PC-Fix® 400 EP

Pure Epoxy 3:1 is a high-performance two-part resin that forms a strong, chemical-resistant bond in one step.

PC-Fix® 400 EP is a high-strength, two-component adhesive anchoring system specially formulated for heavy-duty applications. It comes in convenient plastic cartridges and includes essential accessories such as static mixing nozzles, dispensing tools, and hole cleaning equipment for precise and efficient installation. PC-Fix® 400 EP is engineered for securely anchoring threaded rods and reinforcing bars into pre-drilled holes in concrete and solid masonry substrates. This advanced bonding system ensures superior grip and long-lasting performance, making it ideal for structural and load-bearing applications in construction and industrial settings.

AREAS OF APPLICATION

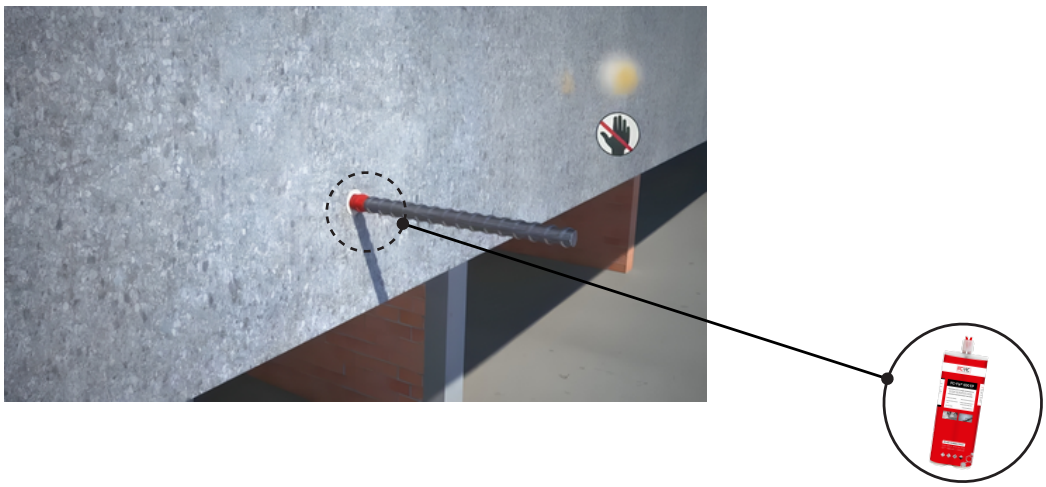
- Used to fix machines, handrails, steel and wooden structures, and rebar—great for large diameter rods.
- Bonds threaded rods and rebar into hardened concrete.
- Works in both cracked and solid concrete where anchor design rules apply.
- Can be used in various base material temperatures.
- Suitable for medium to heavy loads.
- Strong and long-lasting.
- Best for indoor use.

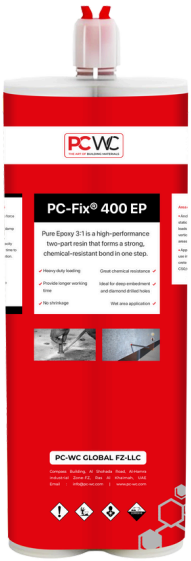
ADVANTAGES

- Strong grip and bonding power
- Longer working time for easier application
- Made for use with threaded rods and rebar
- Ideal for diamond-drilled and large-diameter holes
- Odorless and non-toxic formula
- No expansion or shrinkage
- Works well in different weather conditions
- Can be used in temperatures from 5°C to 40°C
- Free from styrene

TECHNICAL DATA

PHYSICAL PROPERTIES	UNIT	VALUE	TEST STANDARD
Density	kg/L	1.5	ASTM D 1875
Compressive Strength	N/mm^2	24 Hours= 75 , 7Days= 95	ASTM D 695
Tensile Strength	N/mm^2	24 Hours= 18 , 7Days= 23	ASTM D 638
Elongation at Break	%	24 Hours= 6.6 , 7Days= 5.9	ASTM D 638
Tensile Modulus	GN/m^2	24 Hours= 5.6 , 7Days= 5.9	ASTM D 638
Flexural Strength	N/mm^2	45	ASTM D 790
HDT	°C	7 Days = 49	ASTM D 648
VOC	g/L	3	ASTM D 648





DETAILED CONSTRUCTION PROCESS

1.Drill Hole

MARK UP HOLE POSITION AND DRILL HOLE:

Drill holes in the designed position. The depth and diameter of the hole should meet the requirements in order to meet the bonding area and ensure the pulling strength.

2.Brush

CLEAN HOLE:

Clean and blow holes. Brush and blow for three times at least is recommended.

3.Blow

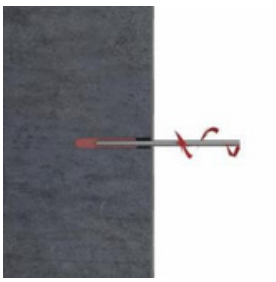
BLOW:

Clean and blow holes. Brush and blow for three times at least is recommended.

4.Inject

INJECTION:

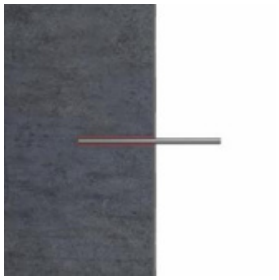
Inject the glue from the bottom of the hole until it fills two-thirds of the hole.



