



PC-Fix® 650 EP

High-Performance Anchoring Grout and Adhesive with Pure Epoxy Resin

PC-Fix® 650 EP is a high-performance, two-component pure epoxy resin system with a 1:1 ratio. When applied in a single step, this resin establishes a robust bond characterized by outstanding chemical resistance.

AREAS OF APPLICATION

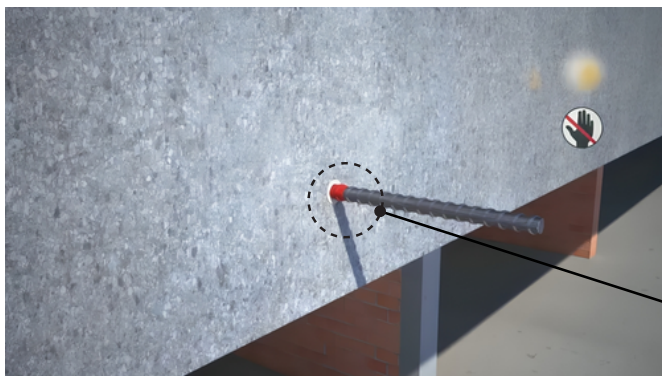
- Designed to repair a variety of structures, including machines, hardtails, steel constructions, wooden constructions, and reinforcement bars.
- Perfect for larger diameter rebar and rods
- Capable of bonding threaded rods and reinforcing bars into hardened concrete.
- Suitable for resisting loads in both cracked and uncracked concrete base material, following anchor design theory and criteria.
- Can be installed in a range of temperatures.
- Ideal for medium to heavy-duty load applications.
- Offers high durability, making it perfect for indoor use.

ADVANTAGES

- High adhesive force and grip force.
- Can be used in damp concrete.
- High load capacity.
- Longer working time to facilitate installation.
- Fire resistant.
- Styrene-free.
- Shrinkage-free hardening.
- Specifically engineered for compatibility with threaded rod and reinforcing bar hardware elements.
- Suited for use with larger bore diameters.
- Formulated with non-toxic and odorless ingredients.
- Exhibits a broad temperature range, from 5°C to +40°C.
- Free of styrene, rendering it a safer alternative.

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



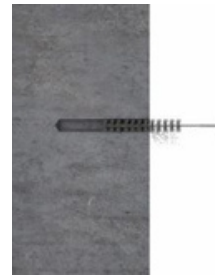
DETAILED CONSTRUCTION PROCESS



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:

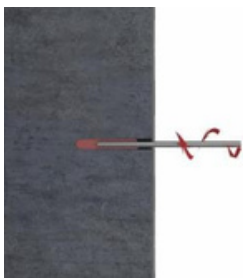
Clean and blow holes. Brush and blow for three times at least is recommended.



4. Inject

INJECTION:

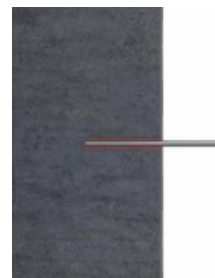
Inject the glue from the bottom of the hole until it fills two-thirds of the hole.



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	Ø10	Ø12	Ø16	Ø20	Ø24	Ø27	Ø30
		Drilling Ø 10mm	Drilling Ø 12mm	Drilling Ø 14mm	Drilling Ø 18mm	Drilling Ø 22mm	Drilling Ø 26mm	Drilling Ø 30mm	Drilling Ø 35mm
650 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		Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Effective embedment depth h(ef) [mm]		90	110	125	170	250	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		Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Effective embedment depth h(ef) [mm]		90	110	125	170	250	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 650 ml

Static mixer

Caulking gun. for 650ml(1:1) cartridge. (Economic)

Caulking gun. for 650ml(1:1) cartridge. (Easy to use) - Nylon Sleeve



All technical data in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

The information, particularly the recommendations relating to the application and end-use of PC-WC products, are given in good faith based on PC-WC's current knowledge and experience of the products when properly stored, handled and applied under normal conditions by PC-WC recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or any other advice offered. The user must test the product's suitability for the intended application and purpose. PC-WC Global FZ-LLC reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our [website www.pc-wc.com](http://www.pc-wc.com)



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