

# TECGRIP CAS EPOXY

## Product Codes

TGR 35, Packaging listed overleaf

## Description

The Tecgrip CAS Epoxy Cartridge Anchor System consists of a combined two part cartridge, one containing the solvent free epoxy resin base component and the second containing the hardener component. The cartridge is constructed of impervious plastic material which prevents any mixing of the two components prior to use. Tecgrip CAS Epoxy Cartridge Anchor System is designed as a pre-filled self contained cartridge, ready for use on site with no additional mixing or placing equipment. Mixing is carried out by pumping the components through a static mixer which fits onto the threaded mixing exit of the cartridge. The system is used for the fixing of steel bolts and bars into pre-drilled upward or downward facing holes within concrete, rock, brickwork, stonework or masonry. Formed anchors are high strength fixings which are resistant to corrosion and may be loaded quickly after installation. Placed anchors are resistant to vibration and do not exert expansive forces.

- Uses include:**
- Starter bars.
  - Studding and dowels.
  - Wall ties and brackets.
  - Base plates and rail tracks.

## Specification Outline

Anchor grouting shall be carried out using the Tecgrip CAS Epoxy Cartridge Anchor System as supplied by Tecroc Products Ltd. The product must be stored handled and used strictly in accordance with the supplier's instructions

## Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The Company's quality system conforms to BS EN ISO 9001:2000 and is assessed by SGS Ltd Systems and Services Certification.

## Typical Anchor Properties @ 20°C

### Uniaxial Pull Out Loads

Anchor Size (mm)	Hole Diam (mm)	Hole Depth (mm)	Uniaxial Load (kN)
8	10	80	32
10	12	90	52
12	14	110	68
16	18	125	85
20	22	170	115

Tests carried out in accordance with BS 5080 using 63N/mm<sup>2</sup> concrete, holes drilled by rotary percussive method on air flush

### Setting Time

Temperature (°C)	-5	5	15	25
Setting Time (mins)	120	75	25	12
Time Before Loading (Hours)	36	20	9	5

- Compressive Strength: 98N/mm<sup>2</sup> @ 7 Days
- Tensile Strength: 26N/mm<sup>2</sup>
- Compressive Modulus: 2kN/mm<sup>2</sup> @ 7 Days
- Density: 1400kg/m<sup>3</sup>

### Fixings Per 400ml Cartridge

BOLT DIAMETER (mm)	HOLE CLEARANCE (2mm)	HOLE DEPTH (mm)	FIXINGS PER 400ml CARTRIDGE
8	10	80	95
10	12	90	58
12	14	110	35
16	18	125	18
20	22	150	10

## Standards

Tecgrip CAS Epoxy has been tested in accordance with the appropriate parts of BS 6319, BS 5080

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Grouts



Structural Support Mortars



Concrete Repair Products



Construction Adhesives



Resin Et Cementitious Anchors



Highway Products



Coatings



Waterproofing



Ground Engineering

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## Typical Anchor Properties @ 20°C

### Anchor Design

Parameters controlling the ultimate anchor strength (uniaxial pull out load) include:

- Type and strength of base material.
- Length of resin anchor bond.
- Hole forming or drilling method.
- Type of bolt or bar.

Typically, for a rough sided hole, a uniaxial pull out load of one tonne per 25mm of embedment may be achieved. Due to bell-mouth drilling do not include the first 50mm in calculation. In practice, a safety factor must be used.

Non-critical applications: Safety Factor = 1.5 (minimum)

Critical applications: Safety Factor = 2.0 (minimum)

Any relevant codes of practice or standards should be conformed to. For the best anchorage performance the distance between anchors and the distance to a workpiece edge should be :

- Anchor to anchor: 2.5 times the embedment length
- Anchor to edge: 1.5 times the embedment length

### Anchor Installation

#### Holes and Bar Types

Holes should preferably be drilled using a rotary percussive self flushing drill. Holes which are diamond cored should be under-reamed or roughened. Holes which are drilled with a rotary percussive non-flushing drill bit should be cleaned using a steel rotary brush. Loosened dust should be blown out of the hole using an extension tube reaching to the bottom of the hole.

Steel bars used for anchoring should be deformed such as those manufactured to BS 4449. Threaded bars may be used; these should be chisel ended to prevent them being unscrewed from the hardened resin. When using smooth bars an extra safety factor should be incorporated into the anchor design.

#### Grout and Bar Placing

Place the cartridge into the dispensing gun. Open the threaded mixing exit by removing the nozzle seal from the screw-end of the cartridge and attach mixing nozzle. Squeeze the hand trigger of the gun several times until grout flows out of nozzle and becomes an even colour. Release the pressure from the gun. Place the mixing nozzle to the back of the hole and pump mixed grout to half/two thirds fill the hole. Insert bar or fixing then gently agitate to remove any entrapped air. Mixed grout should just overflow from the mouth of the hole.

The bar or fixing should not be disturbed until the grout has set and hardened.

### Precautions

#### Temperature in Use

Tecgrip CAS Epoxy Products may be placed at temperatures above 5°C. Use in structural situations at temperatures above 60°C is not recommended. Consult the Technical Services Department for further advice

#### Health and Safety

The Tecgrip CAS Epoxy Cartridge Anchor System is resin based. Resins and solvents may cause allergic reactions in some people. Use barrier cream on exposed areas of arms and wear gloves and eye protection when mixing, using and cleaning. Ensure adequate ventilation to prevent inhalation of vapours.

If skin contact occurs remove resin immediately with cleansing cream and wash with soap and water. Do not use Solvent (cleaning solvent).

Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

If swallowed do not induce vomiting. Seek medical advice immediately.

Full health and safety data are detailed in Product Safety Data Sheet.

#### Fire

The Tecgrip CAS Epoxy cartridges are flammable. Should fire occur extinguish with CO<sub>2</sub> or foam.

#### Yield

The Tecgrip CAS Epoxy cartridge will produce approximately 400ml of mixed grout

#### Storage And Shelf Life

The Tecgrip CAS Epoxy Cartridge Anchor System will have a shelf life of 9 months when kept in dry conditions at a temperature of 5°C to 20°C. Storage at temperatures outside this range and high humidity may reduce the shelf life.

#### Packaging And Ordering

The Tecgrip CAS Epoxy Cartridge Anchor System is supplied in:

Boxes of six (400ml) cartridges + mixing nozzles.

Tecgrip CAS Epoxy Product Code TGR 35

For further information and sales please contact your local Tecroc Products office as listed below.

Tecroc Products Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Tecroc Products Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Tecroc Products Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

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