

HydroBloc®OM 593

Fast setting Organo Mineral Foam for Injection

HydroBloc®OM 593 is a half-organic foam resin with high reactivity. Typical applications are consolidation of unstable areas, filling and stabilisation of cavities.

The foaming factor of HydroBloc®OM 593 is 4 - 5. The main use of HydroBloc®OM 593 are sealing injections and stabilisations of structure. The reaction product of this resin is a fine cellular foam with very good adhesions on mineral surfaces.

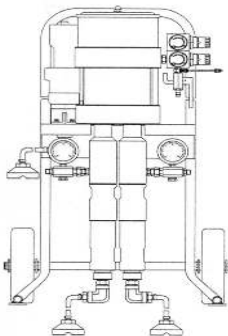
According to the good adhesion and internal strength of this foam, the fixing of sand, gravel and unstable rock is no problem without hindering the subsequent removal of this structure.

HydroBloc®OM 593 is not flammable. It extinguishes directly after removing of direct fire. There is only small smoke emission according to other EP and PU resins. These are both very important properties for application in safety sensible areas.

Processing

HydroBloc®OM-593 is a classic reaction resin with 2 components. The mixing ratio is 1 : 1 (after volume). All typical 2 component injection machines are suitable. The resin does not require any special material inside the pump such as stainless steel.

The starting time (begin of foam reaction) is 90 - 120 seconds (at 20 °C) as product delivered. The gel time (Tgel) is normally 4 - 5 minutes by 20 °C. Directly after mixing the material, it is foaming to a flexible plastic compound which reacts quickly forward to a tough body.



The reaction development is user friendly and enables a sufficient long reaction time and therefore a perfect spread of the resin in the injected area. The hardening itself is quick and reliable.

Additional acceleration is possible through mixing the A component with a special accelerator. If required the setting and reaction time could be customised. Setting times below 40 seconds are possible.

Processing with a 2 component injection machine with mixing nozzle is mandatory. Only good homogenised material guarantees a perfect technical result. The mixing nozzle must be flushed in interruption of work. As cleaning agent we recommend water with 10% cleaner HydroSolv®599.

The A component could be cleaned with the above mentioned flushing agent but the B component must be cleaned with HydroSolv®520. Never use a water based cleaner for the Isocyanate (B) component. The material cures immediately!

The reaction behaviour of the HydroBloc® OM resin depends less on the temperature than classic PUR or EP based resins. The viscosity of the components rise when the temperature declines. If injection must be processed by temperatures ≤ 5 °C please contact our application engineering.

The reaction of the HydroBloc®OM 593 resin is intense exothermic. The maximum reaction temperature is 100 °C even in big quantities such as cavity fillings.

When bigger quantities of the resin cure the reaction temperature rises up to 100 °C. The water contained in the Silicate based A component starts boiling and evaporates as water steam. This is normal and absolutely harmless.

The reaction heat of the resin won't create any temperature peaks which are dangerous for flammable substances such as e.g. Cole mining. The reaction heat won't ignite the Cole. This applies for other injection areas as well where the resin may in contact with other flammable substances.

HydroBloc®OM 593 is less difficult in this relationship than other high reactive systems based on Epoxy or Polyurethane and non water based acrylate resins.

Properties -individual components



Component	593 - A
Characteristic	Muddy, brown liquid
Density	1,40 - 1,45 g/ml at 20°C
Viscosity	250 - 300 mPa.s at 20°C
pH	11 +/- 1
Flash Point	Not applicable

Component	593 - B
Characteristic	Dark brown, clear liquid
Density	1,20 - 1,25 g/ml by 20°C
Viscosity	110 - 200 mPa.s by 20°C
pH	Not applicable
Flash Point	$\geq 200^{\circ}$

-and reaction products



Processing time	about 90 - 120 seconds
Processing temperature	>8°C
Hardening time	3 - 5 minutes (depending on volume)
Reaction product	tough elastic, shrink free
Adhesiveness	1 - 3 N/mm²
Bonding strength	25 - 75 N/mm²
Fire behaviour	self-quenching
Foam factor	4-5

Storage Work safety Disposal

HydroBloc®OM 593 is harmless if used as Injection resin and under consideration of the actual safety guidelines for injections and as well the government safety organisation.

We recommend the permanent use of work safety clothes and goggles when handling the materials. Avoid skin and eye contact.

Store the material in a dry and cold place and keep away from children and unauthorised third parties. Do not store together with food, the materials are unfit for consumption through human or pet.

The A component is a watery silicate solution. Non flammable and no tendency for dangerous reactions. Cans must be kept closed because the silicate reacts in contact with carbonic acid in the air and will be damaged though exposition to air.

The B component is flammable but not inflammable. The product is a modified Diisocyanate and reacts as all such connections easily with water and the existing air humidity. Cans must be kept closed. In contact with water this component creates carbonic acid (CO₂). Product mixed with water or water containing materials should never be stored in closed cans. Because of the gas development the can may burst.

HydroBloc®OM 593 is storage stable for 12 month after delivery date. The safety data-sheet contains more and detailed information about the handling of the product.

The reacted material could be disposed as building rubble. In case of left over material, cure it through mixing both components. Please behave after the local rules.

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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ARCAN Waterproof

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