

PU Injection Foam Resins

WEBAC® 150



Range of application

- Crack repair in concrete
 - Tested according to ZTV-ING (RISS)
 - Registered with the BASt list, monitored according to DIN V 18028
- Filling cavities in masonry and concrete in case of water ingress
- Sealing of foundation pits (material curtain - curtain injection in adjacent foundation soil): sheet pile wall, bore pile wall, underwater concrete
- Sealing of anchor heads in special civil engineering
- Sealing in hydraulic engineering e.g. (potable) water tanks

Special properties

- MR 1 : 1
- Fast and highly expanding foam
- Foam structure not too rigid
- Universally applicable, reliable application
- Adjustable reaction time (accelerator **WEBAC® B15**)
- Good reactivity and extraordinary resistance to alkaline water up to pH-value 13

Instruction for use

- Application by 1C or 2C pump

Mixing

Application by 1C pump:

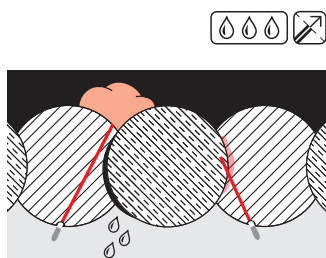
- Empty components A and B into a mixing vessel (make sure that the containers are completely empty) and mix homogenously

Application by 2C pump:

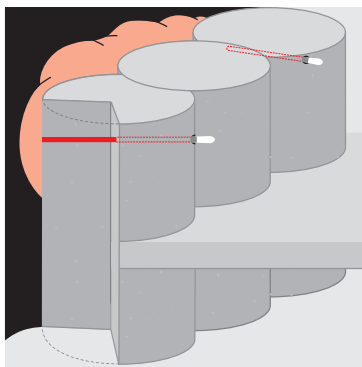
- No premixing required

Exemplary applications

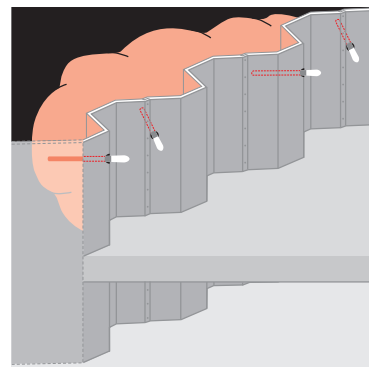
Meaning of the icons ► WEBAC Product Catalog, www.webac.de or www.webac-chemie.com



Bored pile wall: top view



Sealing of a bored pile wall



Sealing of a sheet pile wall

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► Technical Information

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Technical parameters	Values			
Mixing ratio	1 : 1 parts by volume			
Apparent density of foam	16 kg/m ³ (30-fold expansion)			
Density, 20 °C (ISO 2811)	Comp. A	1.0 g/cm ³		
	Comp. B	1.2 g/cm ³		
Processing life (WEBAC test specification following ISO 9514)		30 °C 120 min	23 °C 120 min	12 °C 120 min
Application temperature Building component and material	> 5 °C			
Viscosity of mixture (WEBAC test specification following ISO 3219)		30 °C 300 mPa·s	23 °C 600 mPa·s	12 °C 800 mPa·s
Reaction time with 10 % water Start · End	30 °C 12 s · 60 s	20 °C 14 s · 65 s	12 °C 20 s · 75 s	5 °C 25 s · 85 s
Expansion with 10 % water (EN 14406)	40-times			
Watertightness (EN 14068)	< 1 bar			
Compressive strength · compression set* (ISO 604)	QS 0.1–0.4 mm	0.47 N/mm ² · 13 %		
	QS 0.4–0.8 mm	0.36 N/mm ² · 9 %		
	QS 0.7–1.2 mm	0.70 N/mm ² · 10 %		
Fire behavior SPU-sand mixture	B2 according to DIN 4102-1 6.2.5.2			
UBA-KTW	Repair system for containers			
KTW	D1 (large-surface sealants)			
GISCODE	PU40			
EPD	EPD-DBC-20130014-IBG1-D			
Exposure scenarios according to REACH	Assessment of industry standard application			

* Foam-sand samples from laboratory mixtures with foam : sand = 1 : 20 parts by weight incl. 5 % water referring to SPU percentage.

The specified data are values determined under laboratory conditions and are subject to a certain fluctuation. Deviations are possible in practice depending on the respective object situation.

