FLOWFILL GROUT GP

MULTI PURPOSE NONSHRINK CEMENTITIOUS GROUT

YOUR SMART ADVANTAGES

- A general purpose non-shrink (Class A) cementitious grout ideal for most void filling grouting jobs
- Pre-hardening volume-adjusting. Controlled gaseous expansion system compensates for shrinkage and settlement before hardening occurs.
- Ready to use, pre mixed, requires only the addition of water
- Can be pumped, trowelled, rammed or flowed to areas where normal grouting methods do not suffice.
- Can be mixed for stiff, plastic, flowable or fluid application
- No metallic iron content to cause staining
- Lower water/cement ratio reduces drying shrinkage, increases durability and reduces permeability

USES

- All general purpose grouting
- Precast and pre stressed panels
- Grouting in column bases
- Filling core holes, rod holes and defects in concrete
- Filling for hollow block walls
- Caulking of joints and pipes

PRODUCT CHARACTERISTICS

Colour	Grey powder
Fresh Wet Density	approx 2100 Kg/m3
Application thickness	20mm – 120mm
Application temperature	5 - 30°C
Placement Time	Within 25mins of mixing
Time for Expansion * Tested in accordance to ASTMC940	Start – 15mins Finish 2-3hrs -10A
Set Time	Initial Final
○ Stiff	2.5hrs 3.5hrs
○ Plastic	4hrs 5hrs
○ Flowable	4.5hrs 7hrs
○ Fluid	5hrs 8hrs

Product codes

20kg plastic bag	30804306

TYPICAL PERFORMANCE DATA (APPROX)

Compressive Strength

Consistency	Water Addition (Litres)	MPa 1 day	MPa 7 days	MPa 28 days
Stiff	3 Li	30-40	60-75	75-85
Plastic	3.1-3.6 Li	25-30	50-60	65-75
Flowable	3.6-4.0 Li	20-25	35-40	50-60
Fluid	4.0-4.4 Li	15-20	30-40	40-50

** Tested in accordance to ASTM C109/C109 M-12*

DIRECTIONS FOR USE

COVERAGE

Yield per Bag

Consistency	Yield (Litres)
Stiff	10.5 - 11
Plastic	10.5 - 11
Flowable	11 - 11.5
Fluid	11 - 11.5

- Fresh Wet Density - approx 2100 Kg/m3 depending on actual consistency used
- Bags Required Per Cubic Metre: 85 - 90 bags depending on actual consistency used

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 surface.

- Bolts or anchor holes must be clean and free from dust or loose material. This can be achieved by blowing clean the hole.
- Base plates must be cleared of all rust, oil or grease. It is essential to provide air pressure relief holes for venting.
- Pre-Soaking - it is essential to pre-soak the concrete substrate prior to application of **Bostik Flowfill Grout**

GP. Pre-soak substrate with water for a minimum of 6 hours prior to grouting. Immediately before pouring, the excess water should be removed. In the case of bolt/anchor holes, the holes must be blown out to ensure no traces of free water are present whilst grouting.

APPLICATION

Formwork
Formwork must be constructed to facilitate rapid and continuous filling, whilst remaining leak proof and water tight. Foam rubber strips or suitable sealants underneath the formwork are recommended.

Unrestrained Surface
As Bostik Flowfill Grout GP is an expanding grout, it is advisable not to have any unrestrained areas.

Low Temperature Working
At temperatures below 5ºC 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 Bostik Flowfill Grout GP to 25ºC. Do not exceed this temperature.

High Temperature Working
At temperatures above 30ºC, it is advisable to use water below 20ºC when mixing grout. All materials must be kept cool and away from direct sunlight. If practical, the installation area should be shaded by erecting shade screens. If ambient temperatures are excessive, grouting should be scheduled for early morning or late afternoon.

Mixing
Bostik Flowfill Grout GP requires between 3 - 4.4 litres of potable water per 20kg bag, depending on the desired consistency. For optimum results, mixing should performed using a forced action high shear stirrer powered by a heavy duty electric mixing drill.
- Add pre-measured water to a clean mixing bucket.
- Gradually add powder into the water whilst continuously mixing the contents of the bucket.

When the entire contents of the bags have been added to the water, mix for a further 3 - 5 minutes to achieve maximum results. Mixed product must be smooth, lump free and homogenous consistency.

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

Consistency	**Water Addition** (Litres)
Stiff	3 Li
Plastic	3.1 - 3.6 Li
Flowable	3.6 - 4.0 Li
Fluid	4.0 - 4.4 Li

** Consistency is in accordance to ASTM C1107/C1107-11 and AS 1478.2-2005 Table 4.1.2.2*

CAUTION
- **DO NOT MIX BY HAND**
- **DO NOT ADD ADDITIONAL WATER**
- **DISCARD ANY UNUSED GROUT THAT HAS STIFFENED OR HARDENED.**
- **DO NOT RETEMPER**.

Pouring
The desired ambient temperature for pouring is approximately 20ºC. At this temperature it is essential the grout is placed within 25 minutes of mixing as this will ensure the expansion process is maximised. Ensure the entire area to be grouted is completely filled. We advise the following

- 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 maintained at all times 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.

Curing
On completion of grouting the exposed area should be covered with wet hessian, plastic sheeting or Bostik Bond 'N' Cure to prevent excessive moisture loss. At ambient temperature, formwork should be removed no sooner than 24 hours after completion of grouting. The covering should stay in place for a further 6 days. Lack of sufficient curing could result in plastic cracking and drying shrinkage on the surface.

CLEANING

Bostik Flowfill Grout GP should be removed from tools and equipment with clean water immediately after use

STORAGE AND SHELF LIFE

Flowfill Grout GP has a shelf life of approximately 12 months in unopened bag. Must be stored in a cool, dry elevated place and protected from high humidity.

DISPOSAL

Empty containers, once dry, may be disposed of via local landfill.
If spilt, beware of flammable vapours. Absorb product with clay, sand or earth. Collect in properly labelled metal containers. Dispose of according to local authority regulations. Do not dispose of down drains or into waterways. Fully dried material is not hazardous.

PRECAUTIONS IN USE

Complete details on each of the products mentioned are available on the product Safety Data Sheets. To ensure no harm is caused to persons using Bostik products, it is recommended that all concerned read the appropriate Safety Data Sheets. Visit www.bostik.co.nz for copies.

HIGHLY FLAMMABLE – KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME
USE WITH ADEQUATE VENTILATION
WEAR GLOVES
KEEP OUT OF REACH OF CHILDREN
KEEP CLOSED WHEN NOT IN USE

FIRST AID
Swallowed: Do not induce vomiting, give a glass of water and contact a doctor immediately.
Skin: Remove contaminated clothing, wash with warm soapy water. Cooking oil may aid removal. Do not scrub.
Inhaled: Remove person to fresh air. Get medical advice if breathing becomes difficult. If inhaled to excess, remove from contaminated area – apply artificial respiration if not breathing.
Eyes: Hold open and flood gently with water for at least 15 minutes. Get medical advice.