

MAK POLYGROUT 1K

Polyurethane Injection Resin



Description

Low viscous, single component, hydrophilic, MDI-based, polyurethane injection resin without catalyst. It only reacts with water and forms a flexible polyurethane seal. This product can be injected pure directly into a leaking crack, fracture or joint or it can be injected mixed with water (for example a ratio 1/1). After injection has taken place, it will foam to expand and fill the void, forming a tight, impermeable elastomeric seal, stopping the water flow.

Features

Mak Polygrout 1K reacts with water forming a flexible polyurethane foam or a polyurethane gel depending on the amount of water added.

- ◆ Due to its flexibility, the foam absorbs somewhat the movements of the crack.
- ◆ Penetrates deep in fine cracks.
- ◆ Reacts with water with the formation of carbon di oxide gas. This gas produces a swelling pressure and the resin expands to a foam sealing all water penetration or to a gel with higher water/resin ratios.
- ◆ Free expansion: min. 400 % (ratio 1: 1).
- ◆ Chemically resistant against water, weak acids and alkali, most organic solvents.
- ◆ Excellent adhesion to mineral construction materials (such as concrete, cement, brick), metal and certain plastics, etc.

Application Procedure

Before usage, Mak Polygrout 1K should be shaken in order to achieve a homogeneous material. At temperatures below 10 °C crystallisation may occur. However, after heating (indirectly) and mixing, the liquid is restored to its original quality.

Mak Polygrout 1K can be injected by two methods:

- a) One-component injection pump that is equipped for high pressure. The resin will react with the water in the structure and foam as tabled above.
- b) Two-components injection pump. The water/resin ratio can be varied to form either a flexible polyurethane foam or an elastomeric polyurethane gel as tabled above. Further technical data about the pumps are available on demand.

Cleaning

Use Polyurethane Cleaner A to clean the pump after injection.

Technical Characteristics

- ◆ **Colour:** yellow - brown
- ◆ **Density:** 1,10 - 1,12 kg/dm³
- ◆ **Viscosity:** 15°C: 1000 - 1200 mPa.s, 20°C: 750 - 950 mPa.s
25°C: 600 - 800 mPa.s, 30°C: 400 - 600 mPa.s
- ◆ Reaction time at 20 °C depending on the ratio Polygrout/water.

Technical Characteristics

Ratio PUF 1K Flex 1/Water	Cream Time*	Gel time**	End Product
1:1	20 s - 30 s	2.5 - 4 Min	Flexible Foam
1:4	60 s - 80 s	5 - 7 Min	Flexible Foam/ Gel
1:5	80 s - 100 s	6 - 8 Min	Gel
1:10	3 - 4 Minutes	14 - 16 Min	Gel

*time after which the mixture starts reacting and foams up

**time after which the mixture is no more fluid

Packaging & Supply

20 kg jerry can

Precautions and security measures

- ◆ Avoid contact of the products with the skin and eyes.
- ◆ Wear safety glasses, gloves and an overall.
- ◆ In case of contact with the eyes: wash with lots of water and seek medical attention.
- ◆ In case of contact with the skin: wash with lots of water.
- ◆ Absorb spilled resin with sand and dispose according to the local regulations.
- ◆ Reacts with water. If contaminated by moisture, may form CO₂ gas pressure in containers.
- ◆ For more information: see Material Safety Data Sheet.

Shelf life

6 months after production date in original, unopened and undamaged packaging, stored in a dry place with temperatures between +10°C and +30°C. Once the packaging is opened, the shelf life of the product diminishes quickly and the product should be consumed as soon as possible.

Storage

Storage in area with temperatures between 10°C and 30°C.

Disclaimer

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

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