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General Information

WEBAC PU Injection Foam Resins

► PU injection foam resins (SPU) are designed for quickly and temporarily stopping water. They are characterized especially by their strong increase in volume and can also be used in case of highly pressing water, e.g. in dam building, tunnel construction, bridge building and special civil engineering. The products are compatible with concrete, steel, foil, cable sheathing and WEBAC injection materials. WEBAC PU injection foam resins are resistant to salts, lyes and acids in concentrations usually found in buildings and structures. A secondary injection with PU injection resins is carried out to obtain a durable sealing effect.



Preparatory work

Structural analysis before the injection:

- Structural condition
- Hydrodynamic and hydrostatic conditions
- Water loads
- Salt contamination

Please also note when repairing cracks:

- Crack characteristics (crack type, crack course, crack width, crack width modification, etc.),
 ► see ZTV-ING, part 3, section 5, Annex A or Restoration Guideline, part 2, Tab. 6.1–6.4
- Significance of cracks for building structure

This provides information on:

- Cause of damage
- Selection of suitable filling materials
- Choice of drill-hole packers
- Positioning of drill holes
 (for more detailed information please refer to e.g. WEBAC Brochure "Sealing of Masonry")

In the event of high flow rates, measures may be necessary to reduce the water flow and to prevent the filling material from being washed out (e.g. relief drillings, venting holes and timber wedges, etc.).



Mixing

- The containers are provided according to the required mixing ratio
- Partial quantities can be measured out in separate vessels
- The mixed material is moisture-sensitive; all contact with water (e.g. rain) must therefore be avoided
- If a prepared mixture is not used immediately, air humidity may cause a skin to form on the surface; this skin must be removed prior to further use (do not mix with the material!).
- The mixture should be used within 2 hours to provide for an optimum foam structure

Please observe the mixing instructions for the respective material.



Application

The injection pressure depends on the nature and condition of the building structure, the hydrodynamic and hydrostatic conditions and the desired filling level. Carry out the injection at intervals so that conclusions can be drawn from the reaction of the material (surface emergence etc.) as to whether to continue or to stop the injection process. The reaction speed is influenced by the temperature of the material and the building component. Higher temperatures accelerate, lower temperatures slow down the reaction.

Only inject pure WEBAC PU injection foam resin without any residues from cleaning agents or other impurity.

Application by 1C Pump:

- Transfer the mixed material to the hopper
- Stir briefly

Application by 2C Pump:

- Provide for a sufficient volume flow to ensure that components A and B are mixed homogeneously in the mixing device (static mixer)

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General Information

WEBAC PU Injection Foam Resins

To ensure durable limited-flexibility filling and sealing of cracks, a secondary injection with WEBAC PU injection resins is necessary depending on the object.

Immediately after the injection of WEBAC PU injection foam resins, the secondary injection can usually be carried out via the same drill-hole packers. However, if the secondary injection is carried out several hours later it may be necessary to install new drill-hole packers in different positions.

Please also note when repairing cracks:

If water-bearing cracks under hydrostatic pressure require filling with SPU according to ZTV-ING, part 3, section 4, no. 8.3/8.4, or Guideline of Concrete Repair, part 2, 6.7.2.2, prior to the injection, the filling process must be limited to the crack sections required to reduce water ingress.

Final work

- Upon conclusion of the injection and the curing process of the WEBAC PU injection foam resin or the WEBAC PU injection resin used for the secondary injection, remove the packers
- Close the drill holes with suitable mineral building materials

Cleaning

- **1C Pump:** clean the equipment with **WEBAC® Cleaner A** any time work is interrupted for a longer period of time and after use
- **2C Pump:** the mixing device can be rinsed with component A any time work is interrupted for a short period of time. Clean the equipment with **WEBAC® Cleaner A** any time work is interrupted for a longer period of time and after use
- Use **WEBAC® Cleaner B** for etching all material already cured, but never for rinsing pumps
- Fill the entire pump system with **WEBAC® Lubricant** or **hydraulic oil** in case of long standstill periods

- Observe the technical data sheets of the injection pumps and cleaners used
- Refer to the operating manual of the injection pump for more detailed information

Storage

- Between 5 °C and 30 °C
- Protected from moisture
- In original, sealed containers

Occupational safety

The safety regulations of the industrial trade associations and the WEBAC Material Safety Data Sheets are to be observed at all times when working with this product. Safety data sheets in accordance with Annex II to EU Regulation 1907/2006 must be accessible to all persons responsible for occupational safety, health protection and the handling of materials. For further information, please see the separate information sheet "Occupational Safety".

Waste disposal

In Germany, empty containers can be disposed of via Interseroh Dienstleistungs GmbH observing the respective terms and conditions. It is not possible to dispose of containers at production facilities or delivery warehouses. For more detailed information, please see the separate information sheet "Information on the disposal and return of WEBAC packaging" and the material safety data sheets.

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