

## SOLID SEAL

### Properties:

**SOLID SEAL** is a two-component, non-foaming injection resin with high compressive strength based on silicate for grouting of water bearing cracks being > 0.2 mm as well as for ground and rock stabilisation.

**SOLID SEAL** is mainly used in railway construction as well as in civil engineering, tunneling and mining.

Mixing of A and B component results in a viscous emulsion, which does not absorb any further water of the field of injection. Due to its high density it pushes excess water in front of itself.

### Technical Data:

#### Substance data of components:

##### Component A

Consistency	liquid	
Colour	colourless	
Odour	characteristic	
Spec. density (23°C)	approx. 1.41 g/cm <sup>3</sup>	DIN EN ISO 2811-1
Dyn. viscosity (23°C)	approx. 150 mPas	DIN EN ISO 2555

##### Component B

Consistency	liquid	
Colour	brown	
Odour	characteristic	
Spec. density (23°C)	approx. 1.23 g/cm <sup>3</sup>	DIN EN ISO 2811-1
Dyn. viscosity (23°C)	approx. 100 mPas	DIN EN ISO 2555

#### Mixture of A- and B-component:

Processing temperature	15 - 30°C	substrate temperature
Mixing ratio A : B	1 : 1 (parts by volume)	

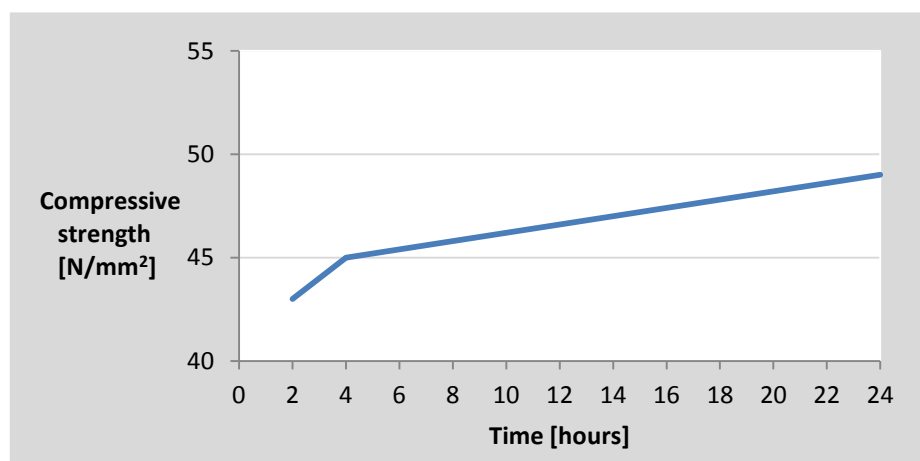
#### Reaction data (at 23°C):

String gel time (Pot-life)	approx. 40 s	ASTM D7487
Final curing	approx. 20 min	

#### Properties of silicate resin:

Compressive strength (7d)	approx. 55 N/mm <sup>2</sup>	DIN EN 12190
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#### Compressive strength after 24 h:



Bending tensile strength	approx. 25 N/mm <sup>2</sup>	DIN EN 12390-5
E-modul us	approx. 1200 N/mm <sup>2</sup>	DIN EN ISO 527
Tensile strength	approx. 14 N/mm <sup>2</sup>	DIN EN ISO 527

## Processing:

Both components are taken directly from the original packaging by means of a 2K injection pump and mixed homogeneously in a static mixer. Injection is done over packer or injection lances.

Indicated injection pumps:      *TPH INJECT PS 25-II*  
   *TPH INJECT PS 5-II*

The initial liquid material reaches quickly a non-liquid shape and cures in short time without foaming up.

## Safety information:

*SOLID SEAL* components A and B are classified as hazardous according to Regulation (EC) 1272/2008 (CLP).

It is therefore necessary, before beginning processing, to become familiar with the precautions and safety advice as indicated in the material safety data sheet.

## Packaging:

Component A                              28 kg metal canister

Component B                              24 kg metal canister

Bigger packaging on request.

## Storage:

Shelf life at least 12 month in original packaging when stored in dry conditions between 15-25°C, protected from heat, frost and direct sunlight.

After the expiration the use of the product is generally not recommended, unless an approval has been provided by TPH. This approval can only be obtained by the quality assurance department of TPH releasing the material after verification of main properties being within specification.

## Disposal:

Small quantities of cured product residues can be disposed of as normal domestic waste. Dispose of not cured product components must be effected in accordance with the corresponding local regulations. For further information please refer to the material safety data sheets.

## Test certificates:

Applications tests for checking the success of subsequent injection seals; MFPA Leipzig 2011

Resistance test of injection products to concrete-corrosive fluids; MFPA Leipzig 2011

*SOLID SEAL* - Examination of the leaching behaviour of an injection resin based on silicate (column trial referring to DIBt Guideline "Assessments of the effects of construction products on soil and ground water"; MFPA Leipzig 2012



*SOLID SEAL* - Resistance test of an injection resin based on silicate to freeze-thaw cycling; MFPA Leipzig 2012

**Legal notice:**

The correct and thus successful application of our products is not subject to our control. A guarantee can be issued for the quality of our products within the framework of our sales and supply conditions, however not for successful processing. All data and specifications in this specification sheet are based on the present state of the art and the right to changes and adaptations for the sake of development remains explicitly reserved. The consumption specifications designated by us can be only average empirical values, where deviations are possible on an individual basis and therefore cannot be excluded by us.

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**TPH.**  
*Waterproofing Systems*