



Technical Data Sheet

AQUAFIN®-P4

Elastic polyurethane injection resin

Art.-No. 2 05091

SCHOMBURG GmbH & Co. KG Aquafinstraße 2-8 D-32760 Detmold 13 2 05091	
EN 1504-5 AQUAFIN-P4 Elastic crack filling material for cracks, voids and defects	
U(D1) W(1) (1/2) (6/40)	
Adhesion and elongation	≥ 0.1 N/mm ²
capacity of elastic crack fillers:	≥ 10%
Impermeability to water:	D1
Glass transition temperature:	-25 °C
Injectability with dry media:	Injectability class: 0.1 at +6 °C, +21 °C and +30 °C
Injectability with non-dry media:	Injectability class: 0.1 at +6 °C, +21 °C and +30 °C
Viscosity:	T _{min} : +6 °C 288mPa*s T _{norm} : +21 °C 148mPa*s T _{max} : +40 °C 95mPa*s
Working time:	T: +5 °C > 40 mins T: +18 °C > 30 mins
Compatibility with concrete	15.6% No failure under compression testing Loss of deformability < 20%

Properties:

AQUAFIN-P4 is a solvent free, low viscosity, two component polyurethane resin. AQUAFIN-P4 is slow reacting and hardens to a non-expansive, flexible, pore-free material, which lightly foams on contact with water. AQUAFIN-P4 bonds to dry as well as damp substrates and has exceptional adhesion and tear resistance. AQUAFIN-P4 has a low glass transition temperature. It survives winter temperatures without becoming brittle and without tearing when cracks widen due to cold conditions.

Areas of application:

AQUAFIN-P4 is used to close off, waterproof and to form an elastic binding of cracks, joints and voids within concrete, natural stone or brickwork structures. AQUAFIN-P4 can be used for waterproofing car parks, concrete tanks, slotted walling, inner leafs of tunnels and construction joints.

Furthermore for the waterproofing injection of the AQUAFIN-CJ1 grout injection hose in construction joints. AQUAFIN-P4 has an advantageous mixing ratio of 1: 1 parts by volume. AQUAFIN-P4 can be injected via packers or via the AQUAFIN-CJ1 grout injection hose embedded in concrete.

Fulfills the criteria in accordance with DIN EN 1504-5: U(D1) W(1) (1/2) (6/40).

Technical Data:

Basis: Polyurethane resin
 Mixing ratio: 1: 1 parts by volume
 Density: Comp. A at +25° C
 0.985 ± 15 g/ml
 Comp. B at +25° C
 1.092 ± 15 g/ml

Mix viscosity:
 at +6° C: 290 ± 50 m Pa·s
 at +15° C: 170 ± 40 mPa·s
 at +25° C: 150 ± 30 mPa·s
 Pot life:
 at +5° C: 30-40 mins
 at +18° C: 25-35 mins
 at +23° C: 17-27 mins

Application temperature: +5°C to +30° C

Gel time/curing time frame:
 at +6° C: 15.0 ± 2 hrs
 at +15° C: 14.5 ± 1.5 hrs
 at +25° C: 11.5 ± 1 hr

Shore A hardness: 55 ± 3

Tensile strength
 (to DIN EN 1504-5): 0.58 ± 0.12 mPa·s

Elongation at break
 (to EN ISO 527-1/-2): 192 ± 38%

Cleaning tools: Equipment and tools must be thoroughly cleaned after use. At the end of work or where there are lengthy interruptions in work, clean the injection equipment. Do not allow material residues to dry in the machinery and harden. Any cleaning agent or solvent must have a flash point above +21° C. Please

AQUAFIN[®]-P4

Packaging:	follow the guidelines from the machine manufacturer. 2.1 kg (1.0 kg comp A and 1.1 kg comp B). 10.5 kg (5.0 kg comp A and 5.5 kg comp B). Components A and B are delivered at a predetermined mix ratio.
Storage:	24 months when stored frost free in the original unopened container in cool and dry conditions between +10° C and +30° C. Ensure the product is stored in accordance with the by-law for storing materials hazardous to water courses.

Substrate preparation:

The following criteria must be fulfilled:

Cement-based surfaces

- Concrete quality: min. C20/25
- Screed quality: min. CT-C35-F5
- Render quality: P III
- Age: min. 28 days
- Tensile adhesion strength: $\geq 1.5 \text{ N/mm}^2$

Product preparation:

Component A (resin) and component B (hardener) are supplied at a pre-determined mix ratio. Add component B to component A. Ensure that the hardener (component B) drains completely from its container. Mixing of the components is to be carried out with a suitable mixer at approx. 300 rpm. Stir until the mix is homogenous (free from striations); mixing time 3–5 minutes. Decant the material into a clean container and mix through thoroughly once again.

Application tools*:

Hand lever press, foot pedal press, mechanical injection equipment (airless or piston pump)

* For application with suitable injection equipment, we recommend contacting HTG HIGH TECH Germany GmbH in Berlin, www.hightechspray.de.

Method of application / consumption:

The mixed injection resin is usually injected via bore holes and packers into the crack requiring waterproofing until it oozes from the control holes.

Example:

1. Drill into the existing cracks (crack width approx. 0.2 mm) at appropriate intervals of approx. 20-30 cm.
2. Clean the boreholes of drilling dust using oil-free compressed air.
3. Place the injection packers.
4. Plug the inserted injection packers and crack zone at the surface, as required, with e.g. ASODUR-EK98. Strip width approx. 1.5 cm
Consumption: approx. 300 g/running meter
5. Once the crack plug has hardened inject the thoroughly mixed AQUAFIN-P4 using appropriate injection equipment.
Consumption: approx. 1000 g/l.
6. Once the injection resin has cured, remove the injection packers, as necessary and close off the bore holes with ASOCRET-M30.

Health & Safety:

Once cured AQUAFIN-P4 is considered harmless. The liquid component is harmful; symbol Xn. When using the product follow government health and safety guidelines, sheet M 044 as well as the advice on the packaging.

Important advice:

- Protect areas which are not to be treated against the influences of AQUAFIN-P4.
- With water-bearing cracks it is necessary to inject AQUAFIN-P1 beforehand in order to stop water penetration.
- Applications which are not clearly explained in this data sheet may only be carried out after consultation with and written confirmation from the SCHOMBURG Technical Services Department.
- Disposal key:
Liquid product residues: EAK 08 01 11 paint and lacquer waste, which contain organic solvents or other harmful substances. Cured product residues: EAK 17 02 03 plastics.

Please observe a valid EU Health & Safety data sheet.
GISCODE: PU40