

## PRODUCT DATA SHEET

# SikaBiresin® UR419 (Biresin® U1419 / Biresin® U1419 L)

## ELASTOMERIC CASTING RESIN FOR FOUNDRY PATTERN MAKING

### APPLICATIONS

- Casting of abrasion and impact resistant mouldings and tools, e. g. smaller core boxes
- Casting of tough-elastic coatings

### MAIN PROPERTIES

- Insensitive to moisture
- Good abrasion resistance
- Good impact resistance and tensile strength
- Good flowability
- Short demoulding time
- Good temperature resistance
- With a higher level of component B **SikaBiresin® UR419 L** the potlife increases
- Dyeable with **SikaBiresin® Colour Paste**

### DESCRIPTION

Basis	Two component polyurethane system
Component A	<b>SikaBiresin® UR419</b> , isocyanate prepolymer, colourless-transparent, unfilled
Component B	<b>SikaBiresin® UR419</b> , amine, brownish-transparent, unfilled <b>SikaBiresin® UR419 L</b> , amine, reddish-transparent, unfilled

### PHYSICAL PROPERTIES

		Isocyanate (A)	Amine (B)		Amine (B)	
		<b>SikaBiresin® UR419</b>	<b>SikaBiresin® UR419</b>	<b>SikaBiresin® UR419 L</b>		
Components						
Viscosity, 25 °C	mPa.s	~ 4,200	~ 200	~ 500		
Density	g/cm <sup>3</sup>	1.01	1.02	1.20		
Mixing ratio A:B In parts by weight	Component A	<b>SikaBiresin® UR419</b>	100	100	100	100
	Component B	<b>SikaBiresin® UR419</b>	16	12	8.5	5.4
	Component B	<b>SikaBiresin® UR419 L</b>	0	4	8.5	12.6
Mixture						
Colour		Coloured-transparent*				
Viscosity, 25 °C	mPa.s	~ 2,800				

Pot life, room temperature, 500 g	min	7	10	15	25
Demoulding time	h	1 – 3	3 – 5	5 – 10	12 – 16
Curing time	d	3 – 5		5 – 7	

\* dependent on raw materials the colour can differ without changing the mechanical properties

## MECHANICAL PROPERTIES

approx. values

Mixing ratio A:B	Component A	<b>SikaBiresin® UR419</b>	100	100	100	100
In parts by weight	Component B	<b>Mixture</b>	16	16	17	18
Density	ISO 1183	g/cm <sup>3</sup>	1.1			
Shore hardness	ISO 868	-	A 98 / D 54	D 52	D 47	D 47
Tear strength	ISO 527	MPa	25	27	22	19
Elongation at break	ISO 527	%	375	480	630	690
Tear resistance	ISO 34	N/mm	68	65	71	73

## PACKAGING UNITS

Working packages	<ul style="list-style-type: none"> <li>■ Isocyanate (A), <b>SikaBiresin® UR419</b> AB Pack</li> </ul>	6 x 1 kg resin + 6 x 0.16 kg hardener in a box
Individual components	<ul style="list-style-type: none"> <li>■ Isocyanate (A), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419 L</b></li> </ul>	200 kg; 10 kg 16 kg; 1.6 kg 5 kg; 0.9 kg

## PROCESSING DATA

- The material, processing and mould temperature must be at least 18 – 25 °C.
- When using pigments, it is recommended to add max. 1% of SikaBiresin® Colour Paste.
- Add the pigments prior to processing to component B.
- Both components have to be mixed thoroughly according to mixing ratio and poured immediately into the released mould with beginning at the lowest point.
- Porous surfaces have to be well sealed previously.
- If using wood (e. g. laminated wood) as supporting cores or PUR foam plates with low to middle density, a previous sealing is necessary.
- The compatibility of the sealing on PUR foam has to be tested separately.
- Recommended release agents are Sika® Liquid Wax-815, Sika® Liquid Wax-852, Sika® Liquid Wax-872 or Sika® Pasty Wax-818. For more information, see Product Data Sheets of the release agents.
- Pay attention to dry conditions and dry mould surfaces while processing.

## STORAGE CONDITIONS

Shelf life	<ul style="list-style-type: none"> <li>■ Isocyanate (A), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419 L</b></li> </ul>	12 months 12 months 12 months
Storage temperature	<ul style="list-style-type: none"> <li>■ Isocyanate (A), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419</b></li> <li>■ Amine (B), <b>SikaBiresin® UR419 L</b></li> </ul>	18 – 25 °C 18 – 25 °C 18 – 25 °C
Crystallization	<ul style="list-style-type: none"> <li>■ After prolonged storage at low temperature, crystallization of components may occur.</li> <li>■ This is easily removed by warming up for a sufficient time to a maximum of 70 °C.</li> <li>■ Allow to cool to requested processing temperature before use.</li> </ul>	

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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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