

PC[®] TUNNELINJECT 2K 6822 M

Medium Reacting 2 Component Polyurethane Injection Resin

1. Description

PC[®] Tunnelinject 2K 6822 M is a medium reacting, 2-component injection resin for permanent sealing and consolidation in water-bearing levels, especially in case of high water pressure. The Tunnelinject product range was developed for application in mining, tunnelling and civil engineering.

2. Application

PC[®] Tunnelinject 2K 6822 M can be used for dry and wet structures:

- Sealing of underground structures against water under pressure
- Sealing against strong flowing water
- Sealing of joints and connections of prefabricated concrete elements in building construction
- Repair of wet shafts, tunnels and channels
- Strengthening, sealing and renovation of old shafts and tunnels
- Sealing of joints in concrete dams
- Sealing of deep boreholes
- Filling of cracks in concrete

This resin can be used in ambient temperatures between -25°C and +30°C, especially in case of sealing against high flowing water at low temperatures. We recommend both components **PC[®] Tunnelinject 2K 6822 M** - component A and the **PC[®] Tunnelinject 2K 6822 M** - component B to be stored, at least 12 hours before application, at a minimum temperature of 15°C. In this way the process temperatures of both components are between 15°C and 30°C.

3. Properties

- Injection in dry and wet structures
- Processing at a volume ratio of A:B = 1:1
- Medium curing time
- Solvent free
- Good resistance against acids, bases and microbes
- Can also be used with salt water up to 3%

4. Technical data (typical values)

Reactivity information:

	Without water contact				
Ambient temperature	10°C	15°C	20°C	25°C	30°C
Final reaction	1 min 50 s	1 min 30 s	1 min 20 s	1 min 5 s	53 s
Foam factor	±1,0				

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This information is given to our best knowledge. It is offered as a possible helpful suggestion in experimentation you may care to make along these lines. It is subject to revision as additional knowledge and experimentation are gained. We make no guarantee of results and assume no obligation or liability whatsoever in connection with this information

	Water contact				
Ambient temperature	10°C	15°C	20°C	25°C	30°C
Final reaction	3 min 55 s	3 min 40 s	3 min 30 s	2 min 45 s	2 min 28 s
Foam factor	±3,0				

Material technical information:

	Component A					Component B				
Ambient temperature	10°C	15°C	20°C	25°C	30°C	10°C	15°C	20°C	25°C	30°C
Viscosity (mPas)	1020	600	450	360	270	360	240	174	140	105
Density (g/ml)	1,012					1,232				
Appearance	light yellow liquid					dark brown liquid				

Mechanical information:

- Shore D (after 1 day at 20°C without water): 73
- Compression Strength (EN 12190, after 1 day at 20 °C without water): 72 MPa
- Flexural Strength (EN 13892-2, after 1 day at 20 °C without water): 83 MPa
- Tensile Strength (EN ISO 527, after 1 day at 20 °C without water): 27 MPa
- Modulus of elasticity (EN 13892-2, after 1 day at 20 °C without water): 2150 MPa
- Adherence to concrete in absence of water: > 3 MPa (rupture in concrete)
- Shelf life: 12 months after production date in the original unopened and undamaged packaging. **PC® Tunnelinject 2K 6822 M** has to be stored in a dry place between +10°C and +30°C. Once the packaging has been opened, the time to use the product reduces fast, so it has to be applied as fast as possible.

5. Processing

The components **PC® Tunnelinject 2K 6822 M** - component A and the **PC® Tunnelinject 2K 6822 M** - component B are delivered ready-to-use. They are injected in a 1/1 volume ratio using a two-component pump with a static in-line mixer.

6. Packaging

The **PC® Tunnelinject 2K 6822 M** - component A and the **PC® Tunnelinject 2K 6822 M** - component B are delivered in separate bins. The volume ratio is 1/1.

- **PC® Tunnelinject 2K 6822 M** - comp. A: 20,5 kg

- **PC® Tunnelinject 2K 6822 M** - comp. B: 25 kg

7. Cleaning

Clean pump and equipment with PC® Ecoclean whenever necessary and at the end of the injection. Flush with ca 1/4 litre of PC® Ecoclean.

8. Precautions and security measures

- Avoid contact of **PC® Tunnelinject 2K 6822 M** with the skin and eyes.
- Wear safety glasses, gloves and an overall.
- In case of contact with the eyes: wash with lots of water and seek medical attention.
- In case of contact with the skin: wash with lots of water.
- Absorb spilled resin with sand and dispose according to the local regulations.
- The **PC® Tunnelinject 2K 6822 M** – component B can react with water or humidity in the air and forms CO₂ gas. This can build up pressure in the packaging which has already been opened.
- Consult the MSDS-sheet for more information.