Silicate Injection Resins

WEBAC® SIL*compact*

▸ Silicate injection resin, suitable for mechanical machining, high strength and adhesive power

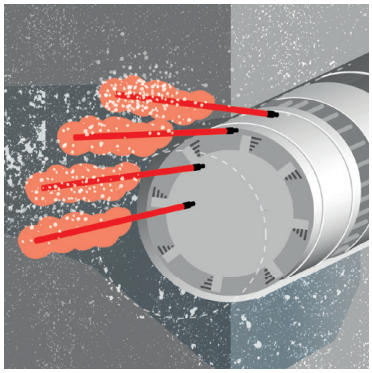
Range of application

- Stabilization and permanent sealing of tunnel systems and mining installations
  - Umbrella injection in direct TMB areas
  - Reinforcement ahead of the tunnel face and tunnel face stabilization
  - Filling of cavities and gaps
- Subsoil and rock mass stabilization
  - Consolidation and stabilization in earthwork and dam buildings, especially with gravel layers
  - Solidification of karst and unconsolidated rock gravel and crushed rock layers
  - Slope stabilization and soil nailing

Properties

- Fast curing and high strength
- No foam formation, no reaction with water
- Suitable for cutting and planing
- High final strength after only a few minutes
- Good adhesion
- High plastic ductility under pressure
- Environmentally sound
- Reaction time and foaming activity adjustable

Example



Tunnel face pre-injection

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▸ **Technical Information**

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Technical parameters	Values			
Mixing ratio		1 : 1 parts by volume		
Density, 23 °C / 73 °F (ISO 2811)	**Comp. A** **Comp. B**	≈ 1.44 g/cm³ ≈ 1.2 g/cm³		
Application temperature Building component and material		≥ 15 °C / 59 °F		
Viscosity, 23 °C / 73 °F (ISO 3219)	**Comp. A** **Comp. B**	≈ 210 mPa·s ≈ 180 mPa·s		
Apparent density (ISO 2811)		≈ 1.3 g/cm³		
Reaction Time Flow limit • tack-free • solid	**10 °C / 50 °F** **20 °C / 68 °F** **30 °C / 86 °F**	≈ 65 s • ≈ 135 s • ≈ 170 s ≈ 35 s • ≈ 80 s • ≈ 100 s ≈ 25 s • ≈ 45 s • ≈ 60 s		
Compressive strength, uniaxial 21 °C / 70 °F (ISO 604)	**1 h** **3 d**	≈ 65 MPa (N/mm²) ≈ 75 MPa (N/mm²)		
Bending tensile strength 21 °C / 70 °F (ISO 178)	**6 h** **3 d**	≈ 20 MPa (N/mm²) ≈ 25 MPa (N/mm²)		
Tensile strength, 21 °C / 70 °F (ISO 527)	**3 d**	≈ 12 MPa (N/mm²)		
Shore hardness D (ISO 386)		**10 °C / 50 °F**	**20 °C / 68 °F**	**30 °C / 86 °F**
	1 h	≈ 55/54	≈ 70/68	≈ 60/59
	24 h	≈ 60/57	≈ 70/68	≈ 70/68
Flashpoint (ISO 2719)	**Comp. A** **Comp. B**	not determinable* ≈ 220 °C / 428 °F		
GISCODE		PU40		
EPD		EPD-DBC-20130016-IBG1-DE		
Exposure scenarios according to REACH		Assessment of industry standard application		

* The flashpoint is not determinable due to water vapor development.

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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Mixing

Application by 2C pump

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

Application instruction

- We recommend storing the components at a minimum temperature of 15 °C / 59 °F for at least 12 hours prior to use to ensure optimum application performance
- Component A must be thoroughly stirred separately with a slow-running stirrer at max. 300 rpm (e.g. drill with paddle stirrer) before application or transfer
- Stir component A again and again during processing
- Protect components from moisture penetration (skin formation, pump-damaging precipitates, foam formation due to moisture)
- 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

Only use injection pumps for one type of material (silicate resin or polyurethane resin). When changing the material, the pump must be cleaned thoroughly and all material and cleaning agent must be removed entirely. For further information, please contact WEBAC.

- WEBAC Quality Control recommends checking the product specification before processing products that have been stored for a longer period of time

Application

- Depending on application

We will be pleased to advise you.
Please contact us! Phone +49 40 670 57-0

Cleaning

- When interrupting work for a short period of time the mixing head can be cleaned with component A of the injection material
- When interrupting work for a longer period of time and after conclusion of the injection process it is necessary to rinse the hoses and the pistons of component A thoroughly with water, use **WEBAC® Cleaner A** for cleaning component B
- Observe the technical data sheet of the cleaners used
- For detailed information refer to the technical data sheet oft the cleaner and the operating manual of the injection pump used

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Product data

Application	• Injection with 2C pump (**WEBAC® IP 2K-40**) • Mixing tube, Ø 8 mm, l = 500 mm
Packing	**Comp. A** 1,380 kg 28.6 kg **Comp. B** 1,100 kg 24.8 kg
Storage	• Between 5 °C / 41 °F and 30 °C / 86°F • Protect from moisture • In original, sealed containers

Test certificates

- Test certificate (for drinking water) according to KTW recommendations (German Federal Health Gazette): D1 (large sealing of surfaces)
- Assessment and effects of construction products on soil and ground water according to DIBt code of practice

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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