PU Injection Resins

WEBAC® 1405 CE

Range of application

- Crack injection in components according to DIN EN 1504-5
- Injection of injection tubes (National Test Certificate)
- Sealing of construction joints
- Damp proof course (dpc) and sealing in masonry
- Sealing of foundation pits
- Sealing injections in tunnels, bridges, etc.

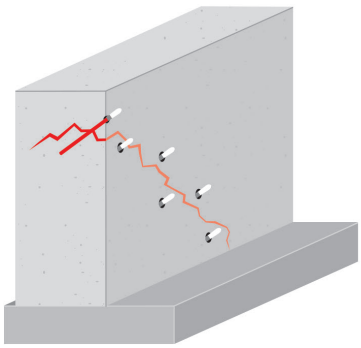
Properties

- Polyurethan-based injection resin
- High elasticity, e. g. during component movement
- Slight foam formation
- Good adhesive power, high edge adhesion to concrete, steel, polymer
- High shear strength
- Resistance to bitumen, coal tar pitch, existing sealings
- Adjustable reaction time (accelerator **WEBAC® B14**)
- With accelerator also suitable for use at low temperatures
- Total solid*

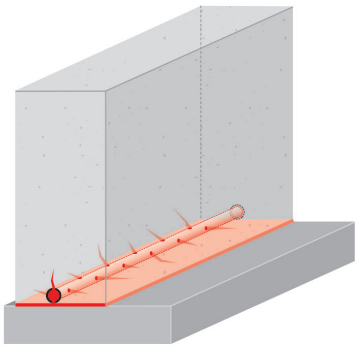
Test certificates

- Declaration of performance in accordance with the Construction Products Regulation (system 2+)
- Certificate of conformity of the factory production control
- Test certificate according to KTW-BWGL recommendations: sealants, lubricants
- 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
- National Test Certificate for **WEBAC® Injection Tube AB** in combination with **WEBAC® 1405**
- Environmental Product Declaration (EPD)
- List of chemical resistance

Examples



Crack repair in concrete



Injection of injection tubes

*according to test method by Deutsche Bauchemie e.V. (German Industry Association for Manufacturers of Construction Chemicals)

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Technical Information

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Technical data	Values			
Mixing ratio	2 : 1 parts by volume			
Density, 20 °C (DIN ISO 2811)	**Comp. A** ≈ 0.98 g/cm³ **Comp. B** ≈ 1.1 g/cm³			
Pot life (WEBAC test specification based on DIN ISO 9514)		**30 °C** ≈ 40 min	**23 °C** ≈ 60 min	**12 °C** ≈ 90 min
Application temperature Building structure and material	> 5 °C			
Viscosity of mixture (WEBAC test specification based on DIN ISO 3219)		**30 °C** ≈ 110 mPa·s	**23 °C** ≈ 150 mPa·s	**12 °C** ≈ 240 mPa·s
Reaction time with 5% water Start · End · Expansion		**21 °C** ≈ 6 min 30 s · ≈ 10 min · ≈ 1.1-times		
Tear strength · Elongation at break 7 d, 21 °C (DIN ISO 527)	≈ 0.21 MPa (N/mm²) · ≈ 40%			
Shore hardness A 7 d, 21 °C (DIN EN 868)	≈ 21/21			
Watertightness (DIN EN 14068)	> 2 bar			
CE classification (DIN EN 1504-5)	U(D1) W(2) (1/2/3) (5/30)			
Fire behavior (DIN 4102-4. 2.3.2)	B2			
GISCODE	PU40			
EPD	EPD-FEI-20220021-IBG1-EN			
Exposure scenarios according to REACH	Assessment of industry standard application			

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 pump
- 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

- 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

- Adapt the injection pressure to the nature and condition of the building structure (< 10 bar for low pressure method or high pressure method starting at ≈ 20 bar)
- Continue the injection until resin leaks out from the masonry and/or from the adjacent packers. This is necessary to get an even material distribution
- A secondary injection must be carried out depending on the moisture condition and foam behavior

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

Material consumption for post-construction damp proof course (dpc) (depends on the pore and cavity volume of the masonry)	• Thumb rule: ≈ 1 kg/m per 10 cm wall thickness • For masonry with wall thickness > 60 cm: ≈ 1.2 kg/m per 10 cm wall thickness		
Delivery form		**Komp. A**	**Komp. B**
		2 x 200 kg	220 kg
		18.8 kg	10.6 kg
		10 kg	5.5 kg
		5 kg	2.75 kg
	Combi:	0.645	0.355 kg
Storage	• Between 5 °C and 30 °C • Protected from moisture • In original, sealed containers		
Compatibility	• Compatible with masonry mortar, concrete, steel, foil, cable sheathing, metal 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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