

TECGRIP CAS POLYESTER RESIN CARTRIDGE ANCHOR SYSTEM

Product Code

TGR29, TGR30, TGR31, TGR33
Packaging listed overleaf

Description

The Tecgrip CAS Cartridge Anchor System consists of a cartridge made up of two concentric cylinders, one containing the 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.

The system is designed as a pre-filled self contained cartridge, ready for use on site with no additional external mixing. Mixing is carried out by pumping the components through a static nozzle mixer which fits onto the threaded mixing exit of the cartridge. The cartridge fits into the Tecgrip CAS gun which is trigger operated to pump the resin components through the static nozzle mixer. For deep holes a Tecgrip CAS extension tube is available to allow mixed anchor resin to be placed from the back of the hole towards the mouth. This method ensures no air locks are produced which would reduce the anchor efficiency.

Anchors are formed by fixing of steel bolts and bars into pre-drilled or cast holes within concrete, rock, brickwork, stonework, masonry or other substrates capable of supporting the required load. Formed anchors, from above the horizontal to vertically down, may be loaded quickly after installation and are resistant to corrosion. Anchors do not exert any expansive force and may be placed close to concrete, brickwork or masonry edges.

Uses include: Anchoring of starter bars, studding and dowels
wall ties and brackets
base plates
rail tracks.

Specification Outline

Anchor grouting shall be carried out using the Tecgrip CAS 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.

Standards

The Tecgrip range of products has been tested in accordance with the relevant parts of the following standards B.S.6319 ; B.S.5080

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. 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.



Grouts

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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.

Anchor Grout Setting Time

Temperature (°C)	5	15	20	25
Setting Time (mins)	12	9	5	3
Cure Time (mins)	240	180	120	60

Typical Properties Developed At 20°C

Compressive Strength 78N/mm²
Tensile Strength 10N/mm²
Compressive Modulus 4.6KN/mm²
Density 1650kg/m³

Number of Fixings Per 380ml Cartridge

Bolt Diameter (mm)	Hole Diameter (mm)	Hole Depth (mm)	Fixings Per 380ml Cartridge
12	14	110	35
16	18	125	20
20	22	150	10

Precautions

Temperature in Use

Tecgrip CAS 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 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.

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.

For full health and safety data refer to Product Safety Data Sheet.

Fire

The Tecgrip CAS cartridges are flammable. Should fire occur extinguish with CO₂ or foam.

Yield

The Tecgrip CAS cartridge will produce approximately 380ml of mixed anchor grout

Storage And Shelf Life

The Tecgrip CAS 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 Cartridge Anchor System is supplied in boxes of six (380ml) cartridges

Tecgrip CAS Cartridges Product Code TGR 29
 Tecgrip CAS Nozzle Mixer Product Code TGR 30
 Tecgrip CAS Gun Product Code TGR 31
 Tecgrip CAS Extension Tube Product Code TGR 33

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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Grouts



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