



3:1 Pure Epoxy



Product Description

Chemfix Pure Epoxy 3:1 Resin is a high performance, two component epoxy resin system. Applied in one single action this resin will produce a high performance, strong fixing with exceptionally high chemical resistance.

Key Features

- Solvent Free, Odourless Resin, No Shrinkage.
- Ideal for Diamond Drilled Holes.
- Longer Working Times.
- Highest Durability.
- Can be used in Wet holes or Underwater.
- Ideal for Rebar Usage.

Approvals



INSTYTUT TECHNIKI
BUDOWLANEJ
Aprobacje Technicznej
ITB nr AT-15-6895:2011
ITB-973/W

Tested by:

**Imperial College
London**
Consultants



Water Regulations
Advisory Scheme
BS6920 approved

Available Sizes

385ml 3:1 Side by Side Cartridge

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

Typical Gel and Curing Time*

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5	0
TYPICAL GEL TIME (mins)	40	60	180	300	-
MIN. LOAD TIME (mins)	180	300	420	1440	-

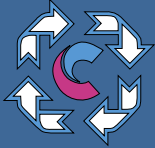
*Figures are based on M12 fixings. Full cure is achieved after 24 hours. All specifications are based on Chemfix Mixer 14.

Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{ck, cube} = 25\text{N/mm}^2$ (C20/25) 5.8 Grade Studding									SETTING DATA IN SOLID SUBSTRATE			
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing	Hole Diameter In Concrete	Hole Diameter In Fixture	Standard Embedment In Concrete	Recommended Torque
	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)	(Nm)	
M8	19.0	9.5	12.7	7.6	9.1	5.4	80	100	160	10	9	80	11
M10	30.2	15.1	20.1	12.1	14.4	8.6	90	130	180	12	11	90	22
M12	43.8	21.9	29.2	17.5	20.9	12.5	110	150	220	14	13	110	38
M16	81.6	40.8	47.8	32.7	34.1	23.3	125	170	250	18	17	125	95
M20	127.4	63.7	79.1	51.0	56.5	36.4	170	190	340	24	22	170	170
M24	183.6	91.8	117.0	73.4	83.6	52.4	210	240	420	28	26	210	260
M30	416.2	207.1	192.7	166.1	137.6	118.6	280	350	560	35	33	280	480

Typical Ultimate Physical Properties

	N/mm ²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	89.77	(EN ISO 604) / (ASTM 695)	This product should be stored between +5°C & +35°C. Keep away from direct sunlight The Shelf life of the product is 24 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 Chemfix Products 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	46.52	(EN ISO 178) / (ASTM 795)		
FLEXURAL MODULUS	3882.00	"		
TENSILE STRENGTH	24.76	(EN ISO 527) / (ASTM 638)		
E MODULUS	5622.00	"		



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Performance Data for Various Stud Strengths, Material and Rebar

5.8 Grade Studding

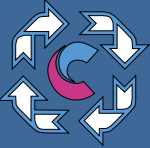
Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s		
		(kN)																		hef failure (mm)	design load (kN)	
8	10	12.7																		66	12.7	
10	12		20.1																	84	20.1	
12	14			29.2																102	29.2	
16	18				45.8	49.7	53.5	54.4												142	54.4	
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	79.1	83.7	84.9																	183	84.9
24	28				111.6	122.4															219	122.4
30	40						178.9	192.7	206.4	240.8	278.9										405	278.9
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

8.8 Grade Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s		
		(kN)																		hef failure (mm)	design load (kN)	
8	10	15.3	17.2	19.1	19.5																102	19.5
10	12		21.5	23.9	26.3	28.7	30.9														130	30.9
12	14				31.5	34.4	37.3	40.1	43.0	45.0											157	45.0
16	18					45.8	49.7	53.5	57.3	61.1	65.0	68.8	72.6	76.4	83.7						219	83.7
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	79.1	83.7	88.4	93.0	102.3	111.6	120.9	130.7												281	130.7
24	28				111.6	122.8	133.9	145.1	156.2	167.4	188.3										337	188.3
30	40								192.7	206.4	240.8	278.9									405	83.7
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

10.9 Grade Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s		
		(kN)																		hef failure (mm)	design load (kN)	
8	10	15.3	17.2	19.1	21.0	22.9	24.8	26.7	27.2												142	27.2
10	12		21.5	23.9	26.3	28.7	31.0	33.4	35.8	38.2	40.6	43.1									180	43.1
12	14				31.5	34.4	37.3	40.1	43.0	45.8	48.7	51.6	54.4	57.3	62.6						219	62.6
16	18					45.8	49.7	53.5	57.3	61.1	65.0	68.8	72.6	76.4	84.1	91.7	99.3	107.0	114.6	116.6	305	116.6
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	79.1	83.7	88.4	93.0	102.3	111.6	120.9	130.2	139.5	162.8	182.0									391	182.0
24	28				111.6	122.8	133.9	145.1	156.2	167.4	195.3	223.2	251.1	262.2							470	262.2
30	40								192.7	206.4	240.8	275.2	309.6	344.0	378.5	388.5					565	388.5
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		



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A4-70 Stainless Steel Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s			
		(kN)																		hef failure (mm)	design load (kN)		
8	10	13.7																			72	13.7	
10	12		21.5	21.7																	= Steel Failure	91	21.7
12	14				31.6																	110	31.6
16	18					45.8	49.7	53.5	57.3	58.8												154	58.8
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350			
20	24	79.1	83.7	88.4	91.7																	197	91.7
24	28				111.6	122.8	132.1															237	132.1
30	40					139.8																203	139.8
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000			

A4-80 Stainless Steel Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s			
		(kN)																		hef failure (mm)	design load (kN)		
8	10	15.3	15.7																			82	15.7
10	12		21.5	23.9	24.8																= Steel Failure	104	24.8
12	14				31.5	34.4	36.1															126	36.1
16	18					45.8	49.7	53.5	57.3	61.1	65.0	67.2										176	67.2
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350			
20	24	79.1	83.7	88.4	93.0	102.3	104.8															225	104.8
24	28				111.6	122.8	133.9	145.1	151.0													271	151.0
30	40								15.3	209.3	223.7											321	223.7
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000			

High Bond Reinforcing Bars $f_{yk}=500N/mm^2$

Rebar Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		Fd,s			
		(kN)																		hef failure (mm)	design load (kN)		
8	10-12	15.3	19.1	21.9																		114	21.9
10	12-14		23.9	28.7	33.4	34.1															= Steel Failure	143	34.1
12	16-18			34.4	40.1	45.8	49.2															172	49.2
14	18-20				46.8	53.5	60.2	66.9														200	66.9
16	20-22					61.1	68.8	76.4	84.1	87.4												229	87.4
Depth (mm)		80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	450	500			
20	28	93.0	104.6	116.3	127.9	136.6																294	136.6
25	32			145.3	159.8	174.4	203.4	213.4														367	213.4
32	40					220.2	256.9	293.6	330.3	349.7												476	349.7
40	50							367.0	412.9	458.7	504.6	546.3										595	546.3
Depth (mm)		200	225	250	275	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400			

