



### Product Information

The Polyester 2 Part Injection Resin is a general purpose resin suitable for solid brickwork and natural stone as well as hollow base materials using suitable sleeves. Polyester resin can also be used in Concrete but more suitable J-Fix Resins are available. It can be used for installing Studs, Rebar and Internal Threaded Sockets in dry conditions.

### Features

- 1 Expansion free
- 2 Easy to dispense
- 3 Close Spacing and Edge Distance
- 4 Minimum waste

### Installation Data

Thread Diameter	Drill Hole Diameter	Hole Depth	Maximum Fixture Thickness	Fixture Clearance Hole	Minimum Structure Thickness	Tightening Torque
mm	mm	mm	mm	mm	mm	mm
8	10	80	18	10	100	7
10	12	90	25	12	120	11
12	14	110	34	14	140	25
16	18	125	45	18	160	50
20	25	170	55	22	220	115
24	28	210	55	26	260	140

### Setting Times

Base Material Temp °C	Gel Time Mins	Load Time Mins
0	45	180
5	25	120
10	15	90
15	10	60
20	8	45
25	5	30

### Recommended Loads for Brick and Block

Thread Diameter	Brick		Block	
	20 N/mm <sup>2</sup> Solid Brick		7 N/mm <sup>2</sup> Solid Block	
	Rec Load kN	Rec Torque Nm	Rec Load kN	Rec Torque Nm
8	1.5	4	0.9	3
10	3.0	7	1.4	6
12	4.2	11	2.5	10
16	5.1	25	4.0	23

### Resin Fixing per Cartridge

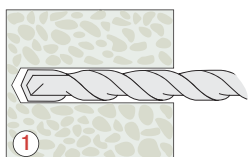
Thread Diameter	Hole Diameter	Hole Depth	380
mm	mm	mm	mm
8	10	80	110
10	12	90	60
12	14	110	40
16	18	125	20
20	25	170	9
24	28	210	5

Loads are for any direction  
Maintain Spacing as per Concrete Loads  
but only 1 fixing per brick is recommended

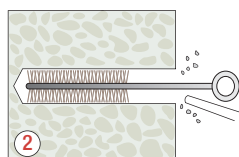
Do not fix closer than 1 brick away from a free edge  
Due to the variable nature of Brickwork and Blockwork these figures  
are for guidance only. For critical applications a site test is recommended

## Installation Instructions

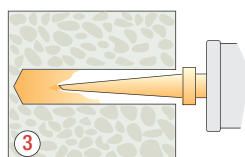
### Solid Materials



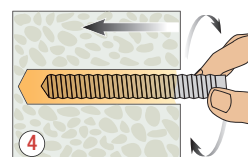
1 Drill hole of correct diameter and to correct depth. If holes formed using diamond drill sides must be roughened using a rotary percussion bit



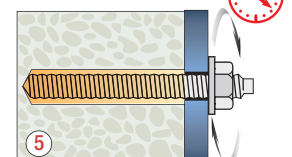
2 Clean hole by brushing and blowing to remove drilling debris and dust



3 Inject resin into hole after ensuring that the 2 parts are mixing correctly. Fill hole approx 1/3 full, filling hole from the bottom towards the top

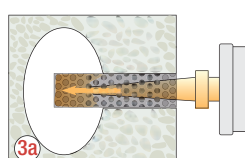
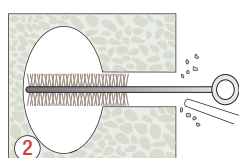
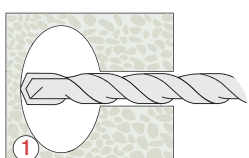


4 Insert stud rotating by hand to ensure an even distribution of the resin around the hole

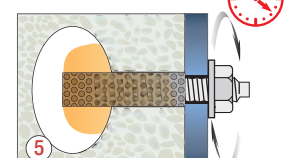
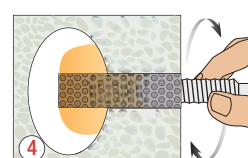


