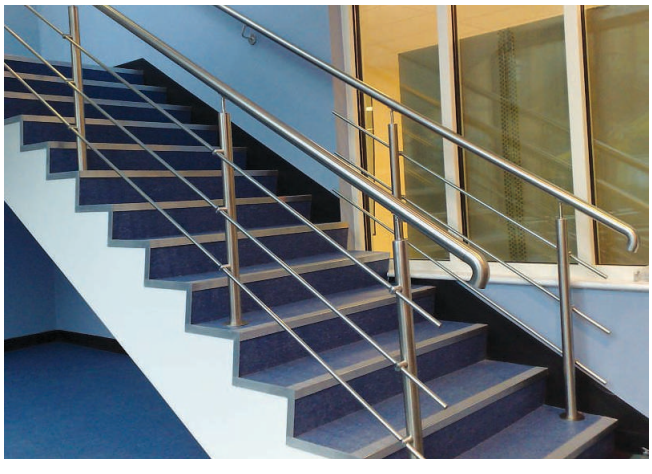
Bostik
smart adhesives

Anchor Grout

POLYESTER RESIN BASED GROUT



DESCRIPTION

Anchor Grout is polyester resin based grout material suitably blended with a hardening compound and fillers and supplied as a pre measured, two part, resin grout. After hardening,the grout has high mechanical properties. Anchor Grout is used where the difference between the hole diameter and bar diameter is ≤25mm.

RECOMMENDED USES

Bostik Anchor Grout is used for high strength corrosion resistant anchoring of bolts and bars from 12 - 25mm diameter into concrete, rock, masonry or brickwork where high speed of installation & early application of load is required. Permanent installation of reinforcement starter bars, foundation bolts, base plates, barriers and safety fences, railway tracks, tieback anchors, reinforcement dowelling abutments, ground anchors for towers, cranes, dock sills, stainless steel hand railings.

FEATURES & BENEFITS

Rapid strength gain, Vibration resistant, Corrosion resistant, Non expansive, Can be placed under water.

PERFORMANCE PROPERTIES	
Colour	Dark Brown
Pot Life @ 25°c	10 – 15 Minutes
Mix Density @ 25°c	1.9 - 2.0 g/cc
Consistency	Flow able

Gel Time at Different Temperatures

Gel time Temp. (0°c)	Gel time (min.)	Min. time required before loading (hrs.)
20	80	7
30	40	3
40	15	1

Compressive strength : After the minimum time required before loading the grout typically attains a compressive strength in excess of 20N/mm^2 and an ultimate compressive strength of 70N/mm^2 in 7 days (50mm x 50mm x 50mm) when tested as per BS 6319 Part 2 : 1983.

Chemical resistance : The cured resin is resistant to fresh and salt water, petrol, oils, grease and mineral acids, and mild alkalis.

DESIGN CRITERIA

The high strength of the cured resin permits strong anchors to be created. The ultimate bond strength developed depends upon -
Strength of host material,
Length of resin bond to bar,
Hole preparation and formation,
Type and dimension of bar.
The following formula may be used to determine the minimum depth of installation for Type 1 rebar bolts, to ensure the shear stress within the concrete is kept within the limits set out in BS 8110.

$$\text{Minimum hole depth} = \frac{0.6Y}{SPd2} \times \frac{P(d1)^2}{4} = \frac{0.15Y(d1)^2}{Sd2}$$

where -

Y is characteristic yield strength of steel (460N/mm^2)

S is permitted shear stress in concrete (N/mm^2)

d1 is bar diameter (mm)

d2 is hole diameter (mm)

This formula is used typically as shown in below:

Minimum hole depth

Characteristic concrete strength (N/mm^2) :	20	25	30	> 40
Permitted concrete shear stress using Type One Bar (N/mm^2) :	1.8	2.0	2.2	2.5

Bar dia. mm	Yield (tons)	Hole dia.	Min. hole depth (mm)			
12	5.2	20	280	250	225	200
16	9.3	20	490	445	400	355
20	14.5	25	615	555	500	440
25	22.6	32	750	675	615	540

APPLICATION PROCEDURE

Hole preparation and formation

Optimum performance of Bostik Anchor Grout requires rough sided, dust free holes. Use of rotary percussive drills with air or water flushing is recommended. Diamond drilled holes should be under reamed unless necessary safety factors are incorporated. Cast holes should preferably be inverse dovetail configuration. If parallel sides holes are cast they should be rough to provide adequate keying.

Bar preparation

All bars should preferably be de - greased and all flaky rust removed.

Mixing

A complete pack of resin and catalyzed filler should be mixed in one operation. Mixing may be carried out mechanically. When a smooth, even consistency is achieved the grout is ready for use and should be placed well within the gel time of the grout (See properties). Packs have been designed to produce practical and economic volumes of grout. Do not attempt to mix partial pack components.

Installation

Using the calculated volume of grout based on the below table , the grout should be poured steadily into the prepared holes. The anchor bar is then pressed into the hole to the required depth. Slight agitation of the bar will assist in achieving a complete bond. The bar should then be left undisturbed in the required position until the resin is set. Estimation Table indicates volume of Bostik Anchor Grout polyester resin grout in cm^3/100mm bond.

Hole dia. mm	Bolt dia. mm		
	12	16	20
20	25		
25	50	40	25

These figures allow for a 25% wastage factor. If the anchor is in very old concrete, masonry or brickwork the wastage factor should be increased.

No of bolts/200 mm deep hole which can be fixed using a 2.5 litre pack of Bostik Anchor Grout.

Hole dia. mm	Bolt dia. mm		
	12	16	20
20	50		
25	25	31	50

CLEANING

Immediately after application of Bostik Anchor Grout, clean the tools, equipment and the mixing container using solvents like Bostik Thinner E, otherwise, removal of dried / hardened mortar is difficult.

PACKING : 1 Kg

STORAGE & SHELF LIFE:

Anchor Grout as supplied shall be stored in a cool & dry place away from sunlight, moisture & high humidity & have a shelf life of 6 Months in the original packing.

PRECAUTIONS

Fire resistance and creep

At operating temperatures above 40°C, the creep of Bostik Anchor Grout polyester resin grout resin under load may become significant. Resin anchors should not be used where structural load bearing performance has to be maintained in anchors subjected to fire conditions.

HEALTH & SAFETY

Confined areas must be well ventilated and no naked flames allowed. Contact with the skin should be avoided as certain sensitive skins may be affected by contact with the polyester resin. In such cases if contact with the resin occurs, the skin should be washed immediately with soap and water & not solvent. Gloves & barrier creams should be used when handling these products. Eye contamination must be immediately washed with plenty of water and medical treatment sought.

FIRE

Bostik Anchor Grout polyester resin grout resin is flammable. Confined areas must be well ventilated and no naked flames allowed. Do not smoke during use.

BOSTIK HOTLINE

Smart help +91 80 27833520

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