CHEMFIX Total Service

3:1 Pure Epoxy

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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.

Approvals

INSTYTUT TECHNIKI BUDOWLANEJ
Aprobacie Technicznej ITB
nr AT-15-6835:2005

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.

Available Sizes

385ml 3:1 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	0
TYPICAL GEL TIME (mins)	40	60	180	300	-
MIN. LOAD TIME (mins)	180	180	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, $f_{ck,cube}$ = 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	103.1	40.8	47.8	32.7	34.1	23.3	130	170	170	18	17	125	95
M20	171.5	63.7	79.1	51.0	56.5	27.7	150	190	210	24	22	170	170
M24	247.1	91.8	117.0	73.4	83.6	52.4	190	240	240	28	26	210	260
M30	416.2	207.1	192.7	166.1	137.6	118.6	300	350	350	35	33	280	480

Typical Ultimate Physical Properties

	N/mm²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	89.77	(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 Chemfix Products and Multifix 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	(ASTM 795)		
FLEXURAL MODULUS	3882.00	-		
TENSILE STRENGTH	24.76	(ASTM 638)		
E MODULUS	5622.00			

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www.multifix.co.za

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Performance Data for Various Stud Strengths, Material and Rebar

Concrete Stength 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																			66	12.7
10	12		20.1														=	Steel	Failure		84	20.1
12	14				29.2																102	29.2
16	20					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

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	15.3	17.2	19.1	19.5																102	19.5
10	12		21.5	23.9	26.3	28.7	30.9										=	Steel	Failure		130	30.9
12	14				31.5	34.4	37.3	40.1	43.0	45.0											157	45.0
16	20					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	278.9
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 f_{yk} = 500N/mm² - Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	12	15.3	19.1	21.9																	114	21.9
10	14		23.9	28.7	33.4	34.1											=	Steel	Failure		143	34.1
12	16			34.4	40.1	45.8	49.2														172	49.2
14	18				46.8	53.5	60.2	66.9													200	66.9
16	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		

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