



Code	Description	Size	Colour
60090	Topotec Resin Anchor	300ml	Grey (when mixed)

### Description

Topotec Resin Anchor is a rapid curing 2 part chemical anchoring system based on epoxy acrylate. Topotec Resin Anchor is styrene free. It is suitable for exterior applications.

### Characteristics

- Styrene free
- Fast Cure time
- 100% waterproof

### Technical Data

<i>Based:</i>	Epoxy Acrylate resin
<i>Application Temperature:</i>	0°C to +30°C
<i>Consistency:</i>	Stable paste
<i>Minimum application temperature of the cartridge:</i>	+15°C to +30°C
<i>Mixing Ratio:</i>	10 : 1
<i>Shelf Life:</i>	12 months from date of manufacture
<i>Storage:</i>	Between +5°C to +25°C, avoid direct sunlight

### Applications

A chemical anchor for bolts, studs and rods:

- Concrete – standard, aerated hollow block (with sleeve)
- Fixing hand rails and other steel structures
- Mortar repair
- Can be used to anchor in wet concrete (20% load reduction applies)

### Product Features:

- Medium and heavy duty load application
- Quick curing
- Suitable for vertical and overhead application
- Two nozzles with each cartridge
- Cartridge can be used at a later date by cleaning and resealing

**Cautions:**

- If gel time expires use spare static mixer
- Do not shorten or cut nozzle
- Do not apply to uncured concrete
- Diamond coned holes will require roughening
- Ensure hole is free of debris/ contaminants prior to application of Boltfix®
- Do follow the specification detail outlined in charts 1-7

**Chart 1: Anchor Size/Hole Size**

Anchor Size	Hole Diameter	Hole Depth	Safety Haul Strength
10 mm	12 mm	90 mm	1632 kgf
12 mm	14 mm	120 mm	2874 kgf
16 mm	18 mm	145 mm	4566 kgf
20 mm	22 mm	170 mm	6704 kgf

**Chart 2: Curing Time Table**

Temperature (°C)	Gelling Time	Full Curing Time
0-5		4hr
5-10	16min.	3hr
10-20	12min.	2hr
20-30	8min.	60min.
30-40	3min.	30min.

Full cure is achieved after 24 hours. Kindly reminding temperature below 15°C the mortar must be conditioned to a minimum of 15°C

**Chart 3: Solid Substrate Rebar Installation Details**

Pressure			Destroy Haul Strength (Kgf/KN)		Safety Haul Strength (Kgf/KN)		Working Standard (mm)	
Concrete Strength			4,000 psi	280 kg/cm2	4,000 psi	280kg/cm2	Hole Diameter	Hole Depth
Rebar No.	#3	(Φ10)	3,540	35.8	1,180	11.9	13	90
	#4	(Φ 13)	5,480	55.4	1,827	18.5	16	120
	#5	(Φ 16)	9,060	91.5	3,020	30.5	20	145
	#6	(Φ 19)	14,150	142.9	4,717	47.6	25	170
	#7	(Φ 22)	18,630	188.2	6,210	62.7	28	200
	#8	(Φ 25)	23,195	234.3	7,732	78.1	32	225
	#9	(Φ 29)	25,340	256.0	8,447	85.3	37	250
	#10	(Φ 32)	32,120	324.4	10,707	108.1	40	290

Remarks: 1. Concrete Strength  $f_c'$ : 280kg/cm2 (4,000 psi)  
2. Rebar Strength: #3~#5  $f_y$ : 2,800 kgf/cm2, #6~#11  $f_y$  = 4,200 kgf/cm2

**Chart 4: Rebar Edge Distances and Testing**

EDGE DISTANCE REDUCTION FACTOR								
TENSILE LOAD								
EDGE DISTANCE(MM)	REBAR							
	CONCRETE 4000psi/27.5Mpa							
	#3(Φ10)	#4(Φ12)	#5(Φ16)	#6(Φ20)	#7(Φ22)	#8(Φ25)	#9(Φ29)	#10(Φ30)
50	0.66							
60	0.74							
70	0.84		0.62					
80	0.89	0.71	0.67					
90	1.00	0.74	0.74	0.64				
100		0.84	0.81	0.66	0.63			
110		0.94	0.87	0.72	0.66			
120		1.00	0.94	0.74	0.69	0.62		
140			1.00	0.83	0.74	0.68		
160				0.94	0.87	0.74	0.62	
180				1.00	0.94	0.84	0.66	0.66

200					1.00	0.87	0.78	0.64
220						0.94	0.84	0.74
240						1.00	0.95	0.82
260							1.00	0.85
280								0.93
300								1.00

Note: The required specification(s) offered in this report are for reference only. The conformity judgement is at the Applicant's final verdict.

**Chart 5: Solid Substrate Thread Rod Installation Details**

Pressure		Destroy Haul Strength (Kgf/KN)		Safety Haul Strength (Kgf/KN)		Working Standard (mm)	
Concrete Strength		4,000 psi	280 kg/cm2	4,000 psi	280kg/cm2	Hole Diameter	Hole Depth
Thread Rod No.	M8	2,550	25.8	850	8.6	10	80
	M10	3,455	34.9	1,152	11.6	13	90
	M12	5,403	54.6	1,801	18.2	16	120
	M16	6,303	63.7	2,101	21.2	20	145
	M20	8,104	81.9	2,701	27.3	25	170
	M24	15,655	158.1	5,218	52.7	28	210
	M30	31,290	316.1	10,430	105.4	35	270
	M36	44,300	447.5	17,767	149.2	40	330

**Chart 6: Thread Rod Edge Distances and Testing**

SPACING REDUCTION FACTOR								
TENSILE LOAD								
EDGE DISTANCE(MM)	THREAD ROD							
	CONCRETE 4000psi/27.5Mpa							
	M8	M10	M12	M16	M20	M24	M30	M36
50	0.66							
60	0.76							
70	0.84		0.62					
80	0.91	0.71	0.67					
90	1.00	0.76	0.74	0.64				
100		0.84	0.81	0.64	0.62			
110		0.94	0.87	0.70	0.65			
120		1.00	0.94	0.74	0.70	0.62		
140			1.00	0.81	0.74	0.66		
160				0.94	0.87	0.75	0.62	
180				1.00	0.94	0.86	0.66	0.64
200					1.00	0.87	0.78	0.66
220						0.94	0.82	0.74
240						1.00	0.93	0.82
260							1.00	0.84
280								0.93
300								1.00

Note: The required specification(s) offered in this report are for reference only. The conformity judgement is at the Applicant's final verdict.

**Chart 7: Fixings per Cartridge**

Anchor Size	Hole Diameter (mm)	Hole Depth (mm)	Number of Fixings			
			235ML	345ML	360ML	380ML
M8	10	80	55	85	87	95
M10	12	90	36	56	58	63
M12	14	110	22	34	35	38
M16	18	125	11	17	17	19
M20	24	170	5	7	8	8
M24	28	210	3	4	5	5
M30	35	270	1	2	2	2

M36	40	330	1	1	1	2
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Note: Based on continuous installation without interruptions or nozzle changes. Provided as a guide and will vary with temperature.

### Health and Safety Recommendation

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- Apply the usual industrial hygiene
- Please refer to the SDS for more detailed information.

#### **Remark**

*The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. In every case it is recommended to carry out preliminary experiments.*

**If any clarification is required, please contact 0800 TOPTEC or email [sales@toptec.co.nz](mailto:sales@toptec.co.nz)**

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