



Epoxy Resin



Product Information

The Epoxy Resin is a 2 Part, 3:1 ratio, injection system suitable for use in Concrete, solid brick and most natural stone. When used with Grade 8.8 Studs or Stainless Steel grade A4/70 studs it provides a very high strength anchorage suitable for use in dry and wet conditions. It is also suitable for use with rebar for use as starter bars and concrete strengthening.

Features

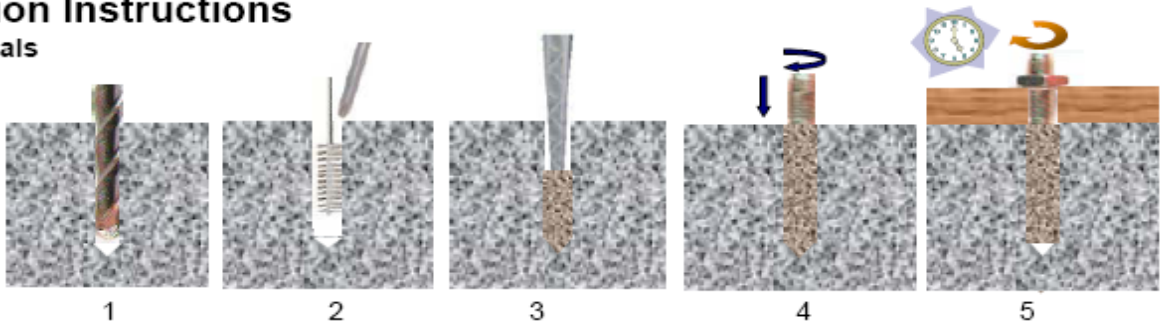
1. Expansion free
2. Very high strength
3. Suitable for stud and rebar installation
4. Close Spacings and Edge Distances

Stud Data						
Thread Diam	Drill Hole Diameter	Hole Depth	Maximum Fixture Thickness	Fixture Clearance Hole	Minimum Structure Thickness	Tightening Torque
mm	mm	mm	mm	mm	mm	kN
8	10	80	18	10	110	10
10	12	90	25	12	120	20
12	14	110	34	14	140	40
16	18	125	45	18	160	80
20	25	170	55	22	220	120
24	28	210	55	26	260	150

Gel / Cure Time		
Base Material Temp °C	Gel Time Mins	Cure Time Hrs
30	15	4
20	30	8
5	150	24

Installation Instructions

Solid Materials



1. Drill Hole of correct diameter and to correct depth
2. Clean hole by brushing and blowing to remove drilling debris and dust
3. Remove cap or cut top of inner sleeve and ensure both holes are clear. Attach nozzle and eject resin to waste until even mix is achieved then fill hole approximately 1/3rd full, filling from bottom
4. Insert stud rotating by hand to ensure an even distribution of the resin
5. Allow to cure, attach fixture and tighten to Recommended Torque

Rebar Installation

Bar Diam	Hole Diam	Design Loads				Depth to B500 Rebar Yield		
		Embedment Depth	Bond Strength	Charac. Tensile Resistance	Design Resistance	B500 Rebar Yield Load	Depth to Rebar Yields	Design Depth to Rebar Yield
mm	mm	mm	N/mm ²	kN	kN	kN	mm	mm
8	10	80	9.1	18.3	10.1	25.1	109.7	329
10	12	90	9.9	27.9	15.5	39.2	126.2	379
12	16	110	12.3	50.8	28.2	56.5	121.8	366
14	18	125	11.4	60.0	33.3	77.0	153.5	461
16	20	125	10.6	66.7	37.1	100.5	188.6	566
20	25	170	10.2	109.3	60.7	157.0	244.9	735
25	32	210	7.7	162.8	90.4	245.0	405.9	1218
30	40	300	7.2	272.8	151.5	402.0	555.3	1666

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Performance Data (20/25 Concrete)

Thread Diam mm	Characteristic Resistance kN		Design Resistance kN		Approved Load kN		Spacing	Edge Distance	
	Tensile	Shear	Tensile	Shear	Tensile	Shear	mm	Tensile	Shear
8	32.9	14.6	18.3	11.7	13.1	8.3	160	80	90
10	41.9	23.2	23.3	18.6	16.6	13.3	180	90	125
12	60.5	33.7	33.6	27.0	24.0	19.3	220	110	165
16	73.0	62.8	40.6	50.2	29.0	35.9	250	125	270
20	115.4	98.0	64.1	78.4	45.8	56.0	340	170	300
24	151.6	141.2	84.2	113.0	60.2	80.7	420	210	360

