

XPSF 300

POLYESTER SF RESIN

**Std
load**

Part : BU-XPSF300/410



Product Description

XPSF300 is a polyester based fixing resin designed for load bearing applications in concrete. This product is also designed without styrene to allow safe use in confined spaces. Suitable for fixing bolts, posts, threaded rods, studs and anchors to install a massive variety of fixings. May be used in any kind of solid substrate for example concrete, stone, granite, marble, brick. Also may be used in hollow substrates with a nylon or metal perforated sleeve.

Key Features

- For use in Hollow Wall, Brickwork, Masonry & Concrete.
- Economical Fixing Resin.
- Standard Duty Load Applications.
- Non Flammable and Non-Hazardous.
- Ideal as well for Indoor Usage.

Typical Gel and Curing Time*

*Figures are based on M12 fixings. Full cure is achieved after 24 hours

Base Material Temperature (°C)	35	25	15	5	-5	-10**
Typical Gel Time (mins)	3	8	13	21	50	60
Minimum Load Time (mins)	20	20	20	30	90	180

**Resin temperature must be at least 20°C

Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{ck, cube} = 25N/mm^2$ (C20/25) 5.8 Grade Steel									SETTING DATA			
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing (mm)	Hole Diameter In Concrete	Hole Diameter In Fixture	Standard Embedment In Concrete	Recommended Torque (Nm)
	Tension (N_{rk})	Shear (V_{rk})	Tension (N_{rd})	Shear (V_{rd})	Tension (N_{rec})	Shear (V_{rec})	Tension ($C_{cr,N}$)	Shear ($C_{cr,V}$)	(mm)	(mm)	(mm)	Concrete/Brick	
M8	20.2	9.5	8.1	7.6	5.8	5.4	80	100	160	10	9	80	11 / 5
M10	28.5	15.1	11.4	12.1	8.1	8.6	90	130	180	12	11	90	22 / 17
M12	40.5	21.9	16.2	17.5	11.6	12.5	110	150	220	14	13	110	38 / 28
M16	69.2	40.8	27.7	32.7	19.8	23.3	125	170	250	18	17	125	95 / 75
M20	89.9	63.7	40.7	51.0	29.1	36.4	170	190	340	24	22	170	170 / -
M24	112.6	91.8	46.3	73.4	33.1	52.4	210	240	420	28	26	210	260 / -
M30	-	-	-	-	-	-	280	350	560	35	33	280	480 / -

Typical Ultimate Physical Properties

	N/mm ²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	53.55	(EN ISO 604) / (ASTM 695)	This product should be stored between +5°C & +25°C. The Shelf life of the product is 12 months from the manufacture date.	The information and data given is based on our own experience, research and testing and is believed to be reliable and accurate. However, as the manufacturer cannot know the varied uses to which its products may be applied, or the methods of application used, no warranty as to the fitness or suitability of its products is given or implied. It is the users responsibility to determine suitability of use. For further information please contact our Technical Department.
FLEXURAL STRENGTH	24.08	(EN ISO 178) / (ASTM 795)		
FLEXURAL MODULUS	2927.67	"		
TENSILE STRENGTH	12.48	(EN ISO 527) / (ASTM 638)		
E MODULUS	9651.33	"		

Typical Performance in Hollow Substrate

SIZE	Recommended Load (kN) Tension or Shear (F_{ec})	
	Brickwork 20.5 N/mm ²	Blockwork 7 N/mm ²
M8	1.7	0.8
M10	3.4	1.7
M12	4.8	2.7
M16	5.6	3.6

Edge Distance (Concrete)

EDGE (mm)	TENSILE EDGE REDUCTION FACTORS						
	M8	M10	M12	M16	M20	M24	M30
50	0.65						
60	0.70	0.67					
70	0.75	0.71					
80	1.00	0.76	0.69				
90		1.00	0.73	0.69			
100			0.76	0.72	0.64		
110			1.00	0.75	0.6		
125				1.00	0.70	0.64	
150					0.75	0.69	
170					1.00	0.72	
190						0.76	0.67
210						1.00	0.70
240							0.74
260							0.77
280							1.00

EDGE (mm)	SHEAR EDGE REDUCTION FACTORS						
	M8	M10	M12	M16	M20	M24	M30
60	0.65						
75	0.76	0.70					
90	0.88	0.80	0.69				
100	1.00	0.87	0.75	0.68			
115		0.97	0.83	0.75			
130		1.00	0.91	0.83	0.66		
150			1.00	0.92	0.73	0.63	
170				1.00	0.80	0.69	
190					1.00	0.74	
210						0.80	0.65
240						1.00	0.71
280							0.80
300							0.84
325							0.90
350							1.00

Spacing (Concrete)

EDGE (mm)	TENSILE: SPACING REDUCTION FACTORS						
	M8	M10	M12	M16	M20	M24	M30
50	0.66						
60	0.69						
70	0.72	0.69					
80	0.75	0.72					
90	0.78	0.75	0.70				
100	1.00	0.78	0.73	0.70			
115		0.82	0.76	0.73			
130		1.00	0.80	0.76	0.69		
150			1.00	0.80	0.72	0.68	
170				1.00	0.75	0.70	
190					0.78	0.73	
210					1.00	0.75	0.69
240						1.00	0.71
280							0.75
300							0.77
325							0.79
350							1.00

IMPORTANT NOTE:
Performance based on clean holes; HAMMER DRILLED - blown
and then brushed with a stiff metal brush & blown again.

Characteristic & Design Shear Loads for Various Stud Grades + Rebar

Stud Diameter (mm)	Stud Grade 5.8		Stud Grade 8.8		Stud Grade 10.9		Stud Grade A4-70		Stud Grade A4-80		Rebar Diameter (mm)	Rebar Diameter (mm)	
	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)		Vrk,s (kN)	Vrd,s (kN)
M8	9.5	7.6	14.6	11.7	19.0	15.2	12.8	8.2	14.6	9.4	8	16.6	11.1
M10	15.1	12.1	23.2	18.6	30.2	24.1	20.3	13.0	23.2	14.9	10	25.9	17.3
M12	21.9	17.5	33.7	27.0	43.8	35.1	29.5	18.9	33.7	21.6	12	37.3	24.9
M16	40.8	32.7	62.8	50.2	81.6	65.3	55.0	32.5	62.8	40.3	14	50.8	33.9
M20	63.7	51.0	98.0	78.4	127.4	101.9	85.8	55.0	98.0	62.8	16	66.4	44.3
M24	91.8	73.4	141.2	113.0	183.6	146.8	123.6	79.2	141.2	90.5	20	103.9	69.3
M30	207.1	166.1	207.6	166.1	269.9	215.9	129.8	64.9	207.6	103.8	25	162.0	108.0
											32	265.1	176.7
											40	414.6	276.4

Notes:

All grades shown for information.

M30 studding is 8.8 grade instead of 5.8 grade.

M30 for A4-70 tensile strength of 500N/mm², instead of 700N/mm².

Safety Factor is 1.25 for all carbon steel.

Safety Factor is 1.56 for stainless steel, up to M24, M30 is 2.0.

Safety Factor is 1.5 for BSt 500 rebar.

Approvals



INSTYTUT TECHNIKI
BUDOWLANEJ
Aprobacie Technicznej
ITB nr AT-15-6900:2006



Approval nr.
CAZ 0834/1
Valid
2010-2013
For use with
hollow &
masonry

