



HydroBloc® Rapid 570

High reactive injection caoutchouc, water swellable

HydroBloc® Rapid 570 is a reactive 2 components hybrid elastomer. After mixing the components, the product reacts very quickly to form a highly elastic, tough, caoutchouc, similar to plastic with excellent mechanical properties (very high tear resistance), excellent adhesion even on wet concrete and high chemical resistance.

HydroBloc® Rapid 570 is swellable. The hardened product absorbs up to 50% water and increases its volume. The swelling effect guarantees double security for waterproofing, because due to the product-specific swelling and the contact pressure developed in the process, HydroBloc® Rapid 570 automatically compensates even subsequent, considerable volume changes in cracks and joints. Waterproofing with HydroBloc® Rapid 570 is "self-healing". Structures sealed with HydroBloc® Rapid 570 therefore remain watertight.

The sum of this properties

- **quick reaction**
- **homogeneous, porous free structure (non foaming!)**
- **high tear resistance and elasticity**
- **swellability in water and swell pressure**

makes HydroBloc® Rapid 570 to the ULTIMATIVE Alternative - when all other materials fail!

The reaction of the two components of HydroBloc® Rapid 570 starts immediately after mixing. This spontaneously produces a cream-like intermediate product that is still flowable under pressure. The viscosity then continues to increase rapidly. Until after about 120 seconds the high elastic tough elastomer is ready.



Due to the two-steps reaction, HydroBloc® Rapid 570 is particularly suitable for waterproofing injections against water - even when a lot of water flows under high pressure. **There are no side reactions** between water and HydroBloc® Rapid 570 (as with polyurethane, for example). **HydroBloc® Rapid 570 does not foam** and does not develop gases. Structural malfunctions like foam bubbles - a frequent cause of long-term failure of PUR injections - do not occur with HydroBloc® Rapid 570. These advantages recommend HydroBloc® Rapid 570 especially as a water stop and sealing agent in civil engineering and tunnel construction, for waterproofing of sheet pile walls or similar applications where safety and durability are top priority.

Dilatation joints:
**Perfectly and durably
sealed with
HydroBloc®Rapid 570**

The renovation of water-bearing movement joints (dilatation joints) with damaged joint tapes is a challenging task.

Leaking joints are safely repaired by injection with HydroBloc®Rapid 570. ARCAN has developed practical solutions and procedures for this issue.



Sealing of movement joints in the pump channel of a sluice by filling the joint gap with HydroBloc®Rapid 570. Injection was performed at low pressure, from bottom to top. The packers were equipped with ball valves for control and to drain the water in the joint.

Before the injection, the emptied and cleaned joints were temporarily dammed at the surface with a shell of shotcrete to create an abutment for the injection agent. After completion of the work and removal of the shotcrete, they were permanently covered with ARCAN Fugenabdeckung®90 - a doweled stainless steel profile.

Processing The application is simple. HydroBloc®Rapid 570 is ready for use as delivered. The two components do not need to be mixed in advance or activated by additives. Due to the high reactivity of the system, however, the product can only be processed by using a two-components pump.

Recommended are high-pressure machines with 1:1 dosing piston pumps and an additional rinsing pump for the mixing device. Commercially available static mixing elements are suitable as mixing devices for the components. Mixing nozzle must be placed directly in front of the injection packer. We recommend our highly effective and environmentally neutral safety solvent HydroSolv®520 for flushing and cleaning the static mixer. Otherwise, the processing is carried out as with conventional injection resins.

HydroBloc®Rapid 570 stops also water, which is fast and flows under pressure. Sure - and forever!



Properties



Components	2
Chemical character	Polyurea-Hybridcaoutchouc
Mixing ratio	1 : 1 depending on volume
Density of the mixture	1,05
Viscosity of the mixture	Not measurably
t-Gel	Approx. 120 Seconds
Hardening Time (20°C)	Approx. 3 - 4 Minutes
Odour	Very faint, pleasant

Safety Storage

When used as an injection agent according to regulations, HydroBloc®Rapid 570 is a harmless substance. However, it is recommended to use protective clothing and goggles during the processing and that the usual industrial hygiene regulations are observed. The national regulations, e.g. of the employers' liability insurance associations, concerning the handling and processing of injection agents must be observed.

In case of eye contact with the basic components or the injection mixture, always rinse with plenty of water for 15 minutes and then consult a specialist immediately.

The vapour pressure of the polymeric isocyanates used in the A component is low. Nevertheless, negative reactions cannot be excluded in persons who react allergic if in contact with isocyanate, even with HydroBloc®Rapid 570. As a precaution you should not work with this product.

HydroBloc®Rapid 570 can be stored for at least 6 months in sealed original cans, in a cool, dry place and protected from light. Quality and reactivity are not affected by storage. However, B-components must be protected from frost. The material becomes unusable by freezing.

The product is not flammable, but combustible. This property must be observed during storage. It must not be stored together with food and must be kept so that it is not accessible to children and unauthorized persons.



Hardened HydroBloc®Rapid 570 is physiologically harmless and must be disposed of like household waste. Product residues can therefore be rendered harmless most easily by mixing the components. Empty cans with liquid adhesions can be cleaned by rinsing with water and then sent for recycling (PE). Rinsing water and liquid material residues are hardened most easily by mixing with cement and then disposed of as building rubble.

Certificates

Test report of Hygiene-Institut Gelsenkirchen of 9.9.1996. Test according to the KTW guidelines for contact with drinking water.



Examination report of the MFPA Leipzig dated 4.6.1999. It was tested the suitability of HydroBloc®Rapid 570 as an injection agent for the sealing of water-bearing movement joints.

These technical information describe the present-day state of knowledge these product. They should only inform about the possibilities of application and could not release the applicator of his commitment to check the possibility to use the product for the required application. Information for processing can be found in processing instructions of our product. Information about safe handling can be found in our current safety data sheet.

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