

# WILLPUR® CS

*Polyurethane system, slow reacting highly elastic two-component injection resin*

## 1. Applications

**WILLPUR® CS** is a slow reacting, very elastic two-component polyurethane resin.

**WILLPUR® CS** is used to close, seal and expand cracks in concrete and to grout injection hoses, for sealing and consolidating cracks and fissures in rock or for sealing and consolidating soil.

## 2. Substance data\*

		WILLPUR® CS -A	WILLPUR® CS -B	Standard
Density at 20°C	g/cm <sup>3</sup>	0.965 – 1.065	1.08 – 1.18	DIN 51757
Viscosity at 5°C	mPa*s	1120 ± 300	27 ± 10	DIN EN ISO 3219
Viscosity at 10°C	mPa*s	705 ± 200	23 ± 10	DIN EN ISO 3219
Viscosity at 15°C	mPa*s	470 ± 150	15 ± 7	DIN EN ISO 3219
Viscosity at 20°C	mPa*s	300 ± 100	10 ± 5	DIN EN ISO 3219
Viscosity at 25°C	mPa*s	195 ± 50	10 ± 5	DIN EN ISO 3219
Viscosity at 30°C	mPa*s	54 ± 20	6 ± 2	DIN EN ISO 3219
Colour		yellowish	yellowish	

## 3. Reaction and mechanical data\*

**Mixing ratio A:B (parts by volume) 1:1**

Reaction profile at:	5°C	23°C	25°C	30°C	Standard
Mixing viscosity 10 min after Mixing end [mPa*s]	102 ± 20	37 ± 10	39 ± 10	32 ± 10	DIN EN ISO 2555
Pot life/ viscosity increase until reaching 1000 mPa*s (rotation) [min].	102 ± 20	66 ± 10	58 ± 10	41 ± 10	DIN EN ISO 2555
Foam factor	approx. 1.0	approx. 1.0	approx. 1.0	approx. 1.0	PV_FW16
Shore D (after 28 days)		40			DIN EN ISO 868

<b>Reaction profile when water is added:</b>	<b>1%</b>	<b>2%</b>	<b>Standard</b>
Start of foaming [min]	approx. 10	approx. 7	PV_FW23
Foaming end [min]	approx. 30	approx. 18	PV_FW23
Foam factor	approx. 1.2	approx. 1.1	PV_FW16

## 4. Composition and properties

Component A is a mixture of different polyols and additives which reacts together with component B to form an elastic resin.

Component B is a modified polyisocyanate.

## 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. The injection is carried out via packers or lances.

The two-component injection pump automatically ensures the mixing ratio of 1 : 1.

Alternatively, due to its long reaction time, the product **WILLPUR® CS** can also be used with a One-component injection pump. For this purpose, the components are mixed homogeneously (streak-free) in a dry and clean container with a slow-running agitator. The mixture is then poured into the pump and processed within the processing time.

The product foams on contact with water.

**Applicable at ambient temperatures between 5°C and 30°C.**

## 6. Safety notes

**WILLPUR® CS - B** is classified as dangerous according to REGULATION (EC) No. 1272/2008.

Before starting processing, it is therefore necessary to inform yourself about precautionary measures and safety advice by means of the safety data sheets.

## 7. Storage

At least six months from date of delivery or twelve months from date of production when stored in a dry place between 5°C and 30°C. Frost can damage the A-component. 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

	<b>WILLPUR® CS -A (Art. No.)</b>	<b>WILLPUR® CS -B (Art. No.)</b>
5 L tin can à	4.5 kg (WPUR-CS-2-A4.5)	5 kg (WPUR-CS-2-B5)
20 L tin can à	18 kg (WPUR-CS-2-A18)	20 kg (WPUR-CS-2-B20)
1000 L IBC à	965 kg (WPUR-CS-2-A965)	1080 kg (WPUR-CS-2-1080)

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

**WILLPUR® CS**, Determination of performance characteristics (injectability in dry and wet sand, compatibility with concrete) according to DIN EN 1504-5:2013, **MFPA Leipzig November 2021**

## 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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