

AQUAFIN®-P1

INJECTION RESIN FOR THE WATERPROOFING OF WATER-BEARING CRACKS

Product Description:

AQUAFIN®-P1 is a highly reactive, one-component modified isocyanates. AQUAFIN®-P1 is ready to use without mixing. AQUAFIN®-P1 foams with water contact by high increase in volume and coming a firm viscoelastic foam, which seals temporarily against further water penetrations. AQUAFIN®-P1 is resistant to acids and alkalis and attacks neither bitumen nor joint tapes. In the case of very dry surfaces, the material does not foam immediately but it hardens slowly due to the steady addition of existing air resp. soil moisture.

Areas of Application:

AQUAFIN®-P1 is used for the injection of water-bearing cracks and joints in concrete and stone. AQUAFIN®-P1 is used for:

- Stoppage of water inflows from cracks, joints, etc.
- Compacting of granular stones.

AQUAFIN®-P1 meets the requirements of the DfBT-leaflet "Bewertung der Auswirkungen von Bauprodukten auf Beton und Grundwasser (evaluation of the effect of construction products on concrete and ground water)" dated November 2000.

Technical Data:

Basis	: water-reactive 1-comp polyurethane resin (with integrated catalyst).
Color	: brown.
Density at 25°C	: approx. 1.150 ± 40 g/cm ³
Minimum reaction temperature	: >5 °C

Viscosity	: at +5°C :2900 ± 300 mPa.S.
	at +10°C:2100 ± 200 mPa.S.
	at +15°C:1200 ± 100 mPa.S.
	at +25°C:425 ± 75 mPa.S.

Recommended processing temperature	: at least 15°C up to 30°C.
Reaction time *)	:
Start of foaming:	
At 5°C	: approx. 27 sec.
At 10°C	: approx. 26 sec.
At 15°C	: approx. 24 sec.
At 20°C	: approx. 22 sec.
At 25°C	: approx. 20 sec.

End of foaming:	
At 5°C	: approx. 4 mins 20 sec.
At 10°C	: approx. 3 mins 20 sec.
At 15°C	: approx. 2 mins 50 sec.
At 20°C	: approx. 2 mins 20 sec.
At 25°C	: approx. 2 mins 00 sec.

*Note: the reaction times had been determined with additional 10% water.

Foaming factors (*) at temperatures of +5°C to 25°C 30 – 50 *) in case of free foaming: the reaction times, foam quantity and foam properties depend on the water quantity, surface of the crack flanks resp. the stones, their distribution in the AQUAFIN®-P1 pressure and other factors

Cleaning:

Clean tools properly immediately after use and thoroughly with the cleaning agent ASO-R006. After work has finished or in case of longer



interruptions the injection equipment is to be cleaned. The material must not dry out in the equipment and plug up vital machine components. The cleaning resp. the solvent agent should have a flashpoint exceeding +21°C, we recommend the use of ASO-R006 (see technical data sheet).

The procedure is as follows:

- Pump off the remaining injection material out of the injection unit.
- Rinse the top container with ASO-R006.
- Clean the injection pump, the top container and the tubes for 5 to 10 minutes with ASO-R006 in circulation.
- Afterwards pump the cleaning mixture into a container and rinse against with ASO-R006.
- In case of longer resting times the pump, the top container and the tubes have to be filled with flushing oil ASO-R007.
- Before the injection unit is used again the oil has to be removed.

Packaging:

AQUAFIN®-P1 is supplied in packs of 1.1 and 5.5 kg. AQUAFIN®-P1 is ready for use without mixing.

Product Preparation:

AQUAFIN®-P1 reacts with air humidity and with water. Therefore, a film may form on the surface of the liquid in opened packs which does not affect the injection procedure. Generally, AQUAFIN®-P1 is injected into the water-bearing areas by means of injection nozzles and handresp. Motor-driven pumps. In contact with water AQUAFIN®-P1 foams up strongly and hardens. If the zone to be waterproofed contains insufficient water, additional injection of water - preliminarily or subsequently will support the reaction and hardening of AQUAFIN®-P1. The application is to be affected in accordance with the ZTV-riss or Rili of the DafStb (regulations for crack injection).

Product Preparation:

We recommend to store the product prior to use for at least 12 hours at a minimum temperature of 15°C in order to ensure the recommended processing temperatures of between +15°C and +30°C.

Method of Application/Consumption:

Generally, the mixed injection resin is injected via boreholes and packers into the cracks to be waterproofed until the material comes out of the control holes.

Example:

1. Existing cracks (cracks width approx. 0.2 mm) have to be bored at a distance of approx. 20 cm.
2. The boreholes have to be cleaned with oil-free pressure air from the dust.
3. Place injection packers.
4. Inject AQUAFIN®-P1 with the suitable injection equipment. Vertical cracks: start the injection from the left side. Consumption: approx. 1150g/l.
5. If necessary, remove the injection packers after thorough hardening of AQUAFIN®-P1 and close the boreholes with ASOCRET-RN, if necessary, level them up to the concrete surface.

Health and Safety:

One cured AQUAFIN®-P1 is physically harmless. The liquid component is harmful; Symbol Xn. In any case, the government health and safety protective directive, data sheet mM 044, should be observed as well as the advice on the packaging.

Important Advice:

Protect areas which are not to be treated against AQUAFIN®-P1. Applications which are not clearly explained in this data sheet may only be carried out with written confirmation from the technical service department.

Disposal: Liquid remainders: EAK 08 01 11 paints and lacquers containing organic solvents or other dangerous substances. Cured product remainders EAK 17 0 03 plastics. See valid European Materials Safety Data Sheet (MSDS).

GISCODE: RU40

