



# POLYESTER CHEMICAL ANCHOR

## Description

ALCOLIN POLYESTER CHEMICAL ANCHOR is a polyester based, styrene free, high performance, rapid curing two-part chemical anchoring system. It is designed as a fast curing, high strength fixing anchor for medium to heavy-duty fixings. The product is extruded via the mixing nozzle with the use of a standard caulking gun directly into the hole.

## Features & Benefits

- Suitable for medium and heavy duty fixing.
- Can be used in structural and non-structural applications.
- Styrene Free - low odour, suitable for indoor use and in enclosed spaces.
- Has good chemical and corrosion resistance.
- Fast curing for rapid repair and installation work.
- Excellent for hollow materials or materials with weak consistency.
- Single cartridge so can be applied with a regular caulking gun.

## Applications

- Anchoring threaded steel rods and bolts into concrete and stone.
- Crack and gap filling repairs in concrete and masonry.
- Balcony repairs, installation of pool ladders, safety barriers and handrails.
- Anchoring of railings, legs, machine housings and steel plates to concrete.

## Adhesion

ALCOLIN POLYESTER CHEMICAL ANCHOR provides excellent primerless adhesion to natural stone, marble, slate, granite, brickwork, plaster, concrete, hollow walls, masonry, wood and steel. Specifically threaded steel rods made of zinc coated steel, stainless steel, high corrosion resistant stainless steel (HCR).

## Limitations

- Will not bond to plastics e.g., polyethylene, polypropylene, Teflon.
- For optimum strength, embedment depths must be within the range 4 diameters to 20 diameters.
- Not suitable for anchoring structures exposed to particularly aggressive conditions e.g., permanent, alternating immersion in seawater or the splash zone of seawater.
- Not recommended for overhead installations.
- For anchoring applications, concrete must be a minimum of 21 days old prior to anchor installation.

## Safety instructions

ALCOLIN POLYESTER CHEMICAL ANCHOR is non-toxic, however, it is advisable to wear gloves in order to avoid direct skin contact. In the event of skin or eye contact, rinse thoroughly and immediately with water. Seek medical



assistance if irritation or discomfort persists. Keep out of reach of children! Refer to our Safety Data Sheets for further toxicological information and comprehensive handling instructions.

### Directions for use

The minimum application temperature is 5°C while the maximum is 30°C. The cartridge temperature must be at least 20°C.

### Product Data

#### Fixing on concrete C20/25 with zinc plated threaded rods class 5.8

Characteristic measurements			M8	M10	M12	M16	M20*	M24*
<b>d<sub>0</sub></b>	Hole diameter	[mm]	10	12	14	18	24	28
<b>h<sub>1</sub></b>	Hole depth	[mm]	85	95	115	130	175	215
<b>h<sub>nom</sub></b>	Embedment depth	[mm]	80	90	110	125	170	210
<b>h<sub>min</sub></b>	Minimum base material thickness	[mm]	115	120	140	161	218	266
<b>T<sub>inst</sub></b>	Fixing torque	[Nm]	10	25	45	90	150	200
<b>s<sub>cr</sub></b>	Centre spacing	[mm]	240	270	330	375	510	630
<b>c<sub>cr</sub></b>	Edge distance tensile	[mm]	120	135	165	168	255	315
<b>S<sub>min</sub></b>	Minimum spacing	[mm]	40	50	60	75	100	115
<b>C<sub>min</sub></b>	Minimum edge distance	[mm]	40	50	60	75	100	115
<b>S<sub>w</sub></b>	Hex key	[mm]	13	17	19	24	30	36
<b>d<sub>f</sub></b>	Hole through fixture	[mm]	9	12	14	18	22	26

\*Diameter M20 and M24 are outside the CE Certification

#### Recommended Loads

#### Fixing on uncracked concrete C20/25 with threaded rods class 5.8

		M8	M10	M12	M16	M20	M24
Tensile	[kN]	9,0	14,0	18,4	23,3	29,6	38,7
Shear	[kN]	5,4	8,6	12,5	23,3	36,2	52,5

General safety factor included

#### Fixing on solid brick and solid masonry

Rod cl 4.8	Hole diam.	Hole depth	Fix. thickness	Torque	Recom. tensile	Recom. shear
M 8 x 100	10 mm	85 mm	10 mm	7 Nm	2,0 kN	3,0 kN
M 10 x 115	12 mm	90 mm	20 mm	15 Nm	2,6 kN	3,4 kN
M 12 x 130	14 mm	100 mm	30 mm	25 Nm	2,8 kN	3,9 kN

