PU Injection Foam Resins

WEBAC® 150

Range of application

- Stopping of pressing water
- Injection in the rear third of the component
- Filling cavities/voids in masonry and concrete in case of water ingress
- Curtain injection without adding accelerator according to National Technical Approval
- 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. (drinking) water tanks
- Shaft repair

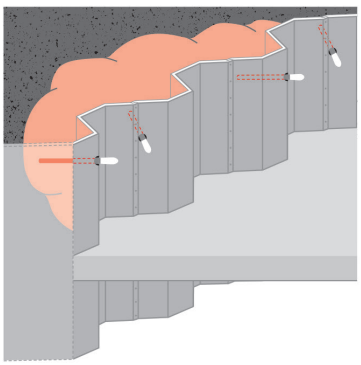
Properties

- Polyurethan-based injection foam resin
- Fast and highly expanding foam
- Foam structure not too rigid
- Adjustable reaction time (accelerator **WEBAC® B15**)
- Good reactivity and extraordinary resistance to alkaline water up to pH-value 13

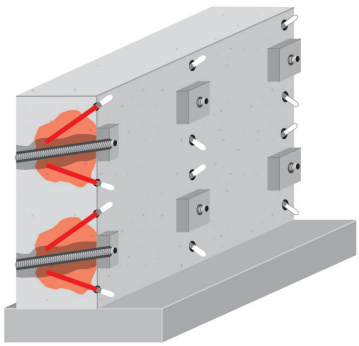
Test certificates

- National Technical Approval
- Test certificate according to KTW recommendations: D1 (large-surface sealants)
- Registered with the BASt List
- Tested according to ZTV-ING (RISS)
- Tested/supervised according to DIN V 18028 by the official material testing institute iBMB
- Environmental Product Declaration (EPD)
- List of chemical resistance

Examples



Sealing of sheet pile walls



Sealing of anchor heads

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Technical Information

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Technical data

Technical data	Value							
Mixing ratio	1 : 1 parts by volume							
Bulk density foam	≈ 16 kg/m³							
Density, 20 °C (DIN ISO 2811)	**Comp. A** ≈ 1.0 g/cm³ **Comp. B** ≈ 1.2 g/cm³							
Pot life (WEBAC test specification based on DIN ISO 9514)			**30 °C** ≈ 120 min		**23 °C** ≈ 120 min		**12 °C** ≈ 120 min	
Application temperature Building structure and material	> 5 °C							
Viscosity of mixture (WEBAC test specification based on DIN ISO 3219)			**30 °C** ≈ 300 mPa·s		**23 °C** ≈ 600 mPa·s		**12 °C** ≈ 800 mPa·s	
Foam reaction 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 (DIN EN 14406)	≈ 40-times							
Watertightness (DIN EN 14068)	> 1 bar							
Compressive strength · **Compression set*** (DIN ISO 604)	**QS 0.1–0.4 mm** ≈ 0.47 MPa (N/mm²) · ≈ 13% **QS 0.4–0.8 mm** ≈ 0.36 MPa (N/mm²) · ≈ 9% **QS 0.7–1.2 mm** ≈ 0.70 MPa (N/mm²) · ≈ 10%							
Fire behavior PU foam-sand mixture (DIN 4102-1 6.2.5.2)	B2							
GISCODE	PU40							
EPD	EPD-FEI-20220021-IBG1-EN							
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 PU foam 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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Preparatory work

Structural analysis:

- Preparation of a building condition analysis to determine the actual condition of the structure/component
  - Structure condition
  - Hydrodynamic and hydrostatic conditions
  - Water load
  - Salt load
- Determine the necessary key figures for soil injections (soil expertise/porosity etc.)

This results in:

- Planning of suitable remediation measures in accordance with the applicable rules and standards
- Selection of suitable material
- Selection of packers/lances
- Arrangement of the boreholes and placement of the packers/lances
- Carrying out a test injection if necessary

Application instruction

- Injection by 1C or 2C pump
- Mixed material is moisture-sensitive; contact with water (e.g. rain) must be avoided
- If a prepared mixture is not used immediately, air humidity may cause a skin on the surface; this skin must be removed prior to further use (do not mix into the material!)
- Make sure the filter in the hopper is clean
- The mixture must be used completely within pot life
- Only use pure WEBAC material without any residues of cleaning agents or other impurity
- The reaction speed is influenced by the temperature of the material and the building structure – higher temperatures accelerate, lower temperatures slow down the reaction

Mixing

Application by 1C pump

- Empty component A and B at the given mixing ratio into a mixing vessel (make sure that the containers are completely empty) and mix homogenously
- Transfer mixed material in a new mixing vessel, stir well again and fill into the hopper of the pump

Application by 2C pump

- Fill component A and B into the respective hoppers
- The components are mixed homogenously in the mixing head

Application

- Adapt the injection pressure to the nature and condition of the building structure, limited to the water-bearing areas
- The injection is carried out in intervals, preferably in the rear third of the structural element's cross section. Conclusions can be drawn from the reaction of the material (surface emergence etc.) to decide whether to continue or to stop the injection
- Immediately after filling with WEBAC PU injection foam resins, carry out a subsequent sealing injection with PU resins using additional drill hole packers

Final work and cleaning

- Once the material has cured remove the packers
- Clean the drill holes and close with suitable non-shrinking mortar
- Clean the component surface of patched cracks, grind flat if necessary
- Clean the pump with **WEBAC® Cleaner A**
- Use **WEBAC® Cleaner B** for dissolving cured material but never for flushing pumps
- Observe the technical data sheet of the injection pump and cleaners used
- For detailed information refer to the operating manual of the injection pump

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Product data

		Comp. A	Comp. B
Delivery form		200 kg	250 kg
		19.8 kg	24.8 kg
		9.75 kg	12.25 kg
		5 kg	6.2 kg
	Combi:	0.45 kg	0.55 kg
Storage		• Between 5 °C and 30 °C • Protected from moisture • In original, sealed containers	
Compatibility		• Compatible with concrete, steel, foil, cable sheathing and WEBAC injection materials	
Resistance		• Resistant to salts harmful to the building, alkalis and acids in common concentrations in building structures	

Occupational safety

The safety regulations of the industrial trade associations and the WEBAC Safety Data Sheets are to be observed at all times when working with this product. Safety data sheets according to Regulation (EC) No. 1907/2006 (REACH) 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” in our product catalog or www.webac.com.

Waste disposal

In Germany, empty containers can be disposed of via “Interzero Circular Solutions Germany 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 “Disposal Notes” in our product catalog or www.webac.com and the safety data sheets.

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