



Grouts



Structural Steels
Joints



Concrete Repair
Products



Construction
Adhesives



Resin &
Concreting
Anchors



Highway
Products



Coatings



Waterproofing



Ground
Engineering

TECHNICAL DATA

5.1.5

Revision Date 07/2002

TECGRIP VL POLYESTER RESIN ANCHOR GROUT SUMMER-WINTER

Product Codes

TGR02s, TGR02w

Description

Tecgrip VL, part of the Tecgrip range of polyester resin anchor grouts, is used for the fixing of steel bolts and bars into pre-drilled holes within concrete, rock, brickwork, stonework, masonry or other substrates capable of supporting the required load. Formed anchors are high strength fixings which are resistant to corrosion and may be loaded quickly after installation. Placed anchors are resistant to vibration, do not exert expansive forces and may be designed for under water installation. Tecgrip VL consists of a low viscosity polyester resin plus a catalysed filler. The two components are mixed to produce a filled resin grout which may be poured or pumped into suitably prepared anchor holes. The mixed grout is coloured dark grey and is used for downward facing holes where the hole diameter is 20mm to 50mm greater than the bolt or bar diameter.

- Uses include:**
- Base plates
 - Rail tracks
 - Starter bars and dowels
 - Safety fences and balustrades
 - Reciprocating machinery
 - High impact loads

Specification Outline

Anchor grouting shall be carried out using Tecgrip VL as manufactured by Tecroc Products Ltd. The product must be stored handled and used strictly in accordance with the manufacturer's instructions

Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The company's quality system conforms to BS EN ISO 9002:1994 and is assessed by SGS Yarsley International Certification Services Ltd.

Typical Anchor Properties @ 20°C Anchor Strengths

Length of Anchor Bond (mm)	Uniaxial Pull Out Load (tonnes)
100	3
200	8
400	16
600	24

Deformed bar to BS 4449 in unreinforced 20N/mm² concrete, holes drilled by rotary percussive method on air flush

Parameters controlling Uniaxial Pull Out Load:

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

Safety Factors:

- Non critical applications : 1.5 minimum
- Critical applications : 2.0 minimum
- Compliance with relevant codes of practice and standards.

Working Time

- Winter Grade 8 - 12 minutes
(above 20°C setting will be rapid)
- Summer Grade 18 - 22 minutes
(below 10°C setting will be extended)

Compressive Strength

Age At Test	2 Hours	1 Day	7 Days
Compressive Strength	40N/mm ²	80N/mm ²	95N/mm ²

Tensile Strength 17N/mm² @ 7 Days

Compressive Modulus 16kN/mm² @ 7 Days

Density 1800kg/m³

Standards

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

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Anchor Installation

Holes and Bar Types

Holes should be drilled using rotary percussive drills with air or water flush. The drill bit should be of the integral type with an elliptical head. 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 compressed air through an extension tube reaching to the bottom of the hole. Cast holes should taper so that the hole diameter is smaller at the mouth than the bottom.

Steel bars used for anchoring should be deformed such as those manufactured to BS 4449. Threaded bars may be used. When using smooth bars an extra safety factor should be incorporated into the anchor design.

Grout and Bar Placing

Place contents of resin can into plastic container or pail. Slowly add catalysed filler whilst mixing. Continue mixing until a uniform colour is achieved. Correct mix proportioning must be used to achieve the designed anchor strength. Pour mixed grout into prepared holes, rodding if necessary to ensure grout flows to the bottom of the hole. Once grout has been placed insert bar into hole and gently twist and press home to the required depth. The bar should be left undisturbed until the grout has hardened.

Equipment should be cleaned with Solvent prior to grout hardening.

For installations under water please consult the Technical Service Department.

Storage And Shelf Life

Tecgrip Products will have a shelf life of 6 months when kept in dry conditions at a temperature of 5°C to 25°C. Storage at higher temperatures or high humidity may reduce the shelf life.

Grout Volumes Required

The following table gives typical Tecgrip VL grout volumes required for given bolt/bar and hole diameters. The volumes given are in cm³ per 100mm of bond length.

Hole Dia (mm)	Bolt Dia (mm) 16	Bolt Dia (mm) 20	Bolt Dia (mm) 25	Bolt Dia (mm) 32	Bolt Dia (mm) 40	Bolt Dia (mm) 50	Bolt Dia (mm) 60
40	105						
50	175	165	150				
60		250	235	205	155		
80				420	385	305	220
100						590	285

Precautions: Temperature in Use

Tecgrip Products may be placed at temperatures between 5°C and 35°C. Use in structural situations at temperatures above 60°C is not recommended. Consult the Technical Service Department for further advice

Health and Safety

Tecgrip Polyester Anchor Grouts are resin based. Resins and solvents may cause allergic reactions in some people. Wear gloves, use barrier cream on unprotected skin and wear 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.

Full health and safety details are given in Product Safety Data Sheet

Fire

Tecgrip VL Resin and Solvent are flammable. Should fire occur extinguish with CO₂ or foam.

Packaging and Ordering

Tecgrip VL is supplied in the following pack sizes :
Summer Grade

13.7kg pack (7.8litres) Product Code TGR 02S

Winter Grade

13.7kg pack (7.8litres) Product Code TGR 02W

Solvent is supplied in 5 litre and 1 litre tins.

5 litre tin : Product Code TM02

1 litre tin: Product Code TM08

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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