

## PRODUCT DATA SHEET

# SikaBiresin® UR404 (Biresin® U1404)

## ELASTOMERIC CASTING RESIN FOR MOULD MAKING

### APPLICATIONS

- Casting of flexible moulds for ceramic and gypsum processing
- Moulds for foaming and casting of mouldings with complex structure
- Manufacture of elastic, flexible mouldings and components

### MAIN PROPERTIES

- Insensitive to moisture
- Very soft, high elongation at break
- Good tensile strength and elasticity
- With component B **SikaBiresin® UR404** for Shore hardness A 40
- With component B **SikaBiresin® UR434** for Shore hardness A 55
- Very low shrinkage
- Dyeable with **SikaBiresin® Colour Paste**

### DESCRIPTION

Basis	Two component polyurethane system
Component A	<b>SikaBiresin® UR404</b> , isocyanate prepolymer, colourless-transparent, unfilled
Component B	<b>SikaBiresin® UR404</b> , amine, reddish-transparent, unfilled <b>SikaBiresin® UR434</b> , amine, beige, filled

### PHYSICAL PROPERTIES

		Isocyanate (A)	Amine (B)	Amine (B)
Components		<b>SikaBiresin® UR404</b>	<b>SikaBiresin® UR404</b>	<b>SikaBiresin® UR434</b>
Viscosity, 25 °C	mPa.s	~ 6,500	~ 300	~ 2,200
Density	g/cm³	1.05	1.03	1.47
Mixing ratio A:B	in parts	80	100	-
	by weight	50	-	100
		Mixture		
Colour		Reddish-transparent*		Light beige*
Viscosity, 25 °C	mPa.s	~ 3,000		~ 3,700
Pot life, room temperature, 500 g	min	~ 25		~ 20
Demoulding time	h	~ 24		> 16
Curing time	d	3 – 5		~ 5

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

## MECHANICAL PROPERTIES

approx. values

			SikaBiresin® UR404	SikaBiresin® UR434
Density	ISO 1183	g/cm <sup>3</sup>	1.05	1.03
Shore hardness	ISO 868	-	A 40	A 55
Tensile strength	ISO 527	MPa	3 – 4	4
Elongation at break	ISO 527	%	> 600	> 600
Tear strength	ISO 34	N/mm	7	9
Linear shrinkage	Internal	%	< 0.04	< 0.02

## PACKAGING UNITS

- |                                      |                             |
|--------------------------------------|-----------------------------|
| ■ Isocyanate (A), SikaBiresin® UR404 | 200 kg; 20 kg; 8 kg; 0.8 kg |
| ■ Amine (B), SikaBiresin® UR404      | 10 kg; 1 kg                 |
| ■ Amine (B), SikaBiresin® UR434      | 16 kg; 1.6 kg               |

## PROCESSING DATA

- The material, processing and mould temperature must be at least 18 – 25 °C.
- Component B Biresin® 1434 must be stirred thoroughly before use.
- 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	■ Isocyanate (A), SikaBiresin® UR404	12 months
	■ Amine (B), SikaBiresin® UR404	12 months
	■ Amine (B), SikaBiresin® UR434	12 months
Storage temperature	■ Isocyanate (A), SikaBiresin® UR404	18 – 25 °C
	■ Amine (B), SikaBiresin® UR404	18 – 25 °C
	■ Amine (B), SikaBiresin® UR434	18 – 25 °C
Crystallization	■ After prolonged storage at low temperature, crystallization of components may occur.	
	■ This is easily removed by warming up for a sufficient time to a maximum of 70 °C.	
	■ Allow to cool to requested processing temperature before use.	
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 enduse 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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SikaBiresin® UR404 (Biresin® U1404)

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