

ANCHOR TECHNOLOGY

MULTI-MAX General Purpose Chemical Anchoring



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Ramset Multi-Max is a styrene-free chemical anchoring system that is formulated for use in different substrates. It is approved for use with rebar and threaded studs in concrete, masonry, solid and hollow materials. It is a cost-effective solution to anchoring jobs close to edges where there is a need to avoid bursting stress on the surrounding substrate and is suitable for normal loads in benign environments

Product Advantages

- One formula for various base materials
- Quick cure for improved productivity
- Less wastages
- Consistent mixing quality
- No VOC, No odour
- ETA approvals

Substrates

- Concrete
- Hollow block wall
- Solid block
- Hollow brick
- Solid brick
- Hollow floor beams

Specification

Multi-Max is a fast dispensing, fast curing methacrylate resin injection chemical anchor..

Appearance : Grey Paste
 Density : 1.3 to 1.6 g/cm³ @ 20°C
 Application temp. : -5°C to 40°C
 Storage temp. : 0°C to 35°C

Applications



- Guard rail fixings
- Overhead fixings
- Scaffolding attachment
- Floor slabs
- Signs
- Stadium seating
- Mechanical and electrical services
- Kitchen furniture & fixtures

Approvals / Listings

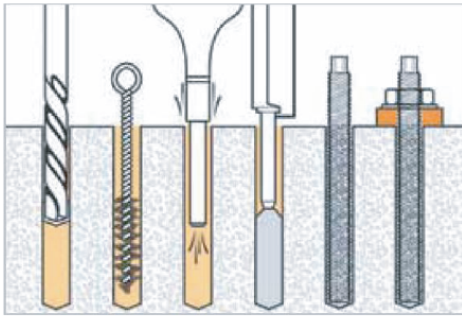
- HDB Prefabrication Technology Centre tested
- ETA Approved for:
 - Threaded studs in concrete
 - Rebars in concrete
 - Threaded studs in masonry



Setting Time

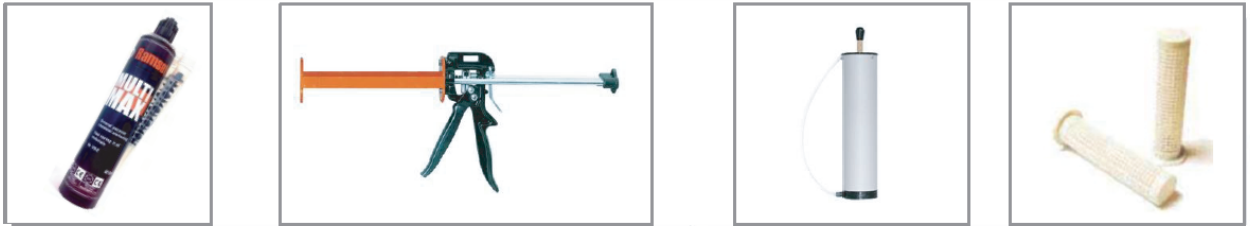
Ambient Temperature	Working Time	Full Cure Time
30°C > T ≥ 40°C	2 min	35 min
20°C > T ≥ 30°C	4 min	45 min
10°C > T ≥ 20°C	6 min	1 hour
5°C > T ≥ 10°C	12 min	1.5 hour
0°C > T ≥ 5°C	18 min	3 hours

Installation



1. Drill correct diameter hole to recommended depth.
2. Clean hole thoroughly with brush and air pump twice.
3. Assemble nozzle onto cartridge. Dispense and discard enough chemical until uniform mix is achieved. Inject from the bottom of the hole gradually, filling in until 50% full.
4. Insert the rod/stud by hand to full depth, using slow rotating movement.
5. Allow **MULTI-MAX** to cure for specified period before loading.

Product Range - MULTI-MAX General Purpose Chemical Anchoring



Description	Part No.	OrderQuantity
MULTI-MAX (410ml) + 2 Nozzles	8A-MULT-IMAX	12
Manual Dispensing Tool 380-410 ml	8A-218N-HBVV	1
Plastic Sleeve 15x85 (M8-M10)	8A-PFSL-1585	10
Plastic Sleeve 20x85 (M12)	8A-PFSL-2085	10
Hand Blow Pump	8A-RABB	1

MULTI-MAX - Indicative Design Loads in Concrete - ChemSet™ Anchor Studs

Thread Size	Drill bit Ø (mm)	Hole Depth (mm)	Torque (Nm)	Edge Distance (mm)	Anchor Spacing (mm)	Tensile Load N_{Rd} (kN)*	Shear Load V_{Rd} (kN)*
M8	10	80	10	120	250	12.1	7.7
M10	12	90	20	135	300	14.1	13.2
M12	14	110	30	165	330	19.6	17.7
M16	18	125	60	190	375	27.9	32.7
M20	25	170	120	255	510	47.5	39.3
M24	28	210	200	315	630	66.0	63.9

Indicative design load (kN) with ChemSet™ Grade 5.8 Studs in 30N/mm² concrete

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

MULTI-MAX – Recommended loads in masonry with stud sleeve

Setting Parameters					Hollow concrete block $f_b \geq 6.0\text{N/mm}^2$		Hollow clay masonry block $f_b \geq 9.0\text{N/mm}^2$		Hollow clay masonry block $f_b \geq 10.0\text{N/mm}^2$		Solid clay masonry block $f_b \geq 8.0\text{N/mm}^2$		Calcium silicate masonry block $f_b \geq 12.0\text{N/mm}^2$		Calcium silicate masonry block $f_b \geq 20.0\text{N/mm}^2$	
Sleeve Size	Stud Size	Hole Ø (mm)	Hole Depth (mm)	Torque (Nm)	N_{rec} (kN)	V_{rec} (kN)	N_{rec} (kN)	V_{rec} (kN)	N_{rec} (kN)	V_{rec} (kN)	N_{rec} (kN)	V_{rec} (kN)	N_{rec} (kN)	V_{rec} (kN)	N_{rec} (kN)	V_{rec} (kN)
Ø20X85	M12	20	85	3 ^(#)	0.43	0.57	0.71	1.00	0.71	0.86	0.26	1.14	1.00	2.85	-	-
	M8	15	130	3 ^(#)	0.43	0.86	0.43	0.34	0.34	1.00	0.57	0.43	0.86	5.80	-	-
Ø15X130	M10	15	130	3 ^(#)	0.43	0.86	0.43	0.34	0.34	1.00	0.57	0.43	0.86	7.70	-	-
	M8	10	80	3 ^(#)	-	-	-	-	-	-	-	-	-	-	3.43	2.71
N/A	M10	12	80	3 ^(#)	-	-	-	-	-	-	-	-	-	-	3.43	2.57
	M12	14	80	3 ^(#)	-	-	-	-	-	-	-	-	-	-	3.43	3.43

2 Nm in hollow concrete block and hollow clay masonry block with compressive strength, $f_b \geq 9.0\text{N/mm}^2$.

*Load data derived from ETAG 029 13/0437. Refer to MULTI-MAX technical data sheet for more information or explanation of technical data.