

WILLKAT® Foam

Two-component, very high foaming and very fast reacting silicate resin.

1. Applications

WILLKAT® Foam is a highly expanding, slightly flexible silicate-based injection foam. **WILLKAT® Foam** has been specially developed for mining, civil engineering, and tunnelling for the safe, fast and economical filling of cavities.

WILLKAT® Foam serves simultaneously to consolidate rock and soil and to stop water ingress. **WILLKAT® Foam** is a reliable injection material for ensuring that tunnelling can proceed according to plan, particularly when approaching fault zones in tunnelling where there is a risk of rock outburst or rock failure due to a lack of bond strength.

2. Substance data*

		WILLKAT® Foam -A	WILLKAT® Foam -B	Norm
Form		colourless, clear liquid	brown liquid	
Viscosity at 25°C	mPa*s	20 ± 10	200 ± 100	DIN EN ISO 3219
Density at 20°C	g/m ³	1.30 ± 0.10	1.23 ± 0.10	DIN 51757

3. Reaction and mechanical data*

Mixing ratio of the components:

	WILLKAT® Foam -A	WILLKAT® Foam -B
Vol. parts	100	100
Weight parts	100	95

Mixing the two components in the appropriate mixing ratio forms a strong, flexible, semi-rigid silicate foam. A change in the mixing ratio can change the reaction times, the foam factor and the mechanical strength.

Reaction profile at:	5°C	15°C	20°C	25°C	Norm
Start time [s]	50 ± 15	25 ± 10	20 ± 10	15 ± 10	PV_FW23
Climb time [s]	100 ± 20	55 ± 15	45 ± 15	40 ± 15	PV_FW23
Foam factor	15 - 30	15 - 30	25 - 45	30 - 50	PV_FW23

4. Composition and properties

WILLKAT® Foam -A is a special water glass with additives.

WILLKAT® Foam -B is a modified polyisocyanate.

The homogeneous mixing of both components creates a low-viscosity emulsion. This emulsion does not absorb any further water from the injection area but pushes it in front of it due to its high density.

5. Preparation/ Processing

Both components are mixed in a ratio of 1 : 1 (parts by volume) with the aid of Two-component injection pumps directly from the containers and mixed homogeneously by a static mixer. Injection is carried out via packers or lances. The two-component injection pump automatically ensures the mixing ratio of 1 : 1.

6. Safety notes

WILLKAT® Foam -A and **WILLKAT® Foam -B** are classified as dangerous according to REGULATION (EC) No. 1272/2008. Before starting processing, it is necessary to inform yourself about precautionary measures and safety advice by means of the safety data sheets.

7. Storage

At least six months after delivery or twelve months after production if stored dry between 10°C and 30°C. The batch number on the container provides information about the minimum shelf life. When using products that have been stored for a longer period, it is generally recommended that F. Willich GmbH + Co. KG checks whether the product specification is still given before using this product.

8. Delivery form

	WILLKAT® Foam -A (Item. No.)	WILLKAT® Foam -B (Item. No.)
20 l tin can	26 kg (WKAT-FO-1-26)	24 kg (WKAT-FO-1-24)
26 l plastic canister	34 kg (WKAT-FO-1-A34)	32 kg (WKAT-FO-1-B32)
1000 l IBC	1400 kg (WKAT-FO-1-A1400)	1330 kg (WKAT-FO-1-B1330)

Other delivery forms on request.

9. Disposal

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

10. Test certificates/Approvals

Test report K3285 39-20, Hygiene Institute of the Ruhr Area, May 2020 on the investigation of WILLKAT Foam from a groundwater hygiene perspective, column test.

LOBA approval, Arnsberg district government, October 2017

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.

F. Willich GmbH + Co. KG

Planetenfeldstr. 120
44379 Dortmund
Germany

Phone: +49 (0) 231 9640 - 0
Fax: +49 (0) 231 9640 - 232
info@f-willich.com
www.f-willich.com