

SpECloc PE

PUMPABLE ANCHOR GROUT

DESCRIPTION

SpECloc PE, is a two-component thixotropic polyester resin grout specially designed and developed for use in the anchoring of bolts and dowels. It is supplied as a two-component pack, one a liquid resin, the second a catalyzed filler.

SpECloc PE, is supplied in Tropical Grade for use in hot climates.

TYPICAL USES

SpECloc PE can be utilized in a wide variety of fixing applications including:

- Dowels and bolts
- Starter bars
- Foundation bolts
- Ground anchors
- Wall tiles
- Rails and crane tracks

ADVANTAGES

- Simple installation
- Rapid set
- High strength
- Easy mixing and placement
- High chemical and abrasion resistance

TECHNICAL DATA

Typical results @ 30 °C

Mixing ratio by weight:

powder to resin 3:1

Compressive Strength

(ASTM D-695) >86 N/mm²

Flexural strength

(ASTM D-790) 36N /mm²

Tensile strength

(ASTM D-638) 10N /mm²

Elastic modulus

13388 N/mm²

Mixed density

1.80g/cm³

Gel Time

20 °C 50 min.
30 °C 33 min.

Cure Time

20 °C 90 min.
30 °C 80 min.

Anchor Size (mm)	Hole Diameter (mm)	Hole Depth (mm)	Tension (kN) Ultimate pull-out	Fixings per Unit (Holes 2/3 filled)
8	10	80	19.2	607
10	12	90	20.7	376
12	14	110	36.0	225
16	18	125	56.6	120
20	22	150	66.7	67

Tension figures quoted are tested in accordance with BS5080 Part 1 in concrete with a compressive strength of 30N/mm²

The ultimate pull out strength (Tension) is affected by:

1. The strengths of both the substrate and bar/stud
2. Depth of embedding
3. Hole preparation

Safety factors between 2 and 4 should be considered depending on the strength and nature of the substrate. Site testing should be carried out where necessary to establish particular suitability. In order to achieve maximum performance, the minimum spacing between anchors and distance from edges should be 2.5 times and 1.25 times the embedding depth respectively.

APPLICATION

Surface preparation

1) Drill holes to the correct diameter and depth, ideally using a rotary percussion drill. For optimum results the internal face of the hole should be of coarse texture. If holes are produced by diamond drilling the smooth sides should be roughened thoroughly.

2) On completion of the drilling process, all dust and debris should be removed using clean compressed air or a rotary brush.

3) All bars must be clean and free from oil or grease and all flaking rust should be removed. Steel bars should be deformed such as those manufactured to BS4449. Threaded bars may be used but should be 'chisel-ended' to prevent unscrewing from cured resin.

Mixing

SpECloc PE is supplied as a liquid resin and a powder component packed within a plastic bucket to be used as a mixing vessel. Pour the liquid resin into the bucket, gradually adding the powder and mixing thoroughly to achieve the desired consistency. On completion of the addition of the powder component, stirring should continue for a further 2 minutes.

In order to achieve the typical properties quoted below, it is recommended that only full units are mixed. However for a limited number of fixings, part mixing may be considered.

Mixing is best carried out using a mechanical mixer such as a slow speed drill and mixing paddle.

Placement

Due to the high exothermic nature of **SpECloc PE**, the material should be placed immediately on completion of mixing.

For annular gaps greater than 12 mm, please refer to, SpEC Technical Department.

Once mixed, the **SpECloc PE** should be placed into an empty applicator cartridge, taking care not to entrap any air. if desired, an extension tube may be fitted to the application cartridge to aid application. The use of an extension tube helps ensure that the resin is filled from the bottom / back of the hole. The material is injected into the hole and the tube is slowly pulled out as the resin fills the hole. This method helps minimize the risk of air entrapment. The hole should be filled to approximately 2/3 full

of **SpECloc PE**. The bar should then be immediately pushed into the resin using a slow twisting action, displacing the resin towards the surface of the hole and completely filling annular gap.

The bolt must be left undisturbed until the resin has set.

For large holes or applications including large quantities of **SpECloc PE** refer to SpEC Technical Department.

EQUIPMENT CLEANING

All tools and equipment must be cleaned thoroughly using SpECTop Cleaning Solvent before setting takes place.

PACKAGING

SpECloc PE is supplied in 5kg and 10kg packs yielding 2.75 litres and 5.5 litres of mixed material respectively.

STORAGE & SHELF LIFE

12 months when stored in cool conditions around 23°C; Higher temperatures will have an adverse effect on the shelf-life.

HEALTH & SAFETY

Before mixing and when mixed but not set, **SpECloc PE** should be regarded as flammable. Direct contact with skin should be avoided and the use of barrier creams and protective clothing is recommended.

In the event of contamination, the product should be removed with soap and water or hand cleaners

All work should be undertaken in well ventilated areas.

For full information on Health and Safety relating to this product refer to the Material Safety Data Sheet available on request.

FLASHPOINT

SpECloc PE 30°C

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