CHEMFIX Total Service

1:1 Pure Epoxy

CHEMFIX Total Service

Product Description

Chemfix Pure Epoxy 1:1 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, Ideal for Rebar Usage.
- Highest Durability.
- Can be used in Wet holes or Underwater.

Approvals

ITB

INSTYTUT TECHNIKI BUDOWLANEJ
Aprobacie Technicznej ITB
nr AT-15-6895:2005

WRAS APPROVED PRODUCT

Water Regulations Advisory Scheme
BS6920 approved

Available Sizes

400ml 1:1 Side by Side Cartridge
600ml 1:1 Side by Side Cartridge

Tested by:
Imperial College London
Consultants

IMPORTANT NOTE:
Performance based on clean holes;
HAMMER DRILLED - blown and then brushed with a stiff metal brush & blown again.
DIAMOND DRILLED - ensure hole is rinsed until return water flow is clear.

Typical Gel and Curing Time*

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5	-5
TYPICAL GEL TIME (mins)	20	40	60	180	-
MIN. LOAD TIME (mins)	180	180	300	960	-

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

Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{ck,cube}$ = 25N/mm² (C20/25)									SETTING DATA IN SOLID SUBSTRATE			
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing (mm)	Hole Diameter In Concrete (mm)	Hole Diameter In Fixture (mm)	Standard Embedment In Concrete (mm)	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 ($C_{cr,V}$)					
M8	19.0	9.5	12.7	7.6	9.1	5.4	80	100	100	10	9	80	11
M10	30.2	15.1	20.1	12.1	14.4	8.6	90	130	130	12	11	90	22
M12	43.8	21.9	29.2	17.5	20.9	12.5	110	150	150	14	13	110	38
M16	81.6	40.8	54.3	32.7	38.8	23.3	130	170	170	18	17	125	95
M20	127.4	63.7	84.9	51.0	60.7	27.7	150	190	210	24	22	170	170
M24	183.6	91.8	122.4	73.4	87.4	52.4	190	240	240	28	26	210	260
M30	473.3	207.1	219.1	166.1	156.5	118.6	300	350	350	35	33	280	480

Typical Ultimate Physical Properties

	N/mm²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	82.48	(ASTM 695)	This product should be stored between +5°C & +25°C. 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	41.64	(ASTM 795)		
FLEXURAL MODULUS	4249.00	-		
TENSILE STRENGTH	28.21	(ASTM 638)		
E MODULUS	4811.00	-		

Chemfix Products Ltd • Mill Street East • Dewsbury • West Yorkshire • WF12 9BQ • UK
Tel : 01924 453886 • Fax : 01924 431658 • Web : www.chemfix.co.uk

Performance Data for Various Stud Strengths, Material and Rebar

Concrete Strength Class: C20/25 (25N/mm² Cylinder; 30N/mm² 150mm cube).
Reinforcement Bar: Minimum Yield Strength f_{yk} 460N/mm²

IMPORTANT NOTE:
Performance based on clean holes;
HAMMER DRILLED - Blown and then brushed with a stiff metal brush & blown again.
DIAMOND DRILLED - Ensure hole is rinsed until return water flow is clear.

5.8 Grade Studding

Rebar Diameter (mm)	Hole Diameter (mm)	5.8 Grade Studding - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	12.7																			59	12.7
10	12	20.1															=	Steel	Failure		75	20.1
12	14		29.2																		91	29.2
16	20					51.3	54.4														127	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	84.9																			163	84.9
24	28			122.4																	196	122.4
30	40					187.8	203.4	219.1	234.7	273.8	278.9										357	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

Rebar Diameter (mm)	Hole Diameter (mm)	8.8 Grade Studding - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	17.1	19.2	19.5																	91	19.5
10	12		24.0	26.7	29.4	30.9											=	Steel	Failure		116	30.9
12	14				35.3	38.5	41.7	45.0													140	45.0
16	20					51.3	55.6	59.8	64.1	68.4	72.6	76.9	81.2	83.7							196	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	88.7	93.9	99.1	104.3	114.7	125.2	130.7													251	130.7
24	28				125.2	137.7	150.2	162.7	175.2	188.3											301	188.3
30	40								219.1	234.7	273.8	278.9									357	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

Rebar Diameter (mm)	Hole Diameter (mm)	10.9 Grade Studding - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	17.1	19.2	21.4	23.5	25.6	27.2														91	19.5
10	12		24.0	26.7	29.4	32.0	34.7	37.4	40.1	43.1							=	Steel	Failure		116	30.9
12	14				35.3	38.5	41.7	44.9	48.1	51.3	54.5	57.7	60.9	62.6							140	45.0
16	20					51.3	55.6	59.8	64.1	68.4	72.6	76.9	81.2	85.5	94.0	102.6	111.1	116.6			196	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	88.7	93.9	99.1	104.3	114.7	125.2	135.6	146.0	156.5	182.0										251	130.7
24	28				125.2	137.7	150.2	162.7	175.2	187.8	219.1	250.4	262.2								301	188.3
30	40								219.1	234.7	273.8	312.9	352.1	388.5							357	278.9
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

Chemfix Products Ltd • Mill Street East • Dewsbury • West Yorkshire • WF12 9BQ • UK
Tel : 01924 453886 • Fax : 01924 431658 • Web : www.chemfix.co.uk

CHEMFIX Total Service

1:1 Pure Epoxy

CHEMFIX Total Service

A4-70 Stainless Steel Studding

Rebar Diameter (mm)	Hole Diameter (mm)	A4-70 Stainless Steel Studding - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	13.7																			64	13.7
10	12		21.7														=	Steel	Failure		81	21.7
12	14				31.6																98	31.6
16	20					51.3	55.6	58.8													138	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	88.7	91.7																		176	91.7
24	28				125.2	132.1															211	132.1
30	40	133.0	139.8																		179	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

Rebar Diameter (mm)	Hole Diameter (mm)	A4-80 Stainless Steel Studding - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	15.7																			73	15.7
10	12		24.0	24.8													=	Steel	Failure		93	24.8
12	14				35.3	36.1															113	36.1
16	20					51.3	55.6	59.8	64.1	67.2											157	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	88.7	93.9	99.1	104.8																201	104.8
24	28				125.2	137.7	151.0														241	151.0
30	40								219.1	223.7											286	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 fyk=500N/mm²

Rebar Diameter (mm)	Hole Diameter (mm)	High Bond Reinforcing Bars fyk=500N/mm² - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	12	17.1	21.4	21.9																	102	21.9
10	14		26.7	32.0	34.1												=	Steel	Failure		128	34.1
12	16			38.5	44.9	49.2															153	49.2
14	18				52.3	59.8	66.9														179	66.9
16	22					68.4	76.9	85.5	87.4												205	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	104.3	117.4	130.4	136.6																262	136.6
25	32			163.0	179.3	195.6	213.4														327	213.4
32	40					250.4	292.1	333.8	349.7												419	349.7
40	50							417.3	469.4	521.6	546.3										524	546.3
Depth (mm)		200	225	250	275	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400		

Chemfix Products Ltd • Mill Street East • Dewsbury • West Yorkshire • WF12 9BQ • UK
Tel : 01924 453886 • Fax : 01924 431658 • Web : www.chemfix.co.uk