

PC[®] TUNNELINJECT 2K 6822 S

Slow Reacting 2 Component Polyurethane Injection Resin

1. Description

PC[®] Tunnelinject 2K 6822 S is a slow 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 S 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 S** - component A and the **PC[®] Tunnelinject 2K 6822 S** - 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
- Slow 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
Pumpable time	30 min	25 min	20 min	15 min	15 min
Final reaction	3 hours	2,5 hours	2 hours	2 hours	2 hours
Foam factor	±1,0				

	Water contact				
Ambient temperature	10°C	15°C	20°C	25°C	30°C
Final reaction	4 min 50 s	4 min 35 s	3 min 45 s	3 min 30 s	3 min 22 s
Foam factor	±2,0				

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

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