

PRODUCT DATA SHEET

SikaBiresin® UR563 L20 / UR503 (UR 58630 System / UR 5803)

POLYURETHANE CASTING ELASTOMER – SHORE A 63 – POT LIFE 15-20'

APPLICATIONS

- Polyurethane casting elastomer designed to produce flexible moulds and tools for the concrete industry
- Especially dedicated for large serie production

MAIN PROPERTIES

- High chemical resistance
- Solvent and mercury free
- Good mechanical properties
- Exists in 30 minutes pot life (SikaBiresin® UR563 L30)

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin® UR503 , isocyanate, amber
Component B	SikaBiresin® UR563 L20 , polyol, grey

PHYSICAL PROPERTIES

		Isocyanate (A)	Polyol (B)
Components		SikaBiresin® UR503	SikaBiresin® UR563 L20
Viscosity, 25 °C	mPa.s	~ 2,000	~ 4,700
Density, 25 °C		1.16	1.33
Mixing ratio A:B	in parts by weight	35	100
		Mixture	
Colour		Grey	
Viscosity, 25 °C	mPa.s	~ 2,500	
Pot life, 25 °C, 135 g	min	15 – 20	
Maximal casting thickness	mm	~ 100	

MECHANICAL PROPERTIES

approx. values

Density	ISO 2781	g/cm ³	1.31
Shore hardness	ISO 868	Shore A1 / A15	65 / 63
Tensile strength	ISO 37	MPa	4.8
Tear strength	ISO 34	kN/m	16.5
Elongation at break	ISO 37	%	670
Linear shrinkage (1020 x 140 x 100 mm)	Internal	mm/m	3.8

THERMAL AND SPECIFIC PROPERTIES

approx. values, hardening conditions 2 h at 23 °C in a mould at 40 °C + 12 h at 70 °C

Glass transition temperature	ISO 11359	°C	< 0
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PACKAGING UNITS

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|---|--------------------------|
| ■ Isocyanate (A), SikaBiresin® UR503 | 227.5 kg / 2.5 kg / 5 kg |
| ■ Polyol (B), SikaBiresin® UR563 L20 | 200 kg / 14.3 kg |

PROCESSING DATA

- The material, processing and master-model temperature must be at least 18 – 25 °C.
- If master-model surface is porous it must be sealed prior applying release agent.
- Recommended release agents are was based. For more information, and recommendation see Product Data Sheets of Sika Release agents or contact local technical assistance.
- When using pigments, it is recommended to add max 1% of SikaBiresin® Color Paste. Add the pigment in component B and stir to homogenize prior mixing with component A.
- Both components have to be mixed thoroughly with a spatula or low-rpm stirrer according to mixing ratio.
- To secure homogeneous and complete mixing, fill the mixture in a second empty container and mix again briefly. Then pour immediately starting from the deepest point.
- Demolding time may vary depending on casted thickness and room temperature. Refer to the table above or please check in your own conditions.
- To achieve the highest performance, leave the elastomeric mould at 23 °C for 5 days before using it.
- To favor concrete mould longevity we invite you to check compatibility of your local release agent for concrete or contact our local technical support.
- In case of use with a 2-component low-pressure machine please make sure with machine supplier about its appropriateness, accuracy and maintenance.

STORAGE CONDITIONS

Shelf life	■ Isocyanate (A), SikaBiresin® UR503	6 months
	■ Polyol (B), SikaBiresin® UR563 L20	12 months
Storage temperature	■ Isocyanate (A), SikaBiresin® UR503	18 – 25 °C
	■ Polyol (B), SikaBiresin® UR563 L20	18 – 25 °C
Crystallization	■ After prolonged storage at low temperature, crystallization of Isocyanate (A) may occur.	
	■ This is easily removed by warming up for a sufficient time to a maximum of 60 °C.	

Opened packagings

- Allow to cool to requested processing temperature before use.
- Containers must be closed tightly immediately after use to prevent moisture ingress.
- The residual material needs to be used up as soon as possible.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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