



Compliant



High performance anchoring epoxy for concrete
Approved for cracked concrete & seismic zones

Fast Cure!

Same day loading
Higher Productivity

EPCON™
Pure Epoxy

G5 PRO



**MULTI
DIRECTIONAL
APPLICATION**



Product Advantages

- ETA approved for cracked concrete and seismic zones
- High performance pure epoxy with 100 years working life
- Fast cure for same day loading (2 hours at 35°C)
- All weather conditions
- Fast, low fatigue dispensing
- Non shrink epoxy – suitable for cored and oversized holes.
- Sag resistant – suitable for overhead applications.
- Low VOC & odourless, can be used indoors.
- Re-sealable tip

Applications

- Post-installed system for bond anchor e.g. starter bars and structural steel connections
- Post-installed system for rebar connection e.g. dowel bars for reinforce concrete walls, columns, slab and beams

Substrates

- Solid Concrete
- Cracked Concrete
- Stone
- Masonry block and brick

Applicable Standards

- Eurocodes
- AS5216:2018
- AS5216:2021
- NCC 2019
- 100 Years Working Life



Damp
Holes



Flooded
Holes



Drilled
Holes



Dustless
Drilling

GENERAL INFORMATION

Performance Related



Material Specification



Installation Related



PRODUCT

EPCON™ G5 PRO is a heavy duty pure Epoxy for anchoring threaded studs and reinforcing bar into cracked and uncracked concrete.

COMPLIANCE

European Technical Assessment

Design according to:

- EN1992-4 (formerly ETAG001 Annex C, E & TR045)

BENEFITS, ADVANTAGES AND FEATURES

- 100 year working life

Greater productivity:

- Anchors in dry, damp, wet or flooded holes
- Easy dispensing even in cold weather

Greater security:

- Strong bond
- Rated for sustained loading

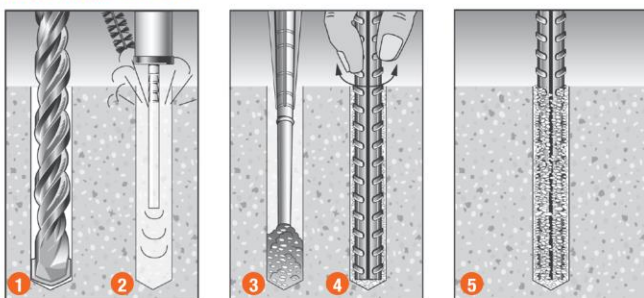
Versatile:

- Anchors in carbide drilled and diamond drilled holes*
- Cold and temperate climates

Greater safety:

- Low odour
- VOC Compliant

INSTALLATION



1. Drill recommended diameter and depth hole.
2. **Important:** Use Ramset™ Dustless Drilling System to ensure holes are clean. Alternatively, clean dust and debris from hole with stiff wire or nylon brush and blower in the following sequence: blow x 2, brush x 2, blow x 2, brush x 2, blow x 2.
3. Dispense adhesive to waste until colour is uniform light grey (2-3 trigger pulls). Insert mixing nozzle to bottom of hole. Fill hole to 3/4 the hole depth slowly, ensuring no air pockets form.
4. Insert Ramset™ ChemSet™ Anchor Stud/rebar to bottom of hole while turning.
5. Allow EPCON™ G5 PRO to cure as per setting times.



Principal Applications

- Threaded Studs
- Starter Bars
- Threaded Inserts
- Over-head installation
- Steel Columns
- Hand Rails
- Road Stitching

RECOMMENDED INSTALLATION TEMPERATURES

	Minimum	Maximum
Substrate	5°C	40°C
Adhesive	10°C	40°C

SERVICE TEMPERATURE LIMITS

-40°C to 70°C

SETTING TIMES

Temperature of base material	Cartridge Temperature	Gel Time	Curing time in dry and wet concrete
5°C - 10°C	Minimum 10°C	150 min	24 h
10°C - 15°C	10°C - 15°C	40 min	18 h
15°C - 20°C	15°C - 20°C	25 min	12 h
10°C - 25°C	20°C - 25°C	18 min	8 h
25°C - 30°C	25°C - 30°C	12 min	6 h
30°C - 35°C	30°C - 35°C	8 min	4 h
35°C - 40°C	35°C - 40°C	6 min	2 h

Note: Cartridge temperature minimum +10°C

Note

*Performance of cored & oversized holes was not included in the ETAG test program and therefore is based on testing conducted at Ramset™ Product Engineering Laboratory.