5 Allow the resin to cure for appropriate time. Attach fixture and tighten anchor to Recommended Torque

### Hollow Materials



3a For Hollow Materials insert perforated sleeve first and inject resin to fill sleeve. Filling sleeve from the bottom towards the top



Performance Data (20/25 Concrete)									
Thread Diameter mm	Characteristic Resistance kN		Design Resistance kN		Recommended Load kN		Spacing mm	Edge Distance mm	
	Tensile	Shear	Tensile	Shear	Tensile	Shear		Tensile & Shear	Tensile
8	14.5	9.0	6.9	7.2	4.9	5.1	100	80	90
10	22.1	14.0	10.5	11.2	7.5	8.0	130	90	125
12	31.7	21.0	15.1	16.8	10.8	12.0	150	110	160
16	36.1	39.0	17.2	31.2	12.3	22.3	170	130	270
20	58.4	61.0	27.8	48.8	19.9	34.9	210	150	300
24	80.6	88.0	38.4	70.4	27.4	50.3	240	190	360

Reduced Design Resistance (kN) • Divide Loads by 1.4 for Recommended Loads

Edge Distance (C20/25 Concrete) for single anchors													Spacing (C20/25 Concrete)							
Edge mm	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	M24	
40	4.5												40	9.7						
45	4.8	6.8											45	10.0	14.1					
50	5.1	7.2					4.0						50	10.4	14.5					
55	5.4	7.6	9.8				4.4						55	10.7	14.9	20.6				
60	5.7	8.1	10.3				4.8						60	11.0	15.3	21.1				
65	6.0	8.5	10.8	11.2			5.2	5.8					65	11.4	15.8	21.6	23.8			
70	6.3	8.9	11.3	11.6	17.4		5.6	6.3					70	11.7	16.2	22.1	24.3			
80	6.9	9.7	12.2	12.6	18.7		6.4	7.2	8.4				80	12.4	17.0	23.2	25.3			
90		10.5	13.2	13.5	20.0	24.3	7.2	8.1	9.5				90	13.1	17.8	24.2	26.3	39.7		
100			14.1	14.4	21.3	25.7		9.0	10.5				100	13.8	18.6	25.2	27.3	41.0		
110			15.1	15.3	22.6	27.1		9.9	11.6				110		19.4	26.2	28.3	42.4		
125				16.7	24.6	29.2		11.2	13.1	14.4			120		20.2	27.2	29.3	43.7	54.6	
130				17.2	25.2	29.9			13.7	15.0			130		21.0	28.2	30.4	45.0	56.1	
150					27.8	32.7			15.8	17.3	24.4		140			29.2	31.4	46.3	57.6	
160						34.2			16.8	18.5	26.0		150			30.2	32.4	47.7	59.2	
170						35.6				19.6	27.7		160				33.4	49.0	60.7	
190						38.4					22.0	30.9	37.2	170				34.4	50.3	62.2
200											23.1	32.5	39.1	190					53.0	65.2
210											24.3	34.2	41.1	210					55.6	68.3
230											26.6	37.4	45.0	230						71.3
270											31.2	43.9	52.8	240						72.8
300												48.8	58.7							
330													64.5							
360													70.4							

Influence of Concrete Strength

Concrete Strength		C20/25	C25/30	C30/37	C40/50	C45/55	C50/60
Cylinder	N/mm <sup>2</sup>	20	25	30	40	45	50
Cube	N/mm <sup>2</sup>	25	30	37	50	55	60
Factor		1.00	1.10	1.22	1.41	1.48	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	12.0	19.3	28.0	52.0	82.0	118.0	Grade 5.8
	kN	13.9	21.4	31.5	58.8	92.0	132.0	Stainless Steel Grade 70
Shear	kN	7.2	11.2	16.8	31.2	48.8	70.4	Grade 5.8
	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 <sup>2</sup>	500	500	500	500	500	500	Zinc plated & H.D.G
		700	700	700	700	700	700	Stainless Steel
Yield Strength	N/mm <sup>2</sup>	400	400	400	400	400	400	Zinc plated & H.D.G
		450	450	450	450	450	450	Stainless Steel
Nut A/F	mm	13	17	19	24	30	36	
Washer Diameter	mm	16	21	24	30	37	44	