

PC 509 Z

Elastic acrylic injection resin with exceptional adhesion properties

PC[®] 509 Z is a 4-component acrylic injection resin for controlling water movement through cracks and voids in concrete, masonry structures and rock fissures. Initially a low viscosity liquid, PC[®] 509 Z reacts to form a flexible gel with excellent adhesive properties that will withstand thermal movement. Based on acrylic and methacrylic monomers, PC[®] 509 Z does not contain acrylamide, metacrylamide, formaldehyde or solvents.

Uses

Sealing cracks and joints in walls, floors, concrete structures, sewers and underground structures against water ingress. In addition to other conventional acrylic resins, PC[®] 509 Z can be used in locations that are not permanently in contact with water (i.e. fluctuating ground water).

Advantages

The PC[®] 509 Z Acryl reacts into an elastic, durable and chemically resistant gel and swells in water. Penetrates deep into fine cracks.

Good general chemical resistance characteristics (for example: petroleum, mineral and vegetable oils, greases, etc).

Excellent adhesion on mineral building materials such as concrete, cement and brick.

The reaction speed can be adjusted from a few seconds to several minutes.

Contains no toxic solvents and is considered as non-flammable.

PC[®] 509 Z Acryl has a high water retention capacity by which cracking of the gel, due to the dry-out of injected cracks under the influence of temperature and ground water level fluctuations, is impossible.

Technical data

Component A1 (resin) :

Appearance: purple-pink liquid

- Viscosity (20 °C): 19 mPas
- Density: 1.15 g/ml
- pH: 6.5 . 8
- % active parts: 42 % - 48 %
- Completely compatible with water

Component A2 (catalyst):

Appearance: clear yellow liquid

- Viscosity (20 °C): 22 mPas
- Density: 1.11 g/ml
- Completely compatible with water

Component B (initiator):

Appearance: white, water soluble powder

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Mixed Resin:

- Minimum application temperature: 5 °C
- Elongation at break: > 50 %
- Watertightness under pressure (EN 14068): waterproof at 2 x 105 Pa
- Compatibility with concrete (EN 12637-1): pass (compatible with concrete).
- Sensitive for wet. dry cycles (EN 14498 B): no change in swelling capacity after 10 wet-dry cycles. One wet-dry cycle consists of 1 day drying at 50 °C followed by 6 days of immersion in water at 21 °C
- Swelling capacity under water (EN 14498 A): the swelling capacity reaches a constant level.
- Increase of volume by conservation under water (EN 14498): 150 % after 7 days immersion in water at 21 °C.
- Shelf life: 6 months after production date in the original, unopened and undamaged packaging.
- PC® 509 Z Acryl has to be stored in a dry and dark place between + 5 °C and + 25 °C.
- If PC® 509 Z Acryl is stored at temperatures higher than 25 °C, the shelf life of PC® 509 Z Acryl cannot be guaranteed.

Mixing

The PC® 509 Z Acryl consists of 4 components:

- A1 : PC® 509 Z Acryl (the acrylic resin)
- A2 : PC® 509 Z Acryl Cat (the catalyst)
- B : PC® 509 Z Acryl Init (the initiator)
- C : Water

2 Solutions are made for each application as follows:

Solution 1:

Is a mixture of the acrylic resin PC® 509 Z Acryl (component A1) with the catalyst PC® 509 Z Acryl Cat (component A2).

Solution 2:

Is a mixture of water with the initiator PC® 509 Z Acryl Init (component B).

In order to obtain the acrylic gel, these 2 solutions are mixed in a volumetric ratio of 1:1.

Reaction times (22°C):

To change the reaction time only adapt the quantity of the initiator and keep the quantity of the catalyst constant.

Solution 1: 0.45litre (0.5kg) catalyst at 8.7litre (10 kg) acrylic resin.

Solution 2: x kg initiator to 8.7litre (8.7 kg) water.

Determination of the initiator quantity (x) for 8.7litres water:

x kg initiator in 8.7litres (8.7 kg) water						
0.45litre catalyst in 8.7litres resin	0,5 kg	0,4 kg	0,3 kg	0,2 kg	0,1 kg	0,05 kg
	32 sec *	41 sec	50 sec	1 min 14 sec	2 min 16 sec	3 min

* standard composition

Prepare only as much A and B component as will be used the same day.

PC® 509 Z Acryl is injected with a two-component manual, electric or pneumatic pump. The machine parts that come into contact with the resin must be in stainless steel.

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Packaging

PC® 509 Z Acryl: 25 kg

PC® 509 Z Acryl Cat: 1,25 kg

PC® 509 Z Acryl Init: 2 x 0,625 kg

Cleaning

Clean equipment with water.

Precautions and H&S measures

Protect the products against the UV-light, sunlight and store between 0 and 25°C.

Do not use water that contains a lot of minerals for the preparation of solution 2. These minerals can accelerate the gel reaction.

PC® 509 Z Acryl can be irritating: wear safety glasses and gloves.

In case of contact with the skin: wash with lots of water and soap.

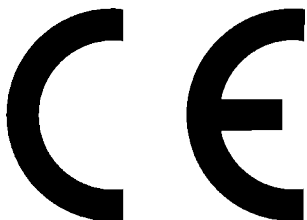
Rinse well afterwards.

In case of contact with the eyes: rinse the eyes during a few minutes with clean water. Consult a doctor.

Transport: no special regulations

Clean the equipment with water and a little detergent.

Absorb spilled resin with sand or sawdust and dispose according to the local regulations.

 0749	
ECC N.V. Terbekehofdreef 50 – 52 B-2610 Wilrijk 09 0749 - CPD BC2-565-1895-0004-001	
EN 1504-5 U(S1)W(1)(1/2/3/4)(5/30) Concrete injection product for swelling filling of cracks	
Watertightness Workability . Viscosity Corrosion behavior Expansion ratio and evolution by water storage Durability . sensitivity to water Durability . sensitivity to wet-drying cycles Durability . compatibility with concrete Dangerous substances	$\leq 2 \times 10^5$ Pa ≤ 60 mPas Deemed to have no corrosive effect Volume change: 150% The expansion reaches a constant level No modification of the expansion ratio Pass comply with 5.4

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This information is based on practical tests and is given in good faith. As final use is beyond our control, we cannot warrant performance or results of application.