

Polyester Styrene Free Resin

Product Group

0868



- Non-flammable
- Very low odour
- Chemical resistance
- Suitable for close edge applications
- Suitable for use in concrete, brickwork, stone & hollow structures
- Suitable for fixing wall ties, starter bars, studs, bolts & large screws
- Available in all cartridge sizes

Stud Data

		M8	M10	M12	M16	M20	M24
Hole Diameter in Concrete	mm	10	12	14	18	24	28
Hole Diameter in Fixture	mm	9	11	13	17	22	26
Std. Embedment in Concrete	mm	80	90	110	125	170	210
Recommended Torque	Nm	11	22	38	95	170	260

Hardening Time

		25	15	5	-5
Base Material Temp. (°C)		25	15	5	-5
Gel Time	mins	3	6	12	50
Min. Loading Time	mins	30	35	50	90

Specification Data - Performance Data at Standard Embedment Depth

		M8	M10	M12	M16	M20	M24
Characteristic Resistance-Tension (Ng)	kN	20.2	28.5	40.5	69.2	89.9	112.6
Characteristic Resistance - Shear (Vg)	kN	10.1	15.6	23.1	41.8	66.8	95.7
Design Resistance - Tension (Ng)	kN	8.1	11.4	16.2	27.7	40.7	46.3
Design Resistance - Shear (Vg)	kN	8.1	12.5	18.5	33.5	53.5	76.6
Recommended Load - Tension (Ng)	kN	5.8	8.1	11.6	19.8	29.1	33.1
Recommended Load - Shear (Vg)	kN	5.8	8.9	13.2	23.9	38.2	54.7
Edge Distance - Tension (C)	mm	80	90	110	130	150	190
Edge Distance - Shear (C)	mm	100	130	150	170	190	240
Characteristic Spacing	mm	100	130	150	170	210	240

Performance Data in Hollow Substrate

	M8	M10	M12	M16
Recommended Load (kN) Tension or Shear				
Brickwork 20.5N/mm ²	1.5	3.0	4.2	5.1
Blockwork 7N/mm ²	0.8	1.5	2.4	3.2

Available from:

HARRISON & CLOUGH LTD
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The full characteristic edge and spacing distances shown in the table above are the minimum allowable for the quoted design resistance or recommended load, depending on the design method used. Where these dimensions are not achievable, the appropriate reduction factor/s from the following tables must be applied to the design resistance or recommended load. Choose the required bolt diameter across the top of the appropriate table and read down the left hand column until actual edge or spacing distance is found. Read off the reduction factor where the two lines intersect (interpolate as required). Multiply this factor by the design resistance or recommended load quoted in the table. On the occasion that multiple close edge and / spacing distances occur, the appropriate reduction factors must be applied.

Edge Distance (Concrete)

Edge (mm)	M8	M10	M12	M16	M20	M24	M8	M10	M12	M16	M20	M24
Tensile: Edge Reduction Factors							Shear: Edge Reduction Factors					
50	0.77						0.50					
60	0.85	0.80					0.60	0.50				
70	0.92	0.87	0.78				0.70	0.58	0.50			
80	1.0	0.93	0.84				0.80	0.66	0.57			
90		1.0	0.89	0.82			0.90	0.75	0.64	0.56		
100			0.95	0.86	0.80		1.0	0.83	0.71	0.62	0.56	
110			1.0	0.91	0.84	0.77		0.92	0.78	0.69	0.61	0.50
130				1.0	0.92	0.83		1.0	0.92	0.81	0.72	0.59
150					1.0	0.90			1.0	0.94	0.83	0.68
170						0.97			1.0	0.94	0.77	
190						1.0				1.0	0.86	
210											0.95	
240											1.0	

Spacing (Concrete)

Spacing (mm)	M8	M10	M12	M16	M20	M24
Tensile & Shear Reduction Factors						
50	0.80					
60	0.84	0.80				
70	0.88	0.83	0.80			
80	0.92	0.87	0.83			
90	0.96	0.90	0.86	0.81		
100	1.0	0.93	0.88	0.84	0.80	
110		0.97	0.91	0.86	0.82	0.79
130		1.0	0.97	0.91	0.86	0.82
150			1.0	0.95	0.90	0.85
170				1.0	0.94	0.88
190					0.98	0.92
210					1.0	0.95
240						1.0

Ultimate physical properties

Compressive Strength (ASTM 695)	-	>56 N/mm ²
Tensile Strength (ASTM 638)	-	< 10 N/mm ²
Flexural Strength (ASTM 790)	-	16 N/mm ²
Elastic Modulus	-	3034 N/mm ²
Flexural Modulus	-	3462 N/mm ²
Mixed Density	-	1,65 g/cm ³

Storage

Store in a dry area between 5°C and 25°C. Do not expose to direct sunlight. Storage at higher temperatures will reduce the shelf life.

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