ASTM C940	~ 1%	~ 1%	~ 1%
Wet Density		~ 2.29 kg/L	~ 2.25 kg/L	~ 2.2 kg/L
Typical Yield		81 bag/m ³	78 bag/m ³	74 bag/m ³
Compressive Strength				
- 1 day	ASTM C109 (50 x 50mm)	40 - 50 N/mm ²	40 - 50 N/mm ²	20 - 30 N/mm ²
- 7 days		65 - 80 N/mm ²	45 - 65 N/mm ²	40 - 50 N/mm ²
- 28 days		75 - 85 N/mm ²	60 - 80 N/mm ²	55 - 70 N/mm ²
Flexural Strength				
- 1 day	ASTM C348 (40 x 40 x 160mm)	7 - 8 N/mm ²	6 - 7 N/mm ²	4 - 6 N/mm ²
- 7 days		9 - 12 N/mm ²	8 - 10 N/mm ²	7 - 8 N/mm ²
- 28 days		13 - 14 N/mm ²	10 - 12 N/mm ²	8 - 10 N/mm ²

Low Temperature Working

Normal precautions for winter working with cementitious materials should then be adopted. At temperatures below 5°C the cure rate and strength development rate will be dramatically reduced. If early strength is required, it is advisable to use heated water and condition Flowfill Grout GP MY to 25°C. Do not exceed this temperature.

High Temperature Working

At temperature above 30°C, it is advisable to use water below 20°C when mixing grout. All materials must be kept cool and away from direct sunlight with installation area to be shaded by erecting shade screens. If ambient temperature are excessive, perform grouting in early morning or late evening.

MIXING

Flowfill Grout GP MY is supplied in a ready to use form, require only the addition of fresh clean water. For optimum results Flowfill Grout GP MY must be mixed with a mechanical forced action mixer with high shear stirrer. It is essential that the grouting operation is continuous hence ensure sufficient labour and mixing capacity is available.

Do Not Mix By Hand

The selected water content should be accurately measured into a mixing vessel. Slowly add the dry powder (Flowfill Grout GP MY) while mixing. The mixing should continue for a maximum of 5 minutes until a uniform homogeneous consistency is obtained.

Do Not Add Additional Water

Discard any unused grout that has stiffened or hardened.

PLACING

It is essential that at ambient temperatures (approximately 20°C) the grout is placed within 25 minutes of mixing and this will ensure the expansion

process will be maximized. Flowfill Grout GP MY can be placed in thickness maximum of 50mm in one single application. For section thicker than 50mm, it is advice to fill the Flowfill Grout GP MY with graded 8 - 10mm chipping to minimise the temperature rise during curing. Avoid trapping air and water by placing grout form on one side only. It is recommended that a suitable head box be used to ensure continuous flow of grout. Ensure entire area to be grouted is filled by bringing level to above underside of machine base plate and remain at this level throughout grout placement. The grout head must be maintained at all times so that a continuous grout front achieved. Do not use mechanical vibrators to assist in flow as this will cause segregation of aggregate. For large areas, it is recommended that Flowfill Grout GP MY be pumped.

CURING

On completion of grouting exposed area should be covered with wet hessian, plastic sheeting or Bostik Bond 'N' Cure to prevent excessive moisture loss. Keep grout covered for a minimum of 24 hours. Remove formwork no sooner than 24 hours after completion of grouting and continue to cure with with hessian, plastic sheeting, water or Bostik Bond 'N' Cure curing agent. Lack of sufficient curing could result in plastic cracking and drying shrinkage on the surface. The surface should be protected for at least 7 days with either a curing compound (Bond 'N' Cure) or wet hessian, plastic sheeting or water.

PRECAUTION

- Do not add additional water other than specified
- For large areas apply grout in continuous operation
- > 5mm minimum per pour
- Unrestrained areas must be kept to a minimum
- Cure time and set will be extended when applied at temperature lower than 5°C

P.A.T.S (PRETESTED ADHESION TO SUBSTRATE)

Consult Bostik representative for further information.

PACKAGING

25kg bag

CLEAN UP

Immediately after use, equipment and tools should be cleaned with clean water.

STORAGE AND SHELF LIFE

All material shall be kept in dry environment completely away from moisture. Flowfill Grout GP MY has a shelf life of approximately 12 months from date of manufacture in original unopened bag.

HEALTH AND SAFETY

Cement products are classified as hazardous under General Health and Safety guidelines, and materials containing Portland Cement are alkaline in nature and during use avoid inhalation of dust, contact with skin and eyes. Suitable protective clothing, dust masks, gloves and eye protection should be worn. Continual or extended contact with cement products can cause skin irritation. If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes. Contact Poison Information Centre or consult medical adviser. For more information, refer to Material Safety Data Sheet.

The information and recommendations relating to the application and end-use of the product are given in good faith and based on tests which we believe to be reliable. Differing materials, substrates, environments, site conditions, and product storage, handling and application may affect results. However, no warranty in respect of merchantability or fitness for a particular purpose, nor any liability arising out of any legal relationship, whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. No guarantee of their accuracy can be made because of the great range of field conditions and variation encountered in raw materials, manufacturing equipment and methods. Thus, the products are sold with limited warranty only, and on condition that purchasers will make their own tests to determine the suitability of the product for their particular purposes. Under no circumstances will Bostik be liable to anyone except for replacement of the products or refund of the purchase price.

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