

EpoxyPlus

400ml Cartridge

EpoxyPlus 400ml cartridge is a styrene-free epoxy acrylate resin 400ml coaxial cartridge system with a resin to hardener ratio of 10:1. The cartridge has a coaxial nozzle outlet and is sealed with a screw cap.

Base Material

- Concrete
- Hard natural stone
- Solid rock
- Solid masonry

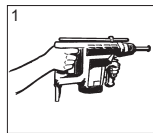
Uses

- Anchor sockets
- Fixing externally threaded rods
- Concrete reinforcing bars
- Securing profiled sections and bars

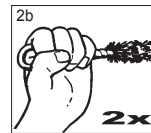
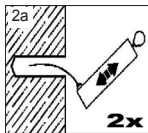
Features

- Styrene Free
- Not hazardous for transportation
- Anchoring without expansion pressure
- Fixing close to free edges
- High load capacities

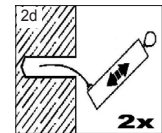
Installation Procedure



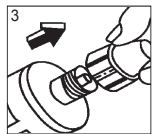
Drill the hole to the correct diameter and depth using a rotary percussive machine.



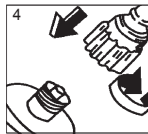
2c Repeat operations illustrated in 2a and 2b



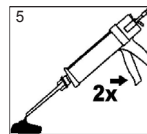
Use a hole cleaning Brush and Blow Pump to clean the hole.



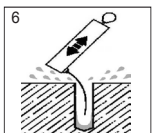
Once the hole is prepared remove the screw cap from the cartridge.



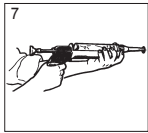
Attach the mixer nozzle, and place the cartridge in the applicator gun



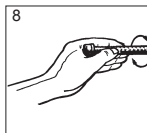
Dispense the first part to waste, until an even colour is achieved.



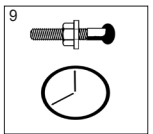
Remove any free water from the hole.



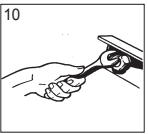
Insert the nozzle to the far end of the hole (using extension tubing if necessary) and inject the resin, withdrawing the nozzle/tube as the hole fills.



Immediately insert the fixing, slowly and with a slight twisting motion. Remove excess resin from around the mouth of the hole before it sets.



Leave the fixing undisturbed until the cure time has elapsed.



Attach the fixture and tighten the nut.

Open and Curing Times

Resin cartridge temperature	Open time	Base material temperature	Curing time
Minimum cartridge temperature +5°C		-5 to 0°C	24 hrs
		0 to 5°C	180mins
5 to 10°C	8 mins	5 to 10°C	100 mins
10 to 20°C	4 mins	10 to 20°C	70 mins
20 to 35°C	1 min	20 to 35°C	40 mins

Shelf Life

Cartridges should be stored in their original packaging in cool conditions (+5°C - +20°C) out of direct sunlight. When stored in this way the shelf life will be a minimum of 12 months from the date of manufacture.

Health and Safety

Please refer to the relevant Safety Data Sheet.

Installation and load capacity data for threaded anchors

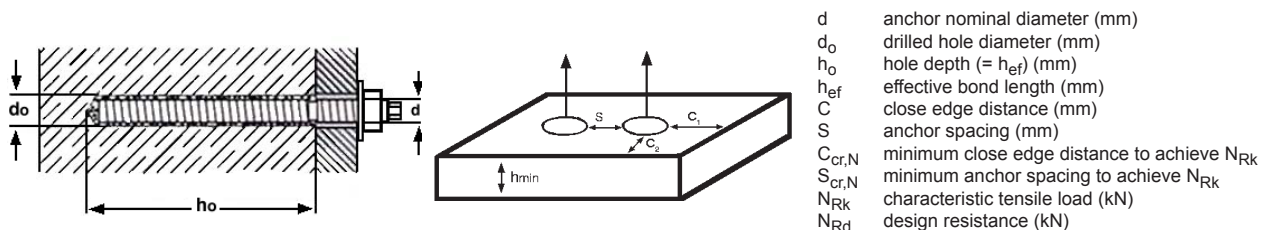
Anchor dia d (mm)	Hole dia d _o (mm)	Hole depth h _o =h _{ef} (mm)	Brush size	Characteristic distances		Min concrete thickness h _{min} (mm)	Resin vol (ml)	Max installation torque (Nm)	Resistance to tensile loads in C20/25 concrete (kN) to ETAG 001	
				Edge C _{cr,N}	Spacing S _{cr,N}				Characteristic load N _{Rk}	Design resistance N _{Rd}
8	10	64	S14	64	128	100	2.8	10	16	8.9
"	"	80	"	80	160	110	3.4	"	20.5	11.4
"	"	96	"	96	192	125	4.1	"	25	13.9
10	12	80	S14	80	160	110	4.5	20	25	13.9
"	"	90	"	90	180	120	5.0	"	29.0	16.1
"	"	120	"	120	240	150	6.7	"	40	22.2
12	14	96	M20	96	192	125	6.9	40	40	22.2
"	"	110	"	110	220	140	7.8	"	46.0	25.6
"	"	144	"	144	288	175	10.3	"	60	33.3
16	18	128	M20	128	256	160	12.2	80	60	33.3
"	"	192	"	192	384	225	18.8	"	95	52.8
20	22	160	L29	160	320	200	21.7	150	75	41.7
"	"	170	"	170	340	220	23.0	"	80.0	44.4
"	"	240	"	240	480	280	32.5	"	115	63.9
24	26	192	L29	192	384	240	34.2	200	115	63.9
"	"	210	"	210	420	270	37.4	"	125	69.4
"	"	288	"	288	576	335	51.3	"	170	94.4

The quoted values for N_{Rk} are for C20/25 concrete;
Factors apply for higher strength concretes

C30/37	C40/50	C50/60
1.04	1.07	1.09

Close edge (C) and anchor spacing (S) distances: The characteristic edge distance (C_{cr,N}) is 1.0 x h_{ef}
The characteristic spacing distance (S_{cr,N}) is 2.0 x h_{ef}
The minimum edge (C_{min}) and spacing (S_{min}) distances are 0.5 x h_{ef}

All load capacity values assume adequate steel strength. The anchor tests were carried out using 10.9 or 12.9 steel.



Concrete capacity reduction factors, tension (Ψ_N)

Single anchor, close edge C

$$\Psi_{C,N} = 0.5 (C/h_{ef}) + 0.5 \leq 1$$

Two anchors, close spacing S

$$\Psi_{S,N} = 0.25 (S/h_{ef}) + 0.5 \leq 1$$

Two anchors, c/l perpendicular to close edge C₁

$$\Psi_{SC,N} = 0.25 (S/h_{ef}) + 0.25 (C_1/h_{ef}) + 0.25 \leq 1$$

Two anchors, c/l parallel to close edge C₂

$$\Psi_{CS,N} = 0.25 (C_2/h_{ef}) + 0.125 (S/h_{ef}) + 0.125 (C_2/h_{ef})(S/h_{ef}) + 0.25 \leq 1$$

Concrete capacity reduction for more complex anchor configurations in tension, and for shear forces acting towards a close edge, should be determined using the design method A, given in ETAG 001, Annex C.

Important Note

Whilst all reasonable care is taken in compiling technical data on the Company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the Company. It is the users responsibility to satisfy himself that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable and that, in the light of our continual research and development programme the information relating to each product has not been superseded.

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