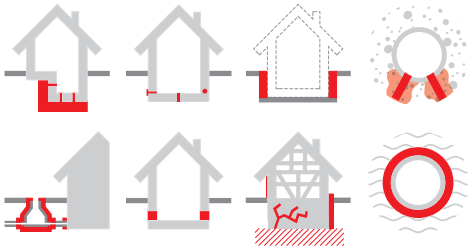
Injection Gels

WEBAC® 240 CE* U



Range of application

WEBAC® 240

- Curtain injection
- Stabilization and sealing of foundation soil
- Damp proof course (dpc)
- Joint sealing
- Construction sealing of buildings
- Micro tunneling

WEBAC® 240 + Bseal I

- Repair of damaged web and foil sealings
  - With ground contact
  - In tunnels, sewers, shafts, bridges and basements
- Sealing of annular gaps and voids in tubbing constructions
- Joint sealing

Properties

WEBAC® 240

- Polyacralyte-based injection gel
- Solid yet elastic, absorbs dynamic and mechanical stress
- Adjustable reaction
- Swells upon contact with water
- Economical material consumption
- Chloride-free
- Environmentally friendly with National Technical Approval according to DIBt**

WEBAC® 240 + Bseal I

- Polyacralyte-based injection gel
- Polymer-reinforced
- Excellent adhesion to dry, damp and wet substrates as well as membranes and foils
- High dimensional stability
- Limited swelling
- Neglected volume loss during the drying process
- Salt reduced

*CE Declaration of Performance 1504-5 for swellable filling with WEBAC® 240 + Bseal I **at 2 % B-concentration

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Injection Gels

WEBAC® 240

Test certificates

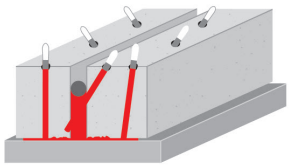
WEBAC® 240

- National Technical Approval
- Certificate of conformity for use as: Curtain injections
- Test certificate according to KTW recommendations: D1 (large-surface sealants)
- Environmental Product Declaration (EPD)
- List of chemical resistance

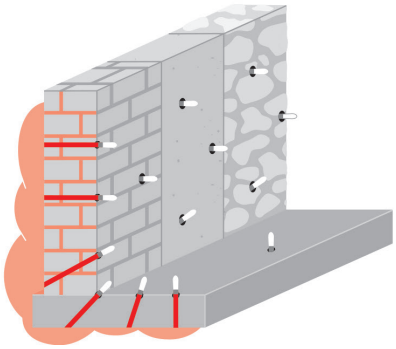
WEBAC® 240 + Bseal I

- 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
- Environmental Product Declaration (EPD)
- List of chemical resistance

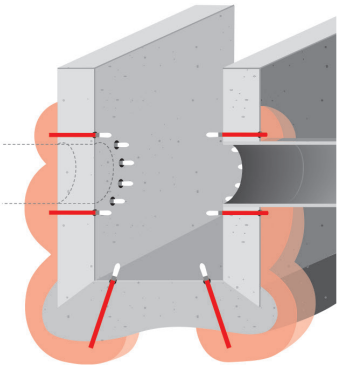
Examples



Sealing and backfilling of joints



Curtain injection



Curtain injection at pipe ducts

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WEBAC® 240 CE* U

Technical data

	WEBAC® 240			
Mixing ratio		**Comp. A** **A1 : A2** 20 : 1 parts by weight	**Comp. B** **water : B-powder concentrate** 98 : 2 parts by weight	
		A : B 1 : 1 parts by volume		
Density, 20 °C (DIN ISO 2811)	**Comp. A1** **Comp. A2** **Comp. B**	≈ 1.2 g/cm³ ≈ 0.95 g/cm³ ≈ 1.0 g/cm³		
Application temperature Building structure and material	> 1 °C			
Viscosity of mixture (WEBAC test specification based on DIN ISO 3219)		**30 °C** ≈ 4 mPa·s	**23 °C** ≈ 6 mPa·s	**12 °C** ≈ 10 mPa·s
Reaction time at 2% B-concentration flow limit · solid		**30 °C** ≈ 20 s · ≈ 40 s	**20 °C** ≈ 40 s · ≈ 75 s	**10 °C** ≈ 100 s · ≈ 180 s
Tear strength · Elongation at break 24 h (in foil), 21 °C (DIN ISO 527)	≈ 0.06 MPa (N/mm²) · ≈ 220%			
Watertightness (DIN EN 14068)	> 2 bar			
Fire behavior test (DIN 4102-1. 6.2)	B2			
EPD	EPD-DBC-20220146-IBF1-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.a

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Technical data

		WEBAC® 240					
	B-concentration	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C
Reaction times – flow limit	0.5%	≈ 420 s	≈ 340 s	≈ 185 s	≈ 120 s	≈ 78 s	≈ 63 s
	1.0%	≈ 250 s	≈ 185 s	≈ 102 s	≈ 70 s	≈ 44 s	≈ 34 s
	1.5%	≈ 165 s	≈ 125 s	≈ 72 s	≈ 48 s	≈ 35 s	≈ 23 s
	2.0%*	≈ 135 s	≈ 100 s	≈ 60 s	≈ 40 s	≈ 27 s	≈ 19 s
	2.5%	≈ 120 s	≈ 90 s	≈ 50 s	≈ 33 s	≈ 23 s	≈ 16 s
	5.0%	≈ 65 s	≈ 50 s	≈ 29 s	≈ 20 s	≈ 15 s	≈ 9 s
	B-concentration	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C
	0.5%	≈ 660 s	≈ 540 s	≈ 330 s	≈ 195 s	≈ 140 s	≈ 110 s
	1.0%	≈ 390 s	≈ 300 s	≈ 200 s	≈ 130 s	≈ 85 s	≈ 70 s
	1.5%	≈ 270 s	≈ 210 s	≈ 140 s	≈ 90 s	≈ 70 s	≈ 45 s
Reaction times – solid	2.0%*	≈ 220 s	≈ 180 s	≈ 120 s	≈ 75 s	≈ 55 s	≈ 40 s
	2.5%	≈ 195 s	≈ 155 s	≈ 100 s	≈ 60 s	≈ 48 s	≈ 35 s
	5.0%	≈ 110 s	≈ 95 s	≈ 60 s	≈ 40 s	≈ 36 s	≈ 27 s

*National Technical Approval according to DIBt
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Deviations are possible in practice depending on the respective object situation.

Technical data

	WEBAC® 240 + Bseal I		
Mixing ratio	A1 : A2 = 20 : 1 parts by weight A : B = 1 : 1 parts by volume		
Density, 20 °C	≈ 1 g/cm³		
Viscosity of mixture (WEBAC test specification based on DIN ISO 3219)	23 °C ≈ 35 mPa·s	12 °C ≈ 40 mPa·s	
	B-powder concentration in Bseal I		
Reaction time (100 ml mixture) – flow limit		2.0% (≙ 0.4 kg)	
	5 °C	≈ 125 s	
	10 °C	≈ 83 s	
	20 °C	≈ 36 s	
Reaction time (100 ml mixture) – solid		2.0% (≙ 0.4 kg)	
	5 °C	≈ 180 s	
	10 °C	≈ 110 s	
	20 °C	≈ 46 s	
Tear strength · **Elongation at break** 24 h (in foil), 21 °C (DIN ISO 527)	≈ 0.2 MPa (N/mm²) · ≈ 450%		
CE classification (DIN EN 1504-5)	U(S2) W(1) (1/2/3) (5/30)		
EPD	EPD-DBC-20220146-IBF1-EN		
Exposure scenarios according to REACH	Assessment of industry standard application		

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Technical Information

Injection Gels

WEBAC® 240 CE* U

Preparatory work

Structural analysis:

- Preparation of a building condition analysis to determine the actual condition of the structure/component
  - Structure condition
  - Moisture condition
  - Salt load

This results in:

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

Application instruction

- Injection by 2C pump (stainless steel)
- Only use stainless steel (V4A) or wooden stirrer for mixing
- All prepared components must be used immediately
- 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

Coloring

- WEBAC Injection Gels can be colored with **WEBAC® F200** to monitor the water displacement, the material distribution as well as to identify any gel leakage
- To color the injection gel, mix ≈ 1% (referring to component A) of the blue color agent **WEBAC® F200** into component A
- The color intensity of the gel will decrease gradually

Due to the high adhesive strength of component B of **WEBAC® 240 + Bseal I**, the filter of the suction hose must be checked regularly for material residues and lumps and cleaned at short intervals when processing larger quantities (see also Final work and cleaning).

Mixing

Mixing of component A

- Empty the smaller container of component A2 completely into the larger container of component A1
- Mix both components via stirring while pouring until homogenous

Mixing of component B

WEBAC® 240

- Dissolve B-powder concentrate in a clean plastic container (canister 20 l) by intensive stirring in clean tap water (the required amount of water is then easily obtained by adjusting the level of component B to the level of component A)

WEBAC® 240 + Bseal I

- Add the B-powder concentrate to the container of component Bseal I and stir until it has fully dissolved

→ Prepared **components A** and **B** are delivered at a mixing ratio of 1 : 1 from respective containers directly with a 2C pump and are mixed homogenously in the mixing head

Application

- Adapt the injection pressure to the nature and condition of the building structure
- Inject the injection gel from bottom to top, beginning at the lowest drill hole level
- Continue the injection until injection gel starts leaking from the adjacent packers

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WEBAC® 240

Final work and cleaning

- The packers can be removed immediately after gel formation
- Cured gel must be removed from the drill holes/drill hole walls down to about 10 cm deep and the drill holes must be filled (preferably use pcc mortar for concrete and quick set mortar for masonry)
- After completion of the injection, the 2C pump must be thoroughly rinsed with water, at least 20 liters of water per piston side (component)
- After the application of **WEBAC® 240 + Bseal I** we recommend cleaning the material piston of component B with **WEBAC® Cleaner A**, to prevent clogging within the piston housing
- After rinsing with cleaner A, the piston should then be rinsed with water
- Gelled residues must be removed from the equipment mechanically immediately after use
- Observe the technical data sheet and the manual of the injection pump

Product data

Material consumption (orientation value)	**Curtain injection**	20 – 60 kg/m² (corresponds ≈ 10 – 30 kg gel concentrate)			
	Sealing of building	≈ 20 kg/m² at 50 cm wall thickness			
	Damp proof course (dpc)	≈ 1.5 – 2 kg/m per 10 cm wall thickness			
Delivery form	**WEBAC® 240**	**Comp. A1** 21.5 kg	**Comp. A2** 1.05 kg	**Comp. B** 1.0 kg 0.4 kg 0.2 kg	**Comp. Bseal I** 20 kg
	WEBAC® F200	**Unit** 1 kg			
Storage		• Between 5 °C and 25 °C • Protect component **Bseal I** of **WEBAC® 24** from frost • Protected from moisture and light • In original, sealed containers			
Compatibility		• Reacted gels are insoluble in water and fuels			
Resistance		• Resistant to diluted acids and salts damaging the structure • Resistant to alternating frost and thaw			

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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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