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TECHNICAL DATA SHEET
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POLYESTER ANCHOR RESIN

Description

A two part rapid curing concrete repair system based on a high performance polyester resin. Specially formulated for its extremely high strength especially in compression and tension. Ideal for a number of applications including bonding building materials (floor tiles etc) and anchoring bolts, starter bars, machinery etc. This corrosion resistant material offers fast installations achieving early high strength.

Outstanding Features

- Rapid Curing - suitable for emergency repairs
- High strength
- Chemical resistant
- Excellent impact and wear resistance
- Non-dusting surface
- Convenient one shot cartridge to fit standard sealant gun

Preparation

Concrete Repair

Remove all debris and dust from the area to be repaired. Any loose or friable concrete should be removed to give a sound surface. Prior to application the area must be clean, dry and sound.

Anchoring

Drill hole to the correct diameter and depth, ideally using a rotary percussion machine. For optimum results the hole must be coarse sided. If holes are produced by diamond drilling the surface should be thoroughly roughened. After drilling the hole all dust and debris should be removed using a hand air pump or a stiff rotary brush.

All bars should be clean and free from oil or grease and all flaking rust should be removed. Steel bars used should be deformed such as those manufactured to BS 4449.

Threaded bars may be used, but should be chisel-ended to prevent them from being unscrewed from the cured resin.

Application

Attach mixing nozzle to the cartridge, screw down hand tight. Place cartridge and plunger in skeleton gun and extrude.

NB Once material has started to extrude through the nozzle over pressurizing will not increase flow rate, and can cause leakage from the rear of the cartridge.

Spread the POLYESTER ANCHOR RESIN over the area to be repaired using a steel float, which has been wiped with Thinners. No. 3.

For vertical anchoring applications extrude the mixed grout into the holes. To avoid air pockets ram the material firmly into the bottom of the hole. Fixings should be inserted using a rotating action.

Technical Data

Mix ratio	10:1 by volume
Compressive strength (ASTM D-695)	48 N/mm ²
Tensile strength (ASTM D-638)	>10 N/mm ²
Flexural strength (ASTM D-790)	20 N/mm ²
Elastic Modulus	4206 N/mm ²
Flexural Modulus	3238 N/mm ²
Mixed density	1.65 g/cm ³
Gel time (minutes)	5 at 20°C
Cure time (minutes)	120 at 20°C

Anchor Size (mm)	Hole Diameter (mm)	Hole Depth (mm)	Tension (kN) (Ultimate Pull Out)	Fixings per unit (holes filled 2/3 full)
8	10	80	22.56	32
10	12	90	29.40	20
12	14	110	31.72	12
16	18	125	72.45	6
20	22	170	78.76	3
24	26	210	106.06	1

Tension figures quoted are tested in accordance with BS 5080 Part 1 in approximately 30 N/mm² concrete.

Storage

Store in a dry area between 5°C and 25°C. Do not expose to direct sunlight. Storage at higher temperatures will reduce the shelf life.

We endeavour to ensure that any advice, recommendation or information we may give in product literature is accurate and correct. However, we have no control over the circumstances in which our product is used and it is therefore important that the end user satisfy himself by prior testing that the product is suitable for his specific application and that the actual conditions of use are suitable. Accordingly, no responsibility can be accepted, or any warranty given by ourselves, our representatives, agents or distributors, other than that the product as supplied by us will meet our written specification. Products are sold subject to our standard conditions of sale and each purchaser and end user should at all times ensure that he has consulted our latest product instructions and safety information.

The Ultimate pull out strength (Tension) is varied by :

1. The strength of both the substrate and bar/stud.
2. The length of the resin bond to bar.
3. Hole preparation.
4. Anchor separation.

Safety factors should be considered depending on the strength and nature of the substrate. Due to the inconsistent nature of hollow blocks and bricks tension figures may vary. Site testing should be carried out where necessary to establish particular suitability.

In order to achieve maximum performance the distance between the centres of the anchors should be a minimum of 2.0 x embedment depth and 1.25 x the embedment depth for the minimum distance from edges.

Figures produced using 10mm threaded bar in 12mm hole in 30N/mm³ concrete using rotary percussion machine and then air flushed.

Health and Safety Data

POLYESTER ANCHOR RESIN resin contains styrene and is flammable. Do not smoke and do not allow naked flames to come into contact with this material. Avoid breathing vapour and wear suitable protective clothing such as gloves and overalls. On contact with skin wash off immediately with plenty of soap and water. For further information refer to the Safety Data Sheet.

