ChemSet™ Reo502™ Extra Heavy Duty Anchoring Epoxy

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ChemSet™ Reo502™ is specifically formulated for extra heavy duty anchoring of reinforcing bars and threaded studs in cracked and non-cracked concrete. The high performance two-component chemical anchoring system provides "peace of mind" when the hole conditions are uncertain. The pure epoxy Reo502™ formulation forms strong bonds to concrete under adverse conditions such as damp, wet or flooded holes. Due to its non-shrink behaviour, it bonds extremely well in oversized diameters and diamond cored holes.

Product Advantages

- High performance pure epoxy
- Fast dispensing in all weather
- Dry, damp, wet and flooded holes
- Longer working time for deep embedment
- Shorter curing time
- VOC & Styrene Free
- Approved for cracked, uncracked and seismic zones.

Substrates

- Concrete
- Hard natural stone (proof loading recommended)
- Solid rock
- Solid masonry

Specification

ChemSet™ Reo502™ is an extra heavy duty, pure epoxy injection chemical anchor.

Appearance	: Light grey
Density	: 1.7g/cm³ @ 20°C
Compressive strength	: 95 MPa (7 days)
Tensile strength	: 23 Ma (7days)

Applications

- Structural applications.
- Rebar and starter bars.
- Safety barriers.
- Balcony fences.
- Rolling cranes.
- Racking.
- Heavy machinery
- Structural steel to concrete.
- Suitable for applications prone to dynamic load vibrations and seismic actions.
- External applications.

Approvals / Listings

- HDB Prefabrication Technology Centre tested
- ETA Approved for:
  - Threaded studs in concrete
  - Rebars in concrete
- ICC-ES Evaluation Report ESR-3614
- CSTB Fire resistance classification F240
- Sustained Load Test (Creep resistance)

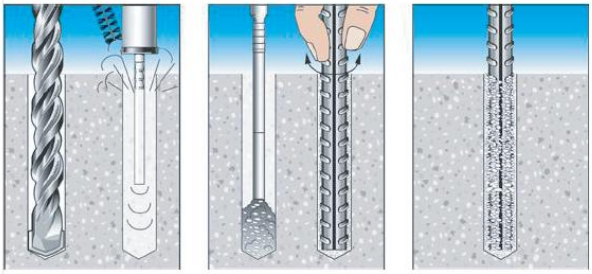
Recommended Installation Temperature

	Minimum	Maximum
Substrate	5°C	40°C
Adhesive	20°C	32°C

Setting Time

Ambient Temperature	Working Time	Full Cure Time
35°C > T ≥ 40°C	4 min	3 hours
30°C > T ≥ 35°C	6 min	5 hours
25°C > T ≥ 30°C	8 min	6 hours
20°C > T ≥ 25°C	11 min	7 hours
15°C > T ≥ 20°C	15 min	8 hours
10°C > T ≥ 15°C	20 min	12 hours

Installation



1. Drill or core hole to specified diameter and depth.
2. Remove dust and debris by brushing and blowing 3 times each (If hole is wet or flooded, brush only to remove water and slurry with wet/dry vacuum).
3. Screw mixing nozzle onto cartridge and dispense 2-3 trigger pulls of adhesive to waste until colour is light grey with no streaks.
4. Insert tip of nozzle to bottom of hole and dispense adhesive while slowly withdraw the mixing nozzle from the hole ensuring that there are no air voids as the mixing nozzle is withdrawn.
5. Fill hole to 1/2 full.
6. Insert threaded stud or reinforcing bar to the bottom of the hole using a back and forth twisting motion. Any excess resin should be expelled from the hole evenly around the steel element.

Product Range – ChemSet™ Reo502™ Extra Heavy Duty Anchoring

Description	Part No.	Order Quantity
ChemSet™ Reo502™ (600 ml) + 1 ISNE Mixing Nozzle	8A-RE05-02VV	12
ISNE Mixing Nozzle	8A-ISNE	24
E102 Dispensing Tool	8A-E102	1
E202 Pneumatic Dispensing Tool	8A-E202	1
Hole Cleaning Pump	8A-RABB	1

ChemSet™ Reo502™ – Indicative Design Loads in Concrete – ChemSet™ Anchor Studs (Grade 5.8)

Thread Size	Drill bit Ø (mm)	Hole Depth (mm)	Torque (Nm)	Minimum Edge Distance (mm)	Minimum Anchor Spacing (mm)	Tensile Load (kN)*	Shear Load (kN)*
M8#	10	80	10	40	40	13.2	9.5
M10	12	90	20	40	40	19.3	12.0
M12	14	110	40	40	40	28.0	16.8
M16	18	125	80	45	45	52.1	31.2
M20	22	170	135	50	50	82.0	48.8
M24	26	210	200	55	55	118.0	70.4
M30	35	270	270	65	65	187.3	112.0

ChemSet™ Reo502™ – Indicative Design Loads in Concrete – Rebar BSt 500S

Bar Size	Drill bit Ø (mm)	Hole Depth (mm)	Minimum Edge Distance (mm)	Minimum Anchor Spacing (mm)	Tensile Load (kN)*	Shear Load (kN)*
Ø8#	12	80	40	40	15.4	9.3
Ø10	13	90	40	40	28.7	14.7
Ø12	15	110	40	40	41.3	20.7
Ø16	20	125	45	45	74.0	36.7
Ø20	25	170	50	50	115.3	57.3
Ø25	30	210	55	55	180.0	90.0
Ø32	40	300	65	65	294.7	147.3
Ø40#	50	360	100	100	385.4	230.4

Additional Ramset technical data.

*Load resistance (kN) with ChemSet™ Grade 5.8 Studs and rebar BSt 500S in C20/25 concrete according to ETA design method TR 029 & CEN/TS 1992-4.

Refer to Ramset Design Guide for more information or explanation of technical data