Shear Loads towards a free edge are for single anchors where Spacing $\geq 3 \times$ Edge Distance

Loads are for JCP Grade 8.8 Studs and Grade A4/70 Stainless Steel Studs

Reduced Design Resistance (kN)

Divide Loads by 1.4 for Recommended Loads

Edge mm	Edge Distance (C20/25 Concrete) for single anchors												Spacing (C20/25 Concrete)					
	Tensile Resistance						Shear Resistance						Spacing mm	Tensile Resistance per Pair of Anchors				
	M8	M10	M12	M16	M20	M24	M8	M10	M12	M16	M20	M24		M8	M10	M12	M16	M20
40	8.3												40	22.9				
45	8.9	13.0											45	23.4	29.1			
50	9.4	13.8					6.5						50	24.0	29.8			
55	10.0	14.6	17.4				7.2						55	24.6	30.4	42.0		
60	10.6	15.3	18.2				7.8						60	25.2	31.1	42.8		
65	11.1	16.1	19.1	26.6			8.5	9.7					65	25.7	31.7	43.5	51.2	
70	11.7	16.9	19.9	27.7			9.1	10.4					70	26.3	32.4	44.3	52.0	
80	12.8	18.4	21.6	29.9			10.4	11.9	13.5				80	27.5	33.7	45.8	53.6	
90		20.0	23.3	32.2	38.1		11.7	13.4	15.2				90	28.6	35.0	47.3	55.2	81.1
100			25.0	34.4	40.4			14.9	16.9				100	29.7	36.2	48.9	56.8	83.0
110			26.7	36.6	42.8	56.1		16.4	18.6				110	30.9	37.5	50.4	58.5	84.8
125				40.0	46.3	60.3		18.6	21.1	23.2			120	32.0	38.8	51.9	60.1	86.7
130					47.4	61.7			21.9	24.2			140	34.3	41.4	55.0	63.3	90.5
150					52.1	67.4			25.3	27.9	39.2		160	36.6	44.0	58.0	66.6	94.3
160					54.5	70.2			27.0	29.7	41.8		180		46.6	61.1	69.8	98.0
170					56.8	73.0				31.6	44.4		200			64.1	73.1	101.8
190						78.6				35.3	49.7	59.6	220			67.2	76.3	105.6
210						84.2				39.0	54.9	65.9	235				78.8	108.4
230										42.8	60.1	72.2	250				81.2	111.2
270										50.2	70.6	84.8	300					120.7
300											78.4	94.2	340					128.2
330												103.6	380					160.4
360												113.0	420					168.4

Influence of concrete strength

Concrete Strength		C20/25	C25/30	C30/37	C40/50	C50/60
Cylinder	N/mm ²	20	25	30	40	50
Cube	N/mm ²	25	30	37	50	60
Factor		1.00	1.10	1.22	1.41	1.55

When using concrete factors check all other information to ensure Steel Strength and Pull out Resistance is not exceeded

Steel Design Resistance for single anchor

		M8	M10	M12	M16	M20	M24	
Tension	kN	19.2	30.3	44.1	82.0	128.1	184.5	Grade 8.8
	kN	13.9	21.4	31.5	58.8	92.0	132.0	Stainless Steel Grade 70
Shear	kN	11.7	18.6	27.0	50.2	87.4	113.0	Grade 8.8
	kN	8.3	12.8	18.5	35.2	55.1	79.4	Stainless Steel Grade 70

Anchor mechanical properties

		M8	M10	M12	M16	M20	M24	
Nominal Tensile Strength	N/mm ²	800	800	800	800	800	800	Grade 8.8
		700	700	700	700	700	700	Stainless Steel Grade 70
Yield Strength	N/mm ²	640	640	640	640	640	640	Grade 8.8
		450	450	450	450	450	450	Stainless Steel Grade 70
Nut A/F	mm	13	17	19	24	30	36	
Washer Diam.	mm	16	21	24	30	37	44	