

Product Description

Chemfix EASF - Epoxy Acrylate Styrene Free Low Odour Resin is a high performance, rapid curing two part chemical anchoring system. Applied in one single action this resin will produce a cost effective, strong, chemical resistant fixing.

Key Features

- For use in Wet holes and underwater.
- Good Chemical Resistance.
- Medium & Heavy Duty Load Applications.
- High Durability.
- Ideal as well for Indoor Usage.

Approvals





INSTYTUT TECHNIKI
BUDOWLANEJ
Aprobacie Technicznej
ITB nr AT-15-6835:2011
ITB-974/W

Tested by:

**Imperial College
London**
Consultants

Available Sizes

380ml / 400ml / 410ml 10:1 Co-axial Cartridge
825ml 10:1 Side by Side Cartridge
330ml / 345ml / 350ml 10:1 Side by Side Cartridge
280ml / 300ml / 410ml 10:1 Foil Bag
150ml / 165ml / 170ml 10:1 Foil Bag

CE 1488
Chemfix Products Ltd
11
 
1488-CPD-0244/W
Chemfix EASF
ETA-11/0031
ETAG 029
For Masonry & Hollow Walls
European Technical Approval

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*

*Figures are based on M12 fixings. Full cure is achieved after 24 hours. All specifications are based on use of a Chemfix T-Flow™ Mixer.

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5	-5**	-10**
TYPICAL GEL TIME (mins)	3	6	8	18	50	60
MIN. LOAD TIME (mins)	20	20	20	30	90	180

**Resin temperature must be at least 20°C

Typical Tensile (kN) Performance Data at Standard Embedment Depth

Size	5.8 Grade Steel Studding			A4-70 Grade Steel Studding			High Bond Reinforcing bars fyk=500N/mm ²				
	Characteristic Resistance (N _{rk})	Design Resistance (N _{rd})	Recommended Load (N _{rec})	Characteristic Resistance (N _{rk})	Design Resistance (N _{rd})	Recommended Load (N _{rec})	Rebar Size (mm)	h _{nom} (mm)	Steel Yield Load	Design Bond Load	Recommended Load
M8	19.0	12.7	9.1	25.6	12.9	9.2	8	80	21.9	11.7	8.3
M10	30.2	16.0	11.4	34.6	16.0	11.4	10	90	34.1	14.9	10.6
M12	43.8	20.3	14.5	43.8	20.7	14.8	12	110	49.2	18.8	13.4
M16	63.5	29.4	21.0	63.5	29.4	21.0	14	125	66.9	23.9	17.1
M20	97.6	38.7	27.6	97.6	38.7	27.6	16	125	87.4	26.2	18.7
M24	126.7	50.3	35.9	126.7	50.3	35.9	20	170	136.6	36.6	26.1
M30	179.5	71.2	50.9	179.5	71.2	50.9	25	210	213.4	48.8	34.9
							32	300	349.7	75.3	53.8
							40	360	546.3	99.5	71.1

Typical Ultimate Physical Properties

	N/mm ²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	62.70	(EN ISO 604) / (ASTM 695)	This product should be stored between +5°C & +25°C. Avoid Direct Sunlight 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 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	23.88	(EN ISO 178) / (ASTM 795)		
FLEXURAL MODULUS	3250.33	"		
TENSILE STRENGTH	12.85	(EN ISO 527) / (ASTM 638)		
E MODULUS	6860.33	"		



Performance Data for Various Stud Strengths, Material and Rebar

Concrete Strength Class: C20/25 (25N/mm² Cylinder; 30N/mm² 150mm cube).

IMPORTANT NOTE:

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

5.8 Grade Studding

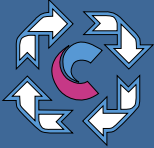
Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd})																		F _{d,s}					
		(kN)																		hef failure (mm)	design load (kN)				
8	10	12.7																			78	12.7			
10	12		16.0	17.8	19.6	20.1															=	Steel Failure	113	20.1	
12	14				20.3	22.1	24.0	25.8	27.7	29.2													159	29.2	
16	18					27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	49.5	54.1	54.4							242	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	38.9	41.2	43.5	45.7	50.3	54.9	59.5	64.0	68.6	80.1	84.9											371	84.9	
24	28				48.0	52.8	57.6	62.4	67.2	72.1	84.1	96.1	108.1	120.1	122.4									510	122.4
30	40								71.3	76.4	89.1	101.8	114.5	127.3	140.0	152.7	178.2	203.6	229.1	254.5			1096	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})																		F _{d,s}						
		(kN)																		hef failure (mm)	design load (kN)					
8	10	13.0	14.6	16.2	17.8	19.5															121	19.5				
10	12		16.0	17.8	19.6	21.3	23.1	24.9	26.7	28.5	30.2	30.9									=	Steel Failure	174	30.9		
12	14				20.3	22.1	24.0	25.8	27.7	29.5	31.3	33.2	35.0	36.9	40.6	44.2	45.0							244	45.0	
16	18					27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	49.5	54.1	58.6	63.1	67.6	78.8			372	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	38.9	41.2	43.5	45.7	50.3	54.9	59.5	64.0	68.6	80.1	91.5	102.9	114.4	125.8	130.7							571	130.7		
24	28				48.0	52.8	57.6	62.4	67.2	72.1	84.1	96.1	108.1	120.1	132.1	144.1	168.1	188.3							784	188.3
30	40								71.3	76.4	89.1	101.8	114.5	127.3	140.0	152.7	178.2	203.6	229.1	254.5			1096	278.9		
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})																		F _{d,s}						
		(kN)																		hef failure (mm)	design load (kN)					
8	10	13.0	14.6	16.2	17.8	19.4	21.0	22.7	24.3	25.9	27.2										=	Steel Failure	168	27.2		
10	12		16.0	17.8	19.6	21.3	23.1	24.9	26.7	28.5	30.2	32.0	33.8	35.6	39.1	43.1								242	43.1	
12	14				20.3	22.1	24.0	25.8	27.7	29.5	31.3	33.2	35.0	36.9	40.6	44.2	47.9	51.6	55.3	62.6			340	62.6		
16	18					27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	49.5	54.1	58.6	63.1	67.6	78.8			518	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	38.9	41.2	43.5	45.7	50.3	54.9	59.5	64.0	68.6	80.1	91.5	102.9	114.4	125.8	137.2	160.1	182.0							796	182.0
24	28				48.0	52.8	57.6	62.4	67.2	72.1	84.1	96.1	108.1	120.1	132.1	144.1	168.1	192.1	216.2	240.2			1092	262.2		
30	40								71.3	76.4	89.1	101.8	114.5	127.3	140.0	152.7	178.2	203.6	229.1	254.5			1527	388.5		
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000						



