

WILLSTOP® 1K+

Fast reacting one component injection resin

1. Applications

WILLSTOP® 1K+ is a high performance one-component system for sealing water ingress with high water flows. The product can be used for filling voids in rock cracks, soil consolidation and anchors in gravel.

The product:

- temporary waterproofing in the area of accessible channels and manholes
- Waterproofing against water under pressure

2. Substance data*

		WILLSTOP® 1K+	Norm
Density at 20°C	[g/cm ³]	1.105 ± 0.05	DIN 51757
Viscosity at 5°C	[mPa*s]	approx. 780	DIN EN ISO 3219
Viscosity at 10°C	[mPa*s]	approx. 420	DIN EN ISO 3219
Viscosity at 20°C	[mPa*s]	approx. 210	DIN EN ISO 3219
Viscosity at 25°C	[mPa*s]	approx. 165	DIN EN ISO 3219
Viscosity at 30°C	[mPa*s]	approx. 110	DIN EN ISO 3219
Colour		dark brown	

3. Reaction and mechanical data*

WILLSTOP® 1K+	Temperature [°C]		SF
Start of reaction [sec]	5	approx. 50	ca. 50
End of reaction [sec]		approx. 230	
Start of reaction [sec]	10	approx. 40	ca. 55
End of reaction [sec]		approx. 200	
Start of reaction [sec]	20	approx. 18	ca. 60
End of reaction [sec]		approx. 150	
Start of reaction [sec]	25	approx. 15	ca. 70
End of reaction [sec]		approx. 130	
Start of reaction [sec]	30	approx. 13	ca. 80
End of reaction [sec]		approx. 115	

4. Composition and properties

Components:

WILLSTOP® 1K+ is a modified polyisocyanate.

WILLSTOP® 1K+ must be protected from atmospheric moisture.

System:

When **WILLSTOP® 1K+** system comes into contact with water, it expands and cures rapidly to form a tough open-cell polyurethane foam.

5. Preparation/Processing

Preparation

We recommend storing the **WILLSTOP® 1K+** system at the desired temperature for at least 12 hours before processing to achieve the desired processing temperature.

Processing with a 1K injection system

WILLSTOP® 1K+ is conveyed with a 1K injection system, injected via an injection packer through a previously created borehole behind the manhole or channel wall.

The product requires water to react.

6. Safety notes

WILLSTOP® 1K+ is classified as dangerous according to REGULATION (EC) No. 1272/2008.

Before starting processing, it is therefore necessary to obtain information on precautions and safety advice from the safety data sheets.

7. Storage

At room temperature, the shelf life is at least six months. The minimum durability is reflected by the batch number on the container. If this time is exceeded, we recommend the material is checked by F. Willich GmbH + Co. KG for compliance with the specification.

8. Delivery form

	WILLSTOP® 1K+
20 l tin can à	20 kg
10 l tin can à	10 kg

Other delivery forms on request.

9. Waste management

In Germany, empty packaging can be taken back by the KBS or Interseroh-System for steel or plastic packaging. The return is limited exclusively to used, completely empty packaging of the same type, shape, and size that we carry in our product range.

Transport and outer packaging are not included.

For more information on the location and further modalities of the return, please visit the website of the recycling partner acting on our behalf:



Interseroh+ GmbH

www.interseroh.plus
info@interseroh.plus
Tel.: +49 (0)2203 9147 - 1268



**Kreislaufsystem
Blechverpackungen Stahl GmbH**

www.kbs-recycling.de
info@kbs-recycling.de
Tel.: +49 (0)211 239228 - 0

Reacted product residues can be disposed of in smaller quantities with household waste, in larger quantities as construction waste or incinerated.
Non-reacted product components must be disposed of in accordance with local regulations.

10. Test certificates/approvals

Hygiene investigation, Hygiene Institute of the Ruhr July 2019.

11. Legal notes

***The indicated data are laboratory values.**

Our technical application advice, which we give to support the customer or applicator on the base of our experience and to the best of our knowledge according to the current state of knowledge in practice and science, is non-binding and does not represent an agreed quality. The data and processing instructions are based on laboratory tests.

In practice, the measured values may be different due to influences outside our control. We explicitly reserve the right to make technical changes during further development.

The technical documents should be read carefully before starting work.

With the publication of a new version of the technical data sheet, all previous data sheets lose their validity. The applicator must test the products for their suitability for the intended application.

With the publication of this data sheet, previous editions become void.

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