

BP-NanoGrout GP

Non-Shrink Cementitious Performance Grout

Description

BP-NanoGrout GP is a cement based, non-metallic, non-shrink, free flowing grout that maintains a fluid consistency for a longer duration. It is a high strength, free flowing; shrinkage compensated grout. It provides a dimensionally stable, free flowing grout with controlled expansion. It exhibits excellent thermal compatibility with concrete.

Standards Compliance

ASTM C1107

Application Area

BP-NanoGrout GP can be used for grouting of bolt pockets, gaps between the base plate and concrete such as bridge bearings, machinery base-plates, stanchion base plates, joints between precast panels, rail and anchor bolts, etc. It can be used for filling precast joints and tie holes with adjustable consistency. It can be used for reinstating damaged structural elements by placing within the formwork.

Advantages

- ✓ Ready to use, only requires addition of water.
- ✓ Flow-able and self leveling.
- ✓ Can fill intricate voids
- ✓ High strength
- ✓ No bleeding or segregation
- ✓ Controlled expansion
- ✓ Proven and predictable performance.
- ✓ High bond strength to steel and concrete.
- ✓ Early strength development even at flow able consistency.
- ✓ Impermeable.

Typical Properties

Property	Test Method	Value
Component		Single
Form		Powder
Colour		Gray
Fresh Wet Density	BSEN 12350-6	2.20 kg/ltr +/- 0.05
Consistency	ASTM C1107	W/P 0.14 0.16 Fluid** Flowable*
Compressive Strength	ASTM C109	1 day 25-30 N/mm ² 3 day 40-45 N/mm ² 7 days 50-55 N/mm ² 28 days 65-70 N/mm ²
Flexural Strength	BS 6319-3	7 days 7-8 N/mm ² 28 days 9-10 N/mm ²
Expansion (plastic state)	ASTM C940	Nil
Bleeding	BS 1881-208	Nil
Setting Time	ASTM C191-01a	Initial:>4hrs; Final: < 8 hrs

*Flow:125-145% as per ASTM C1437

**Flow: 165-185% as per ASTM C1437

Surface Preparation

The substrate should be sound, clean, free from loose material, grease, laitance, dirt curing

compound, or any other substance that might impair the substrate's quality of the bond. Saturate concrete substrate with water at least 3 - 4 hours prior to pouring the grout. Any standing water should be removed just before placing the grout. Ensure that there is no standing water in bolt pockets. Metal surfaces should also be clean and free from rust, oil and grease.

Mixing

BP-NanoGrout GP should be mixed using a suitable mechanical grout mixer. For small volumes it is recommended to use a drilling machine fitted with a paddle. For large works, high shear vane grout mixer is to be used. Powder should be added to the pre-gauged water. A free flowing and self leveling grout can be obtained at a mix ratio of 25 kg powder to 4.0 liters of water. Mix until uniform consistency is achieved. Chilled or cold water will give enhanced flow-ability. **BP-NanoGrout GP** can also be used as dry pack mortars of various consistencies by adjusting the water content of the mix.

Application Guidelines

Place the mixed grout within 15 minutes to gain full advantage of the expansion. Bolt pockets should be grouted first. Stop the grout 5-10 mm below the top surface of the bolt pocket. Grouting of base plate should be carried out continuously. Ensure to have enough grout in place before starting. Start pouring the mixed grout from one side of the formwork to prevent entrapment of air. This can be achieved by pouring the grout to the shortest distance. It is advisable to use heavy duty diaphragm pump when large volumes are to be placed. During application ensure entrapped air is able to escape through relief holes. Maintain continuous head during grouting. Grout flow should not be interrupted. Check for any grout loss through the formwork or between any unsealed joints. Plug the same using **BP-MoyaProof Plug**.

Curing

To prevent rapid surface drying and crazing, exposed surface of grout should be cured with wet burlap or moist hessian or use a suitable curing compound from **BP-JetCure** range.

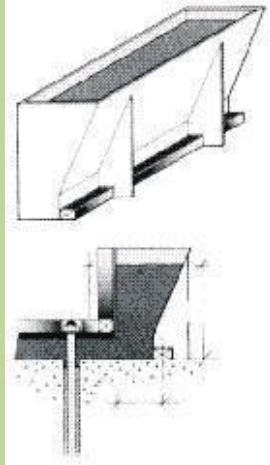
Note

Use **BP-NanoGrout GP** for minimum gap of 10 mm and maximum thickness of 100 mm. For thickness above 100 mm, **BP-NanoGrout GP** can be mixed with hard, clean, surface saturate dry (SSD), graded 10 mm aggregates in the ratio of 1:1 or 1:0.5 by weight depending on consistency required. Exact proportion should be determined by conducting site trials. Ambient temperature will affect setting time and strength gain. Use of chilled water will ensure better flow and retention properties.

BP-NanoGrout GP

Approximate Flow at 25°C

W/P Ratio	Gap Depth	Head Height	Head Height
	MM	MM	MM
14%	10	280	1200
	20	800	2500
	30	1400	2800
	40	2200	>3000
16%	10	800	2400
	20	1700	2900
	30	2800	3100
	40	>2900	>3200



Packaging

BP-NanoGrout GP is packed in 25kg moisture resistant bags.

Yield

13.0 ltr/25 kg bag with W/P of 0.16.

Storage & Shelf-life

12 months from date of manufacture when stored

under warehouse conditions in original unopened packing. Extreme temperature / humidity may reduce shelf life.

Limitations

At temperatures above 35°C, it is recommended that measures are taken to reduce material placing temperatures. These include, storing materials and equipments under cool shade and away from direct sunlight. Avoid installation during the hottest part of the day. Ensure that water temperature is kept below 20°C. Should not be used in unrestrained area.

Cleaning

Clean all equipments and tools with water immediately after use. Hardened material can be removed mechanically.

Health and Safety

This product contains cement powders which, when mixed with water or upon becoming damp, release alkalis that can be harmful to skin. During use, avoid inhalation of the dust and contact with the skin or eyes. Gloves, goggles and suitable mask must be worn. Contact with skin, eyes, etc. must be avoided. If swallowed seek medical attention immediately. Regarded as non-hazardous for transportation. Do not reuse containers. To be disposed off as per local rules and regulations.

Quality & Care

Conpacmix (BD) Ltd. acquired German technology for an updated production facility and set up a state of the art laboratory facility for conducting regular quality assessments on raw materials procured and finished products. Process from procurement of raw materials to finished products, are managed by qualified and experienced engineers, chemists and technicians.

Note: Field service where provided does not constitute supervisory responsibility. Suggestions made by **Conpacmix (BD) Ltd.** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **Conpacmix (BD) Ltd.**, are responsible for carrying out procedures appropriate to a specific application.

Manufacture:

