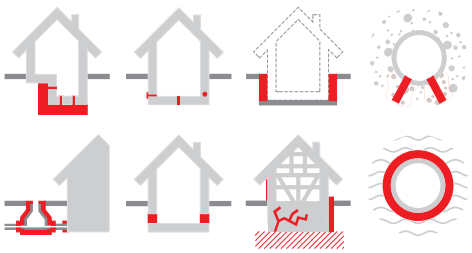
Injection Gels

WEBAC® 240 CE* U



▸ WEBAC® 240 is a polyacrylate gel for sealing building structures and joints, specially suitable for curtain injections. Due to a multifunctional modular system various applications are possible.

Range of application

WEBAC® 240

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

WEBAC® 240 + Bseal I CE*

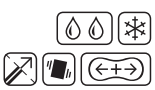
- Protection and repair of concrete structures according to EN 1504-5 (CE-Declaration of Performance 2+)
- Repair of damaged web and foil sealings
  - With ground contact
  - In tunnels, sewers, shafts, bridges and basements
- Sealing of annular gaps and voids in tubbing constructions
- Backfilling of joints
- Sealing joints with permanent contact to water

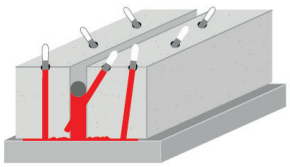
WEBAC® 240 + Bseal II

- Sealing of annular gaps and voids in tubbing constructions
- Curtain injection
- Sealing of damaged sealings with ground contact
- Backfilling of joints

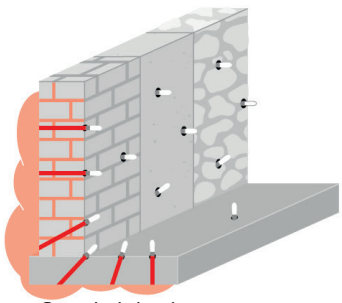
Examples

Meaning of the icons ▸ WEBAC Product Catalog, www.webac.de or www.webac-grouts.com

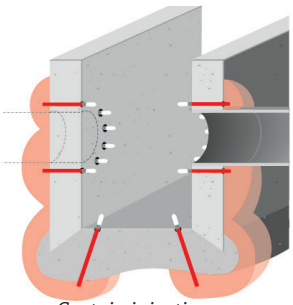




Sealing and backfilling of joints



Curtain injection



Curtain injection at pipe ducts

*CE Declaration of Performance 1504-5 for swellable filling with WEBAC® 240 + Bseal I

Technical Information

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Injection Gels

WEBAC® 240 CE* U

Properties

WEBAC® 240

- Solid yet elastic, absorbs dynamic and mechanical stress
- Adjustable reaction
- Swells upon contact with water
- Economical material consumption
- chloride-free
- Environmentally friendly

WEBAC® 240 + Bseal I CE**

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

WEBAC® 240 + Bseal II

- Polymer-reinforced
- Elastic, ductile without breaking
- Long pot life
- High toughness
- Limited swelling
- Neglected volume loss during drying process
- Salt reduced
- Adjustable reaction time

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

Injection Gels

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 / 68 °F (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 / 34 °F			
Viscosity of mixture	**30 °C / 86 °F** ≈ 4 mPa·s	**23 °C / 73 °F** ≈ 6 mPa·s	**12 °C / 54 °F** ≈ 10 mPa·s	
Reaction time at 2% B-concentration flow limit · solid	**30 °C / 86 °F** ≈ 20 s · ≈ 40 s	**20 °C / 68 °F** ≈ 40 s · ≈ 75 s	**10 °C / 50 °F** ≈ 100 s · ≈ 180 s	
Tear strength · elongation at break 24 h (in foil), 21 °C / 70 °F (ISO 527)	≈ 0.06 N/mm² · ≈ 220%			
Watertightness (EN 14068)	> 2 bar			
Fire behavior test (DIN 4102)	B2 according to DIN 4102-1. 6.2			
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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Technical Information

Injection Gels

WEBAC® 240 CE* U

Technical data

WEBAC® 240

Reaction times

flow limit

B-concentration	5 °C 41 °F	10 °C 50 °F	15 °C 59 °F	20 °C 68 °F	25 °C 77 °F	30 °C 86 °F
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

solid

B-concentration	5 °C 41 °F	10 °C 50 °F	15 °C 59 °F	20 °C 68 °F	25 °C 77 °F	30 °C 86 °F
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
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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Injection Gels

WEBAC® 240 CE* U

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 / 68 °F		≈ 1 g/cm³		
Viscosity of mixture		23 °C / 73 °F ≈ 35 mPa·s	12 °C / 54 °F ≈ 40 mPa·s	
		B-powder-concentration in Bseal I		
Reaction time (100 ml mixture)	flow limit		2.0% (≙ 0.4 kg)	
		5 °C / 41 °F	≈ 240 s	
		10 °C / 50 °F	≈ 75 s	
		20 °C / 68 °F	≈ 45 s	
	solid		2.0% (≙ 0.4 kg)	
		5 °C / 41 °F	≈ 260 s	
		10 °C / 50 °F	≈ 105 s	
		20 °C / 68 °F	≈ 60 s	
Tear strength · elongation at break 24 h (in foil), 21 °C / 70 °F (ISO 527)		≈ 0.2 N/mm² · ≈ 450%		

Technical data

		WEBAC® 240 + Bseal II			
Mixing ratio		A1 : A2 = 20 : 1 parts by weight A : B = 1 : 1 parts by volume			
Density, 20 °C / 68 °F		≈ 1 g/cm³			
Viscosity of mixture		23 °C / 73 °F ≈ 30 mPa·s	12 °C / 54 °F ≈ 35 mPa·s		
		B-powder-concentration in Bseal II			
Reaction time (100 ml mixture)	flow limit	5% ≙ 1 kg	2% ≙ 0.4 kg	1% ≙ 0.2 kg	0.5% ≙ 0.1 kg
	5 °C / 41 °F	≈ 75 s – 120 s	≈ 160 s – 250 s	≈ 300 s – 380 s	≈ 680 s – 800 s
	10 °C / 50 °F	≈ 35 s – 60 s	≈ 60 s – 100 s	≈ 140 s – 200 s	≈ 310 s – 420 s
	20 °C / 68 °F	≈ 8 s – 28 s	≈ 15 s – 45 s	≈ 35 s – 85 s	≈ 70 s – 170 s
	solid	5% ≙ 1 kg	2% ≙ 0.4 kg	1% ≙ 0.2 kg	0.5% ≙ 0.1 kg
	5 °C / 41 °F	≈ 110 s – 220 s	≈ 230 s – 290 s	≈ 400 s – 500 s	≈ 850 s – 980 s
	10 °C / 50 °F	≈ 60 s – 85 s	≈ 100 s – 170 s	≈ 200 s – 300 s	≈ 450 s – 580 s
	20 °C / 68 °F	≈ 30 s – 50 s	≈ 40 s – 55 s	≈ 70 s – 105 s	≈ 120 s – 250 s
Tear strength · elongation at break 24 h (in foil), 21 °C / 70 °F (ISO 527)				≈ 0.1 N/mm² · > 500%	

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Technical Information

Injection Gels

WEBAC® 240 CE* U

Preparatory work

- See **WEBAC Brochure Curtain Injection**

Curtain Injection

Mixing

Mixing of component A

- The containers of component A are provided according to the required mixing ratio
- Empty the smaller container of component A2 completely into the larger container of component A1
- Mix both components via stirring while pouring until homogeneous

Mixing of component B

WEBAC® 240

- Dissolve B-powder-concentrate in clean tap water in a clean plastic bucket by thoroughly stirring it with a stainless steel stirrer (by adapting the filling level of component B to that of component A it is easy to assess the required amount of water)

WEBAC® 240 + Bseal I/Bseal II

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

Application by 2C pump (stainless steel)

- Prepared components A and B are delivered at a mixing ratio of 1 : 1 from respective containers directly with a 2C pump (stainless steel)
- The components are mixed homogeneously in the mixing head

Application instruction

- Only use stainless steel, wooden or plastic 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 approx. 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 power of component B of **WEBAC® 240 + Bseal I/ Bseal II** the filter of the suction hose must be regularly checked for material residues and lumps and be cleaned if necessary when applying large quantities. Upon completion of the injection process, the 2C pump must be thoroughly rinsed with plenty of water (at least 20 liters of fresh, clean water per component) to prevent clogging within the pump system and the suction hoses.

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Injection Gels

WEBAC® 240 CE* U

Application

- The injection pressure depends on the nature and condition of the 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

For detailed information, refer to the **WEBAC Brochure Curtain Injection**.

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 with non-shrinking mortar
- Clean the injection pump and the equipment exclusively with water
- Gelled residues must be removed from the equipment mechanically immediately after use
- Observe the technical data sheet of the injection pump and cleaners used
- For detailed information refer to the operating manual of the injection pump used

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-grouts.com.

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" in our product catalog or www.webac-grouts.com and the safety data sheets.

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Injection Gels

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Product data

Application		Injection by 2C pump (**WEBAC® IP 2K-F1**)				
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				
Packing		**Comp. A1** 21.5 kg	**Comp. A2** 1.05 kg	**Comp. B** 1.0 kg 0.4 kg 0.2 kg	**Bseal I** 20 kg	**Bseal II** 20 kg
		F200 1 kg				
Storage		• Between 5 °C / 41 °F and 25 °C / 77 °F • Protect **WEBAC® 240** component **Bseal I/II** from frost • Protect from moisture and light • In original, sealed containers				
Compatibility/Resistance		• Resistant to diluted acids and salts damaging the structure • Resistant to alternating frost and thaw • Reacted gels are insoluble in water and fuels				

Test certificates

WEBAC® 240

- National Technical Approval: Injection gel for curtain injection
- Certificate of Conformity for use as: Curtain injections
- Test certificate** according to KTW recommendations: D1 (large sealing of surfaces)

WEBAC® 240 + Bseal I

- Declaration of Performance according to Construction Products Regulation
- Test certificate* according to KTW recommendations: D2 (other sealants and adhesives)

*CE Declaration of Performance 1504-5 for swellable filling with WEBAC® 240 + Bseal I
**drinking water

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