PU Injection Resins

# WEBAC® 1660 CE

## Range of application

- Crack repair in components according to DIN EN 1504-5
- Static strengthening/stabilization of components
- Filling of cavities/voids (quarry stone and unconsolidated rock)
- Injection of injection tubes
- Needling of masonry
- Sealing of foundation pits

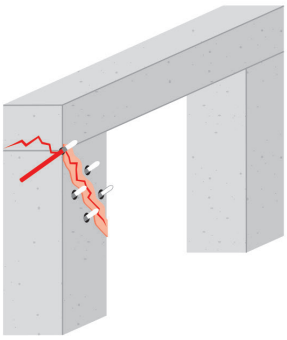
## Properties

- Polyurethan-based injection resin
- Sealing, stabilizing
- High compressive and bending tensile strength
- Fast curing with and without water
- Slight foam formation upon contact with water
- Total solid*

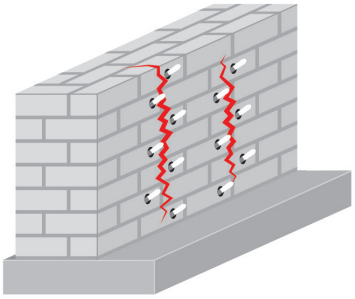
## Test certificates

- 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 recommendations: B (containers)
- Test certificate according to KTW recommendations: C (equipment)
- Environmental Product Declaration (EPD)
- List of chemical resistance

## Examples



*Structural crack repair*



*Stabilization of masonry*

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

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| Technical data | Values | | | |
|---|---|---|---|---|
| **Mixing ratio** | | 1 : 1 parts by volume | | |
| **Density**, 20 °C (DIN ISO 2811) | **Comp. A**<br>**Comp. B** | ≈ 1.0 g/cm³<br>≈ 1.2 g/cm³ | | |
| **Pot life** (WEBAC test specification based on DIN ISO 9514) | | **30 °C**<br>≈ 10 min | **20 °C**<br>**Diaphragm pump**<br>≈ 20 min<br>**Piston pump**<br>≈ 25 min | **12 °C**<br>≈ 45 min |
| **Application temperature** Building structure and material | | > 1 °C | | |
| **Viscosity of mixture** (WEBAC test specification based on DIN ISO 3219) | | **30 °C**<br>≈ 280 mPa·s | **23 °C**<br>≈ 450 mPa·s | **12 °C**<br>≈ 980 mPa·s |
| **Tensile strength** on concrete 7 d, 21 °C (DIN EN 12618-2) | **dry** | ≈ 3.0 MPa (N/mm²) | | |
| **Compressive strength** 7 d, 21 °C (DIN ISO 604) | | ≈ 67 MPa (N/mm²) | | |
| **Bending tensile strength** 7 d, 21 °C (DIN ISO 178) | | ≈ 70 MPa (N/mm²) | | |
| **Tensile strength · Elongation at break** 7 d, 21 °C (DIN ISO 527) | | ≈ 31 MPa (N/mm²) · ≈ 1.9% | | |
| **E modulus** 7 d, 21 °C (DIN ISO 527) | | ≈ 1,850 MPa (N/mm²) | | |
| **CE classification** (DIN EN 1504-5) | | U(F1) W(5) (1) (12/30) | | |
| **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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## Technical Information

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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
- 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 an 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 (< 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

| | Comp. A | Comp. B |
|---|---|---|
| **Delivery form** | 9.75 kg | 11.85 kg |
| **Storage** | • Between 5 °C and 30 °C<br>• Protected from moisture<br>• 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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