EASF



A4-70 Stainless Steel Studding

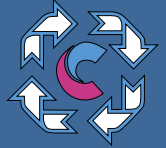
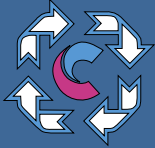
Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																		$F_{d,s}$				
																				hef failure (mm)	design load (kN)			
8	10	13.0	13.7																		85	13.7		
10	12		16.0	17.8	19.6	21.3	21.7													=	Steel Failure	122	21.7	
12	14				20.3	22.1	24.0	25.8	27.7	29.5	31.3	31.6										171	31.6	
16	18					27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	49.5	54.1	58.8					261	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	38.9	41.2	43.5	45.7	50.3	54.9	59.5	64.0	68.6	80.1	91.7										401	91.7	
24	28				48.0	52.8	57.6	62.4	67.2	72.1	84.1	96.1	108.1	120.1	132.1								550	132.1
30	40								71.3	76.4	89.1	101.8	114.5	127.3	139.8								549	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}) (kN)																		$F_{d,s}$			
																				hef failure (mm)	design load (kN)		
8	10	13.0	14.6	15.7																		97	15.7
10	12		16.0	17.8	19.6	21.3	23.1	24.8												=	Steel Failure	140	24.8
12	14				20.3	22.1	24.0	24.8	27.7	29.5	31.3	33.2	35.0	36.1								196	36.1
16	18					27.0	29.3	31.5	33.8	36.0	38.3	40.5	42.8	45.0	49.5	54.1	58.6	63.1	67.2			298	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	38.9	41.2	43.5	45.7	50.3	54.9	59.5	64.0	68.5	80.1	91.5	102.9	104.8								458	104.8
24	28				48.0	52.8	57.6	62.4	67.2	72.1	84.1	96.1	108.1	120.1	132.1	144.1	151.0					629	151.0
30	40								71.3	76.4	89.1	101.8	114.5	127.3	140.0	152.7	187.2	203.6	223.7			879	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}) (kN)																		$F_{d,s}$			
																				hef failure (mm)	design load (kN)		
8	10-12	11.7	14.6	17.5	21.9																	150	21.9
10	12-14		16.7	20.0	23.3	26.6	30.0	34.1												=	Steel Failure	205	34.1
12	16-18			20.4	23.8	27.1	30.5	33.9	37.3	40.7	44.1	49.2										290	49.2
14	18-20				26.5	30.3	34.0	37.8	41.6	45.4	49.2	53.0	56.7	60.5	66.9							354	66.9
16	20-22					33.8	38.0	42.2	46.5	50.7	54.9	59.1	63.3	67.6	71.8	76.0	80.2	87.4				414	87.4
Depth (mm)		80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	450	500			
20	25 - 28	42.7	48.1	53.4	58.8	64.1	74.8	85.5	96.1	106.8	117.5	136.6										639	136.6
25	30 - 32			58.9	64.8	70.7	82.5	94.3	106.0	117.8	129.6	141.4	165.0	188.5	213.4							906	213.4
32	39 - 42					75.4	88.0	100.5	113.1	125.7	138.2	150.8	176.0	201.1	226.2	251.4	276.5	301.6	349.7			1391	349.7
40	48 - 52							110.6	124.4	138.2	152.1	165.9	193.5	221.2	248.8	276.5	304.1	331.8	359.4	381.7		1976	546.3
Depth (mm)		200	225	250	275	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400			



Characteristic (Vrk,s) & Design (Vrd,s) Shear Loads for Various Stud Grades + Rebar

Stud Diameter	Stud Grade 5.8		Stud Grade 8.8		Stud Grade 10.9		Stud Grade A4-70		Stud Grade A4-80		Rebar Diameter (mm)	BSt 500 Rebar	
	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	9.0	7.2	14.6	11.7	19.0	15.2	12.8	8.2	14.6	9.4	8	16.6	11.1
M10	15.0	12.0	23.2	18.6	30.2	24.1	20.3	13.0	23.2	14.9	10	25.9	17.3
M12	21.0	16.8	33.7	27.0	43.8	35.1	29.5	18.9	33.7	21.6	12	37.3	24.9
M16	39.0	31.2	62.8	50.2	81.6	65.3	55.0	32.5	62.8	40.3	14	50.8	33.9
M20	61.0	48.8	98.0	78.4	127.4	101.9	85.8	55.0	98.0	62.8	16	66.4	44.3
M24	88.0	70.4	141.2	113.0	183.6	146.8	123.6	79.2	141.2	90.5	20	103.9	69.3
M30	207.0	165.6	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.

Typical Performance in Hollow Substrate

Size	Recommended Load (kN)	
	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