5.Plant

ANCHORING:

Inserting in one single direction until the bottom of the hole.



6.Curing

STANDING AND CURING:

Keep stand for maintenance before curing.

THEORETICAL NUMBER OF FIXINGS PER CARTRIDGE

Cartridge Volume	h_{ef}	Ø8 Drilling Ø 10mm	Ø10 Drilling Ø 12mm	Ø12 Drilling Ø 14mm	Ø16 Drilling Ø 18mm	Ø20 Drilling Ø 22mm	Ø24 Drilling Ø 26mm	Ø27 Drilling Ø 30mm	Ø30 Drilling Ø 35mm
400 ml side by side	8d	240	147	98	52	31	19	12	6
	10d	192	118	78	42	24	15	9	5
	12d	160	98	65	35	20	13	8	4
	20d	96	59	39	21	12	7	4	2

Note: Jobsite/contractor installations usually result in more resin being injected than the theoretical requirement resulting in a lower number of fixings per cartridge. The reduction to the number of fixings per cartridge in practice is greater for smaller diameter holes and shallower embedment depths.

WORKING & LOADING TIMES

Resin cartridge Temperature	T Work	Base Material	T Load
+10 to +15°C	20 mins	+5 to +10°C	24 hrs
		+10 to +15°C	12 hrs
+15 to +20°C	15 mins	+15 to +20°C	8 hrs
+20 to +25°C	11 mins	+20 to +25°C	7 hrs
+25 to +30°C	8 mins	+25 to +30°C	6 hrs
+30 to +35°C	6 mins	+30 to +35°C	5 hrs
+35 to +40°C	4 mins	+35 to +40°C	4 hrs
+4 0°C	3 mins	+ 40° C	3 hrs

ANCHOR THEORY

INSTALLATION PARAMETERS

Diameter of rebar (mm)	10	12	16	20	25	32
Drilled hole diameter (mm)	14	16	20	25	32	40

DESIGN RESISTANCE

PHYSICAL PROPERTIES							
Rebar size Effective embedment depth h(ef) [mm]		∅10 90	∅12 110	∅16 125	∅20 170	∅25 250	∅32 300
non-cracked concrete temperature range (-40°C / +40°C)							
Tension	C20/25 NRd,p[kN]	17.90	24.43	38.90	62.12	123.55	186.00
	C50/60 NRd,p [kN]	22.45	27.70	43.56	77.12	132.57	210.94
Shear	C20/25 NRd,s[kN]	9.17	15.23	21.79	67.34	88.78	147.60
cracked concrete temperature range (-40°C / +40°C)							
Tension	C50/60 NRd,p [kN]	15.78	17.89	21.69	36.58	45.89	72.03
	C50/60 NRd,p [kN]	16.17	18.39	23.56	38.00	50.01	77.97
Shear	C20/25 NRd,s[kN]	9.17	15.23	21.79	67.34	88.78	147.60

RECOMMENDED RESISTANCE

PHYSICAL PROPERTIES							
Rebar size Effective embedment depth h(ef) [mm]		∅10 90	∅12 110	∅16 125	∅20 170	∅25 250	∅32 300
non-cracked concrete temperature range (-40°C / +40°C)							
Tension	C20/25 NRd,p[kN]	12.99	16.79	27.11	45.98	84.93	133.89
	C50/60 NRd,p [kN]	15.22	20.88	37.61	54.47	96.50	150.98
Shear	C20/25 NRd,s[kN]	6.65	11.99	13.76	43.58	64.29	105.24
cracked concrete temperature range (-40°C / +40°C)							
Tension	C50/60 NRd,p [kN]	10.11	12.57	14.88	25.07	34.77	52.94
	C50/60 NRd,p [kN]	11.79	13.39	16.56	27.00	37.73	55.97
Shear	C20/25 NRd,s[kN]	6.65	11.99	13.76	43.58	64.29	105.24

LIMITATION

- Installation of anchors is not recommended when the substrate temperature is below 0°C.
- A new static mixer should be used once the gelling time has expired.
- Nozzles should not be cut or shortened.
- If the cartridge is not finished, clean the opening first, then replace the plug and tightly cap it. The cartridge may be used again in the future by replacing the static mixer.
- Ensure that the hole is properly cleaned. The hole may be damp but should be free from water.
- Do not dilute the mortar with any solvents and/or other chemicals.

STORAGE AND SHELF LIFE

For optimal storage conditions, please store in a dry and dark environment with temperatures ranging from 10°C~30°C, avoiding direct sunlight. This recommendation applies 36 months after the manufacturing date.

PACKAGING & ACCESSORIES

cartridges of 400 ml
Static mixer
Caulking gun. for 400ml(3:1) cartridge. (Economic)
Caulking gun. for 400ml(3:1) cartridge. (Easy to use) - Nylon Sleeve

ISO 9001 CERTIFIED

PC-WC GLOBAL FZ-LLC
Compass Building,Al Shohada Road Al-Hamra industrial Zone-FZ,
Ras Al- Khaimah,UAE
Email : info@pc-wc.com
Phone +971542455817 , www.pc-wc.com

TECHNICAL DATA SHEET UPDATED IN SEPTEMBER 2020
TDS/PC-FIX® 400 EP