



### Product Information

The Polyester 2 Part Injection Resin is a general purpose resin on styrene free monomers. Suitable for solid brickwork, natural stone and concrete as well as hollow base materials using suitable sleeves. It can be used for installing Studs, Rebar and Internal Threaded Sockets in damp and dry conditions.

### Features

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



### 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	11
10	12	90	25	12	120	22
12	14	110	34	14	140	38
16	18	125	45	18	160	95
20	25	170	55	22	220	170
24	28	210	55	26	260	260

### Setting Times

Base Material Temp °C	Gel Time Mins	Load Time Mins
-5	50	90
0	30	70
5	12	50
10	9	40
15	6	35
20	4	25

### 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
mm				
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

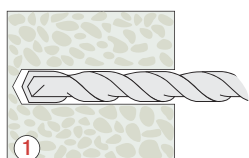
Thread Diameter	Hole Diameter	Hole Depth	360	300	150
mm	mm	mm	mm	mm	mm
M8	10	80	110	68	30
M10	12	90	60	45	20
M12	14	110	40	26	12
M16	18	125	20	18	8
M20	25	170	9	9	4
M24	28	210	5	4	2

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

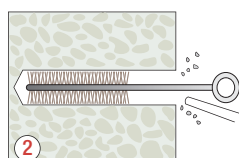
Do not fix closer than 1 brick away from a free edge  
Due to the variable nature of Brickwork and Blockwork these figures  
are for guidance only. For critical applications a site test is recommended

## Installation Instructions

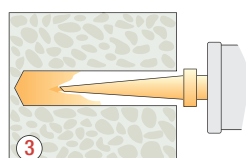
### Solid Materials



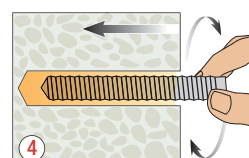
1 Drill hole of correct diameter and to correct depth. If holes formed using diamond drill sides must be roughened using a rotary percussion bit



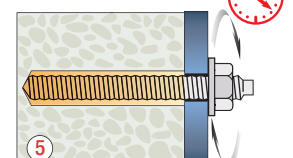
2 Clean hole by brushing and blowing to remove drilling debris and dust



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

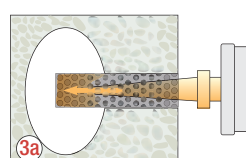
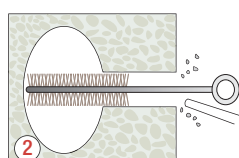
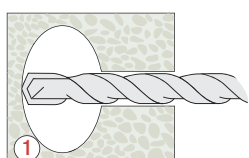


4 Insert stud rotating by hand to ensure an even distribution of the resin around the hole

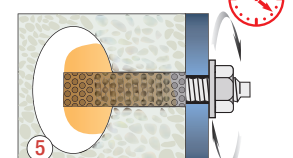
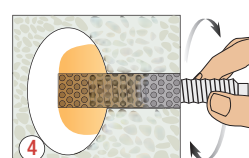


5 Allow the resin to cure for appropriate time. Attach fixture and tighten anchor to Recommended Torque

### 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	20.2	9.0	8.1	7.2	5.8	5.1	100	80	90
10	28.5	14.0	11.4	11.2	8.1	8.0	130	90	125
12	40.5	21.0	16.2	16.8	11.6	12.0	150	110	160
16	69.2	39.0	27.7	31.2	19.8	22.3	170	130	270
20	89.9	61.0	40.7	48.8	29.1	34.9	210	150	300
24	112.6	88.0	46.3	70.4	33.1	50.3	240	190	360

Reduced Design Resistance (kN) • Divide Loads by 1.4 for Approved 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	5.3												40	11.3						
45	5.6	7.4											45	11.7	15.3					
50	6.0	7.9					4.0						50	12.2	15.8					
55	6.3	8.3	10.5				4.4						55	12.6	16.2	22.1				
60	6.7	8.7	11.0				4.8						60	13.0	16.7	22.7				
65	7.0	9.2	11.6	18.0			5.2	5.8					65	13.4	17.1	23.2	38.3			
70	7.4	9.6	12.1	18.8	25.5		5.6	6.3					70	13.8	17.5	23.8	39.1			
80	8.1	10.5	13.1	20.2	27.4		6.4	7.2	8.4				80	14.6	18.4	24.8	40.7			
90		11.4	14.1	21.7	29.3	29.2	7.2	8.1	9.5				90	15.4	19.3	25.9	42.4	58.1		
100			15.2	23.2	31.2	30.9		9.0	10.5				100	16.2	20.2	27.0	44.0	60.1		
110			16.2	24.7	33.1	32.7		9.9	11.6				110		21.0	28.1	45.6	62.0		
125				27.0	36.0	35.2		11.2	13.1	14.4			120		21.9	29.2	47.3	64.0	69.5	
130				27.7	36.9	36.1			13.7	15.0			130		22.8	30.2	48.9	65.9	71.4	
150					40.7	39.5			15.8	17.3	24.4		140			31.3	50.5	67.8	73.3	
160						41.2			16.8	18.5	26.0		150			32.4	52.1	69.8	75.2	
170						42.9				19.6	27.7		160				53.8	71.7	77.2	
190						46.3					22.0	30.9	37.2	170				55.4	73.6	79.1
200											23.1	32.5	39.1	190					77.5	83.0
210											24.3	34.2	41.1	210					81.4	86.8
230											26.6	37.4	45.0	230						90.7
270											31.2	43.9	52.8	240						92.6
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	