

PRODUCT DATA SHEET

SikaBiresin® UR595 L4 / UR505 (UR 5805 / UR5895)

POLYURETHANE CASTING ELASTOMER – SHORE A 94 – COLD CURING – POT LIFE 4'

APPLICATIONS

- Polyurethane casting elastomer designed to produce semi-flexible parts or moulds
- Casting by hand or via a 2-component low pressure machine

MAIN PROPERTIES

- Easy processing
- Quick setting at room temperature
- Good tear strength
- High impact resistance
- Available in various colors

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin® UR505 , isocyanate, straw yellow
Component B	SikaBiresin® UR595 L4 , polyol, coloured

PHYSICAL PROPERTIES

		Isocyanate (A)	Polyol (B)
Components		SikaBiresin® UR505	SikaBiresin® UR595 L4
Viscosity, 25 °C	mPa.s	~ 450	~ 1,500
Density, 25 °C		1.21	1.19
Mixing ratio A:B	in parts by weight	55	100
	in parts by volume	54	100
		Mixture	
Colour		Orange / Light Orange	
Viscosity, 25 °C	mPa.s	~ 1,000	
Pot life, 25 °C, 155 g	min	~ 4	
Demoulding time at 23 °C		~ 12	
Demoulding time at 80 °C	h	~ 1	
Maximal casting thickness	mm	~ 50	

MECHANICAL PROPERTIES

approx. values

Density	ISO 2781	g/cm ³	1.25
Shore hardness	ISO 868	Shore A1	A 94
Tensile strength	ISO 37	MPa	16
Tear strength	ISO 34	kN/m	64
BASHORE resilience	ASTM 2632	%	25
Elongation at break	ISO 37	%	400

THERMAL AND SPECIFIC PROPERTIES

approx. values, hardening conditions 12 h at 80 °C

Working temperature	-	°C	- 20 / + 70
Glass transition temperature	TMA Mettler	°C	< 0

PACKAGING UNITS

■ Isocyanate (A), SikaBiresin® UR505	1025 kg / 225 kg / 11 kg
■ Polyol (B), SikaBiresin® UR595 L4 light orange	205 kg
■ Polyol (B), SikaBiresin® UR595 L4 orange	205 kg

PROCESSING DATA

- The material, processing, master-model or mould temperature must be at least 18 – 25 °C.
- If master-model or mould 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.
- Component B must be stirred thoroughly before use.
- 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.
- 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® UR505	9 months
	■ Polyol (B), SikaBiresin® UR595 L4	12 months
Storage temperature	■ Isocyanate (A), SikaBiresin® UR505	18 – 25 °C
	■ Polyol (B), SikaBiresin® UR595 L4	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.	
	■ Allow to cool to requested processing temperature before use.	

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Opened packagings

- 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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