

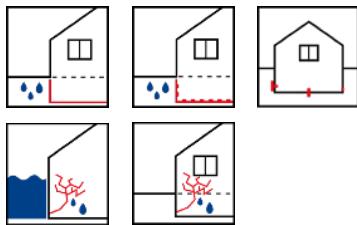
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## Technical Instruction

### Four-component Acrylic Injection Resin

AcrylGel is a four-component injection system designed for sealing cracks and joints in concrete. Thanks to its very low viscosity (comparable to water), it can be used to seal the finest cracks. The setting time can be appropriately adjusted, ensuring effective sealing in varying application conditions.

#### Areas of Application:



- ❖ Protection against water infiltration and groundwater penetration.
- ❖ Injection of water-bearing cracks in concrete or masonry walls.
- ❖ Curtain injection.
- ❖ Injection through injection hoses.

#### Properties:

- ❖ Reacts to form a soft, elastic, and viscous gel.
- ❖ High tensile strength.
- ❖ Good chemical resistance.
- ❖ In moist or dry conditions, it increases or decreases in volume reversibly.
- ❖ The product's reaction time can be adjusted from a few seconds to a few minutes.
- ❖ High water retention capacity.

#### Product specifications

ResinBau AcrylGel A1	
Color	Blue liquid
pH	6,0 - 7,5
Viscosity (20 °C)	4-30 mPas (depending on testing method)
Density (20 °C)	1,15 - 1,2 kg/cm <sup>3</sup>
% active parts	40%
Storage temperature	2 - 35°C

## ResinBau AcrylGel A2

Color	Transparent liquid
pH	10 - 12
Viscosity (20 °C)	< 100 mPas
Density (20 °C)	1,05 - 1,11 kg/cm <sup>3</sup>
Storage temperature	2 - 35°C

## ResinBau AcrylGel B2

Color	White powder
Storage temperature	2 - 35°C

## ResinBau AcrylGel ( A1+A2 ) + ( water + B2 )

Color	Blue liquid
pH	6,0 - 7,5
Viscosity (20 °C)	4-15 mPas (depending on testing method) - test with water
Density (20 °C)	1,11 - 1,15 kg/cm <sup>3</sup>
Elongation at Break (hardened)	300%
Water absorption	33%
Min. application temp	2°C

## Reaction Time

❖ To facilitate mixing, use the AcrylGel mixing calculator on resinbau.com

100% A1 = x% A2	100% B1 = x% B2	Reaction Time (20°C)
10%	0,1%	12 min
12,5%	0,1%	8 min 37 sec
12,5%	0,15%	6 min 40 sec
12,5%	0,5%	2 min 30 sec
12,5%	1%	57 sec
12,5%	2%	31 sec
12,5%	4%	20 sec

## Optional Additional Products

- ❖ Hammpack® 3K Injection Head
- ❖ **Hammpack® PI-Cleaner** – for cleaning injection pumps
- ❖ **Hammpack® PI-Saver** – for pump maintenance
- ❖ Hammpack® Injection Packers

## Preparatory Work for Injection

- ❖ This product is intended exclusively for professional users.
- ❖ Before starting the injection process, an analysis of the building's condition should be conducted.
- ❖ It is recommended to perform an on-site trial before injection to determine the desired reaction time.
- ❖ Reaction time depends on several factors:  
**Temperature of the material and the surroundings** (higher temperatures speed up the reaction, lower temperatures slow it down)  
**Building structure**
- ❖ **Reaction time** is adjusted by altering the amount of initiator used.
- ❖ The application of acrylic gel should be done using a two-component stainless steel pump.
- ❖ Install the packers and begin the injection process.

## Preparation of Resin

- ❖ Prepare the following mixtures:
  1. **Mixture 1** – Resin (A1) + Catalyst (A2)
  2. **Mixture 2** – Polymer (or water) (B1) + Initiator (B2)
- ❖ The mixtures are combined in a 1:1 ratio.
- ❖ After preparing the mixtures in two separate containers, take an equal sample from each and test the curing time of the blend. Adjust the proportions if necessary.
- ❖ Mixture 1 remains stable for at least several hours, while Mixture 2 stays stable for a few days at temperatures below 25°C.

## Reaction Time

- ❖ The amount of catalyst (A2) added should be 5% or 12,5% of the resin (A1) quantity. For example, to 1000g of resin (A1), add 50g or 125g of catalyst (A2).
- ❖ The reaction time changes by adjusting the amount of initiator (B2) – times are provided in the table below. As with the catalyst, the amount of initiator is based on the resin quantity.

100% A1 = x% A2	100% B1 = x% B2	Reaction Time (20°C)
10%	0,1%	12 min
12,5%	0,1%	8 min 37 sec
12,5%	0,15%	6 min 40 sec
12,5%	0,5%	2 min 30 sec
12,5%	1%	57 sec
12,5%	2%	31 sec
12,5%	4%	20 sec

- ❖ To facilitate mixing, use the AcrylGel mixing calculator on [resinbau.com](http://resinbau.com)

## Application Instructions

- ❖ Prepare the pump according to the manufacturer's instructions.
- ❖ The two mixtures are drawn separately into the pump but are mixed in a 1:1 ratio in the mixing head before injection.
- ❖ The pressure for injecting the resin depends on the structure and size of the crack.
- ❖ Begin the injection at the lowest point of the crack, and continue until the resin flows out of the adjacent packer.
- ❖ This ensures even distribution of the material.
- ❖ Stop the pump, disconnect the hose from the packer's fitting, and move to the next packer.
- ❖ Continue the process until the crack is fully filled.
- ❖ Ensure proper maintenance of the injection head, as leaks in one of the channels can initiate the reaction and clog the equipment.

## Additional Data

- ❖ Gel curing slows down in lower temperatures but is still quick, even below 0°C.
- ❖ In acidic environments, the reaction slows down, while in alkaline environments, it speeds up.
- ❖ The presence of minerals and metals (especially iron and copper) can either accelerate or slow down the curing process depending on their concentration.
- ❖ When submerged in water, uncured gel can absorb up to twice its own weight in water over several weeks without cracking.
- ❖ In humid conditions, the gel's volume remains approximately constant, and in the absence of water, it shrinks slowly without cracking. These dimensional changes are reversible and do not degrade the gel.

## Cleaning After Work

- ❖ Clean the pump and equipment with water whenever work is paused for more than half of the set reaction time and after completing the application.
- ❖ Finish cleaning when the pump releases clear water.
- ❖ During cleaning, ensure proper safety precautions.

## Storage & Shelf Life

- ❖ Store in a dry, shaded area at temperatures between 0°C and 25°C.
- ❖ Shelf life: 12 months from the production date in the original, unopened packaging.
- ❖ A longer shelf life may be possible if tests are conducted on a retained sample.