#### Fixing on perforated brick using the plastic sleeve

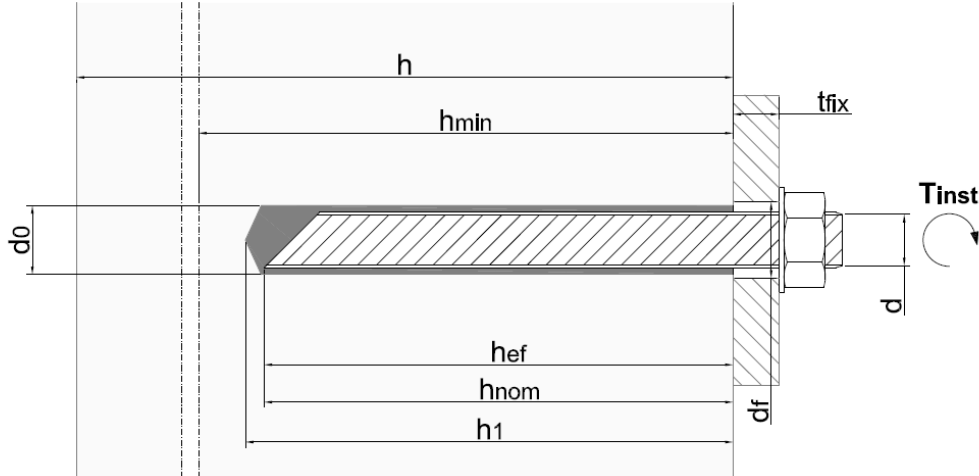
Rod cl 4.8	Hole diam.	Hole depth	Fix. thickness	Torque	Recom. tensile	Recom. shear
M 8 x 100	16 mm	90 mm	10 mm	5,0 Nm	0,9 kN	2,0 kN
M 10 x 115	16 mm	90 mm	20 mm	7,5 Nm	0,9 kN	2,0 kN
M 12 x 130	16 mm	90 mm	30 mm	10,0 Nm	0,9 kN	2,5 kN

Recommended loads for applications on base materials with medium strength characteristics. For different masonry base materials, load values must be obtained with in situ tests.

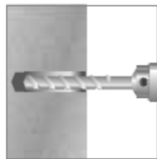
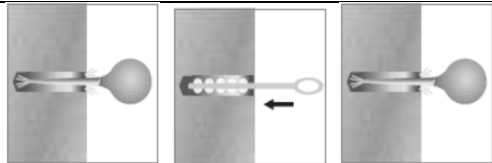
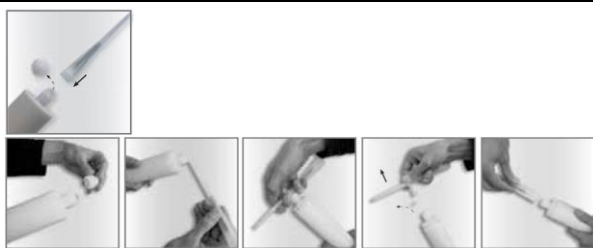
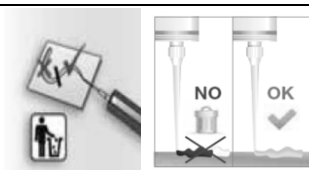
## Curing conditions

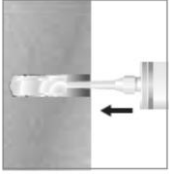
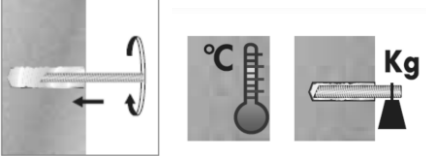
Resin temperature	Gel time (working time)	Cure time
5°C	15 min	2 hours
10°C	12 min	1 hour 30 min
20°C	6 min	45 min
25°C	4 min	30 min
30°C	3 min	20 min

The temperature of the bond material must be  $\geq 5^{\circ}\text{C}$



## Installation

1		<p>Drill the hole with the correct diameter and depth using a rotary percussive machine. Check the perpendicularity of the hole during the drilling operation.</p>
2	 <p>4x Blower Pump    4x Brush    4x Blower Pump  <i>(Instead of the blower manual pump it is also possible to use the compressed air free oil)</i></p>	<p>Clean the hole from drilling dust: the hole shall be cleaned by at least 4 blowing operations, by at least 4 brushing operations followed again by at least 4 blowing operations. Before brushing, clean the brush and check if the brush diameter is sufficient.</p>
3		<p>Unscrew the front cup, pull-out the steel closing clip according to the following operations:</p> <ul style="list-style-type: none"> <li>- insert the mixer in the eye of the plastic extractor,</li> <li>- pull the extractor to unhook the steel closing clip of the foil. After that, screw on the mixer and insert the cartridge in the gun.</li> </ul>
4		<p>Before starting to use the cartridge, eject a first part of the product, being sure that the two components are completely mixed. The complete mixing is reached only after the product, obtained by mixing the two components, comes out from the mixer with a uniform color. Now the cartridge is ready to be used.</p>

5		<p>Fill the drilled hole uniformly starting from the drilled hole bottom, in order to avoid entrapment of the air; remove the mixer slowly bit by bit during pressing out; filling the drill hole with a quantity of the injection mortar corresponding to 2/3 of the drill hole depth.</p>
6		<p>Insert immediately the rod, marked according to the proper anchorage depth, slowly and with a slight twisting motion, removing excess of injection mortar around the rod. Observe the processing time according and curing time.</p>

### Cleaning

Uncured adhesive can easily be removed from the hands or tools using a clean solvent-soaked cloth, e.g. turpentine or paraffin.

### Storage stability

ALCOLIN POLYESTER CHEMICAL ANCHOR can be kept for 12 months if stored in a cool dry place between +5°C to +30°C in its original moisture-tight container. Keep away from heat sources and direct sunlight. Cartridge can be open for up to 3 months. During this time the chemical anchor can be used, however a new mixer nozzle will be required. If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but a check should be performed to observe whether the product is still workable.

### Product packaging

- 300ml cartridge

*The above information is only offered, as a guide to the use of this product. Furthermore, users should satisfy themselves that it is suitable for their needs. Since we have no control over the conditions under which it is used, we cannot accept responsibility for problems caused by the use and/or application of this product.*

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