

# WILLPOX® RS

*Two-component epoxy resin*

**DIBt approval: Z-42.3-529**

## 1. Applications

**WILLPOX® RS** is a two-component epoxy resin **for warm curing** with good adhesion even to damp surfaces, for

- Sewer rehabilitation with robots for socket rehabilitation
- and other applications

**WILLPOX® RS** is a solvent-free, filled and pigmented 2-component reaction resin based on epoxy resin. The product is easy to process despite its high thixotropy.

**WILLPOX® RS** is pre-accelerated and has a through-drying speed. The optimum degree of cross-linking with hot curing above is achieved 80 °C.

## 2. Substance data\*

		WILLPOX® RS -A	WILLPOX® RS -B	Norm
Density at 23 °C	g/cm <sup>3</sup>	1.12± 0.05	1.20± 0.05	DIN EN ISO 2811-1
Viscosity at 23°C	Pa*s	585± 40%	2226± 50%	DIN EN ISO 3219
Colour		green	dark beige	
Flash point	°C	> 200	> 120	DIN EN ISO 2719

## 3. Reaction and mechanical data\*

**Mixing ratio [kg] A : B = 2.56 : 1**

Temperature [°C]		10°C	15°C	25°C
Pot life	min	approx. 40	approx. 35	approx. 30
Tack-free time	min	approx. 360	approx. 360	approx. 330
Cooling time	min	approx. 480	approx. 480	approx. 480

#### Definition of pot life:

The pot life begins when the resin components are mixed at 0. The resin components can be pressed out within the determined pot life, taking the above parameters into account.

#### Definition of tack-free time:

The determined time to tack-free condition begins after the pressing out process and means that the curing resin mixture does not pull threads when it comes into contact with the surface.

#### Definition of cooling time:

The cooling time starts at 0 and ends after the system heating on the pressing/sanitising unit is switched off.

<b>Mechanical data</b>			<b>Norm</b>
Density	g/cm <sup>3</sup>	1.11 ± 5%	DIN EN ISO 1183-1
Bending E-modulus	MPa	> 3900	DIN EN ISO 178
Bending stress	MPa	> 35	DIN EN ISO 178
Tensile modulus of elasticity	MPa	> 3600	DIN EN ISO 527-2
Tensile strength	MPa	> 12	DIN EN ISO 527
Pressure E-modulus	MPa	> 1700	DIN EN ISO 604
Compressive yield stress	MPa	> 44	DIN EN ISO 604
Shrinkage	%	< 0.01	ISO 2577
Shore hardness D	D/15	73	DIN EN ISO 868
Tensile bond strength concrete wet	MPa	≥ 4.26	DIN EN 1542

## 4. Composition and properties

#### **Components:**

**WILLPOX® RS -A** is an epoxy resin based on bisphenol A and F with non-hazardous admixtures.

**WILLPOX® RS -B** is a formulated cycloaliphatic polyamine.

#### **End product:**

The two homogeneously mixed components react to form a viscous-elastic epoxy resin.

## 5. Preparation/Processing

Primer preparation is essential to ensure a strong bond at the renovation site. In the case of spigot renovation, we recommend carrying out primer preparation in accordance with RSV e.V. as described in information sheet 5. The mechanically pre-milled areas must be cleaned with high-pressure cleaning to ensure that the renovation site is free of grease and dust. Between preparation and rehabilitation, the areas to be rehabilitated should no longer be flooded with wastewater.

For socket and crack repair, the sockets and cracks must be milled out completely down to healthy material. The depth of the milling groove must be such that the grouting material is guaranteed to run. The mechanically pre-milled joints and cracks must be cleaned using high-pressure cleaning to ensure that the renovation site is free of grease and dust. Between preparation and rehabilitation, the areas to be rehabilitated should no longer be flooded with wastewater.

The two components are mixed at a weight ratio of 2.56 : 1 (A : B) for at least 3-4 minutes to form a homogeneous mass. The homogeneous resin mixture is poured into the cartridge intended for processing in accordance with the system manufacturer's instructions and applied to the restoration site within the specified pot life. After positioning the squeeze-out cartridge, the resin mixture is pressed into the pre-positioned mould. The pressed resin mixture is cured with the addition of heat.

### **Important notes:**

In warm or cold weather, it is essential to ensure that the components have the recommended processing temperature of 20°C to 25°C during application.

### Material temperature:

Optimum product temperature for processing 20°C. If the temperature deviates from the prescribed processing temperature, the reaction behaviour of the components may change, and the restoration result may be negative.

### Recommendation:

We recommend storing the products for at least 12 hours at a minimum temperature of 20°C before processing in order to achieve the recommended processing temperature of between 20°C and 25°C. When heating, localised overheating, e.g. on the container wall, must be avoided at all costs.

## 6. Safety notes

**WILLPOX® RS -A** and **WILLPOX® RS -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 in a dry place between 10°C and 30°C. The minimum durability is reflected by the batch number on the container.

## 8. Delivery form

	WILLPOX® RS -A	WILLPOX® RS -B
3 l tin can à	2.16 kg	-
1 l tin can à	-	0.84 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

**DIBt approval Z-42.3-529**

**SBKS type test 140205\_118301\_0001**

**MFPA Leipzig Investigation of the elution behaviour PB 5.1/14-513-1**

## 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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