TRADES & APPLICATIONS

	Construction Contractor	Balustrade Contractor	Concrete Remediation	Building Contractor	Civil Contractor	Steel Fabricator
Post-Installed Reinforcing Bar	✓	✓	✓	✓	✓	
Anchoring structural steel column/beams				✓		✓
Machinery hold down	✓		✓	✓		
Starter Bars	✓	✓	✓	✓	✓	
Installing handrails, balustrades & safety barriers				✓		✓

PRODUCT RANGE



Part No:	Order Description	Box Qty
8A-G5PR-O600-ML	EPCON G5 PRO (600ml) + 1 EF Mixing Nozzle	15
8A-EFMN	Ramset EF Easy Flow Mixing Nozzle	12
8A-CUAP-VVVV	CUAP ChemSet Universal Applicator	1
8A-CUAR-18VV	CUAR 18V ChemSet Powered Applicator	1

EPCON G5 PRO – Indicative Design Loads in Concrete – ChemSet Anchor Stud (Grade 5.8)

Design Loads (N_{Rd} , V_{Rd}) for one anchor without edge or spacing in kN

$$N_{Rd} = \frac{N_{Rk}^*}{\gamma_{Mc}}$$

TENSILE

Anchor size	M8	M10	M12	M16	M20	M24	M30
UN-CRACKED CONCRETE							
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rd} (kN)	17.8	25.1	36.8	52.1	83.2	117.4	183.6
CRACKED CONCRETE							
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rd} (kN)	11.6	16.2	23.5	35.3	59.6	87.7	145.2

$\gamma_{Mc} = 1.8$

$$V_{Rd} = \frac{V_{Rk}^*}{\gamma_{Ms}}$$

SHEAR

Anchor size	M8	M10	M12	M16	M20	M24	M30
V_{Rd} (kN)	7.7	13.2	17.7	32.7	39.3	63.9	90.6
$\gamma_{Ms} =$	1.43		*M8 to M16				
$\gamma_{Ms} =$	1.50		*M20 onward				

EPCON G5 PRO – Indicative Design Loads in Concrete – Rebar

Design Loads (N_{Rd} , V_{Rd}) for one anchor without edge or spacing in kN

$$N_{Rd} = \frac{N_{Rk}^*}{\gamma_{Mc}}$$

TENSILE

Rebar size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rd} (kN)	13.9	19.6	28.8	43.6	74.2	114.6	169.2

$\gamma_{Mc} = 1.8$

$$V_{Rd} = \frac{V_{Rk}^*}{\gamma_{Ms}}$$

SHEAR

Rebar size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
V_{Rd} (kN)	11.1	17.3	24.9	44.2	69.1	108.0	176.9
$\gamma_{Ms} =$	1.5						

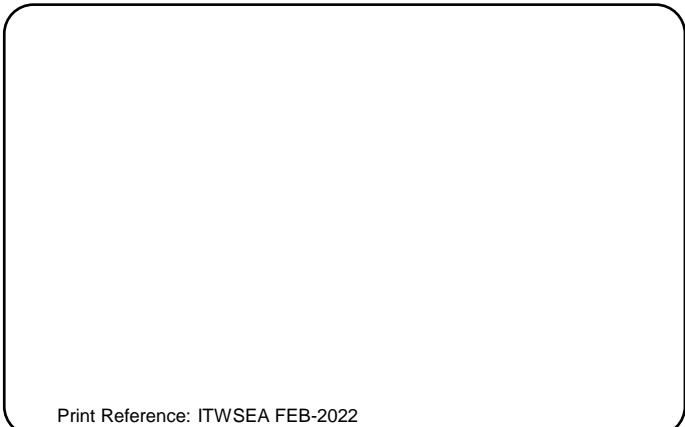
ChemSet™ Anchor Studs – Zinc Plated


ChemSet™ Anchor Studs are made from Grade 5.8 carbon steel to get the most out of adhesive tensile capacities and provide higher shear capacities than regular Grade 4.6 grade studs. External hex drive avoids jamming common with hex bar driven studs. External hex does not collect rainwater leading to accelerated corrosion in internal hex drive.

Advantages

- High Performance Grade 5.8 Carbon Steel
- Pre-cut to standard chemical anchoring lengths
- Supplied with nuts and washers
- Depth set mark to ensure correct embedment
- Reliable external hex drive for installing capsules
- Ramset™ Quality

Part No.	Description	Anchor Size (mm)	Stud Length (mm)	Max Fixture Thickness (mm)	Hole Diameter Ø (mm)	Min Hole Depth (mm)	Order Qty
8A-CS08-110V	CS08110 Studs	8	110	15	10	80	10
8A-CS10-130V	CS10130 Studs	10	130	20	12	90	10
8A-CS12-160V	CS12160 Studs	12	160	25	14	110	10
8A-CS16-190V	CS16190 Studs	16	190	35	18	125	10
8A-CS20-260V	CS20260 Studs	20	260	65	25	170	6
8A-CS24-300V	CS24300 Studs	24	300	63	28	210	6
8A-CS30-380V	CS30380 Studs	30	380	70	35	280	5

YOUR LOCAL DISTRIBUTOR

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