

## BONDIT GROUT 700N

(NON-SHRINK CEMENTITIOUS PRECISION GROUT)

### PRODUCT DESCRIPTION

Bondit Grout 700N is a pre-blended, ready to use non-shrink, non-metallic Portland cement-based material consisting of high quality & performance synthetic polymers, specialty additives used for grouting of machinery bases, bearing plates, precast concrete, columns, beams, and anchoring applications. Designed with high flexural and compressive strength to handle high-load transfers. It contains no calcium chloride. It requires only the addition of water at the job site.

### FEATURES & BENEFITS

- High Flow, High Strength & Non-Shrink
- Non-Metallic & Non-Staining
- High Bonding Strength
- Hydrogen Free Expansion System
- Chloride Free
- Pourable/Pumpable Versatility
- Grouting from 25mm to 100mm in a single application
- Meets National & International Standards
- Economical

### AREA OF APPLICATION

Structural grouting and general-purpose structural grouting:

- Column bases
- Anchor bolts
- Machinery bases
- Sole plates
- Tilt-up panels
- Steel bearing plates
- Reinforcing steel in block cells



### Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081



# GROUTS

- Dowel rods
- Transfer lines
- Concrete - poured in place, precast, tilt-up and prestressed

## YIELD/WATER

Bag Size	Water
25 kg	Flowable: 3.75 litre
	Plastic: 3.50 litre

NOTE: Yield and water are approximate. The yield above does not allow for waste and spillage.

## COLOUR

GREY

## APPLICATION INSTRUCTIONS

### Surface & Substrate Preparation

- The substrate to be grouted must be clean, sound and free from dust, oil, grease, curing compounds or any foreign matter that will affect the grout adhesion bond and inhibit performance. Bolt holes and anchor points must be clean and free of water.

### Pre-Soaking

- All prepared areas must be saturated with water for 24 hours prior to grout placement. Remove excess water bringing it to a surface saturated dry condition (SSD). This will reduce the porosity of the substrate.
- Prior to grouting, ensure all excess water is removed and all holes must be free from water and no puddles of water are present.
- If grouting under base plates, it is imperative that bleed holes or venting holes are provided (this will eliminate pressure build up in a confined area).

### Formwork

- It is essential that the formwork to be constructed is leak proof and water tight. In order to achieve this, it is recommended that foam rubber strips or a suitable sealant such as polyurethane or silicone be used underneath the formwork.
- The formwork should be constructed, which will allow and ensure a grout head to be maintained on the side above the level of the underside at the base plate. The formwork should allow for gravity flow of grout with a suitable grout head allowing for continuous flow between the base plate and the concrete substrate.



### Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081



- To ensure ease of formwork removal, the formwork should be coated with form oil or release oil prior to grouting (consult Bondit Technical Service Department for additional information).
- It is recommended that Bondit Grout 700 N be kept in a cool environment and the use of cold water be used for mixing. It is recommended that in instances where the temperature is greater than 30° C, the grouting be conducted early in the day or late in the evening and sheltered from sunlight and direct heat.

## Mixing

Bondit Grout 700 N must be mixed with a mechanical mixer with a high shear mixer or a suitable drum mixer that creates a forced action mixing.

- Use slow speed an electric drill fitted with a spiral paddle (approx.400 rpm).
- Maintain the mixing ratio as given.
- Only mix with clean potable water. Place 3/4 of desired mixing water, start mixer then slowly add the dry mix.
- To this mix, while stirring with a mixing paddle attached to a drill, slowly add the remaining 1/4 water until the desired consistency is achieved,
- Mix for 3 - 5 minutes to ensure a uniform lump free consistency.

## Placements

Bondit Grout 700 N can be placed in three different ways:

### 1. Dry Pack/ Plastic Grout: (3.50 litre water/25kg Bag)

Ensure sufficient water is present to obtain a stiff/ dry pack consistency. If the grout is too dry, insufficient hydration of the cements will cause low strength gain and inadequate curing. Using a tamping rod or a suitable temping tool, apply the grout in the required position tamping to ensure adequate compaction.

### 2. Gravity flow using header box:

Mix the grout to a flowable consistency and pour grout from one side to avoid air entrapment. Ensure a grout head box is used and the grout head is maintained at all times. This will ensure continuous flow of grout without the possibility of air entrapment.

### 3. Large volume pumping:

Mix the grout using a forced action mixer. A positive displacement pump is the recommended pump for large placement application. For large grout pours ensure the grout is pumped from the bottom upwards as this will minimize any air entrapment and ensure complete void filling.

For base plates pump from one side ensuring an air bleeder hole is available in the formwork or base plate to ensure any build- up of pressure is released from the bleeder hole.



## Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081



For special grout application and placement, contact Bondit Technical Service for further details.

## FLOW PROPERTIES

Grout Consistency	Gap Width (mm)	Flow Distance (mm)		
		50mm head	100mm head	250mm head
Flowable	30	350	1000	1500
	40	500	1500	2000
	50	900	2000	3000+

- The creation of a header box is required for continuous pour applications to avoid developing air pockets under the base plate and improve flow.
- Care must be taken during grouting to ensure the headbox and grout head is maintained at all times.
- The grout head nominated (100mm or 250mm) will ensure that a continuous and consistent flow is achieved.

### Curing

On completion of grout application, all exposed grout should be cured in accordance with 'good practices' in concrete curing. The exposed grout should be covered with plastic sheeting, wet hessian or wet liquid curing compounds. Consult your Bondit Technical Service for advice on the most suitable product.

Curing plays a vital role in ultimate grout performance and strength development.

TYPICAL PROPERTIES	
Appearance	Grey powder (grey when mixed)
Bulk Density (kg/m <sup>3</sup> )	Approx. 1355 kg/m <sup>3</sup>
Fresh Wet Density (kg/m <sup>3</sup> )	Approx. 2240 kg/m <sup>3</sup> (Flowable/Plastic)
Application Temp.	Minimum 10°C Maximum 40°C
Expansion Characteristic	Expansion 1-2% Plastic state
Time for Expansion	Start 15 min, Finish 4 hrs (Plastic State)
Bleed	0%



### Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081



# GROUTS

SETTING TIME		
Consistency	Plastic (14%)	Flowable (14.5%)
Initial Set (hours)	3.0	4.0
Final Set (hours)	4.5	6.0
Water requirement (litre per 25kg Bag)	3.50	3.60

COMPRESSIVE STRENGTH (MPa)			
Age (Days)	Plastic (W/P=0.14)	Flowable (W/P=0.15)	50% aggregate (10-12 mm) (w/p = 0.16)
1	30	>25	
3	55	>50	
7	60	>55	≥70
28	74	≥70	≥80
BS 1881 - Part 116:1983 – Compressive Strength			

FLEXURAL STRENGTH (MPa)	
Age (Days)	Flowable (W/P=0.16)
1	3.0
3	7.5
7	9.5
28	11.5
BS 4551:1998 – Flexural Strength	

Age (Days)	Grout Consistency	Bonding Strength (MPa)	Tensile Strength (N/mm <sup>2</sup> )
28	Flowable (W/P=0.15)	>25	>4

## PERFORMANCE SPECIFICATIONS

All grouting (specify details and areas of application) must be carried out with a prepackaged cement-based product which shall be mixed with water on site at water powder ratio of 0.1.



### Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081



# GROUTS

The grout must not bleed or segregate, must be iron free and chloride free. Expansion of 1 - 4% shall occur while the grout is plastic.

## CLEAN UP

Wash all tools and equipment with fresh, clean water immediately after use. Bondit Grout 700 N can only be removed mechanically.

## PRECAUTIONS

- Use only when the product, air, and surface temperature are above 5°C for a minimum of 24 hours.
- Grout temperature should be maintained from 10°C – 40°C to achieve specified results.
- Use cold water in hot weather or hot water in cold weather to achieve desired grout temperature.
- Colder temperatures or higher humidity conditions will retard set times.
- Do not retemper grout by adding water as grout will segregate and bleed affecting performance.
- Do not add accelerators, retarders, plasticizer or other additives.
- Do not mix more Bondit Grout 700 N than can be placed in 15 minutes. Do not add additional water other than specified. Discard any grout that has stiffened or is unworkable.
- Do not vibrate or use mechanical vibrator to assist flow. Shut down nearby machines for a minimum of 24 hours.
- Do not apply in application thicknesses <1" (25 mm) or > than 4" (100 mm).
- For pours exceeding 100 mm (4 inch) thickness, add 12.5 kg of clean washed well graded 10-12 mm (3/8 inch) minus stone to each 25 kg Bag of Bondit Grout 700 N to achieve adequate results.

## PACKING SIZE

25 kg bag

## SHELF LIFE & STORAGE

12 months. Should be stored in clear and dry area in an unopened packaging at ambient temperature.

## HEALTH AND SAFETY

Avoid contact with skin. Protective gloves and clothing are recommended when mixing or using this product. Please refer to full MSDS (material safety data sheet) for this product, which is available from Bondit upon request.



## Corporate Office

Sai Prithvi Arcade,  
Office No. 3 & 4  
First Floor, Above  
Bata Showroom  
Madhapur  
Hyderabad 500081

