

PRODUCT DATA SHEET

SikaBiresin® UR745 / SikaBiresin® UR703 (UR 7845 / UR 7803)

POLYURETHANE CASTING ELASTOMER – SHORE A 45 TO A 55 – POT LIFE 30-40'

APPLICATIONS

- Polyurethane casting elastomer designed to produce flexible moulds or parts, by hand casting or with help of a 2-component low pressure machine

MAIN PROPERTIES

- Adjustable hardness from 45 to 55 A Shore
- Low moisture sensitivity
- Low shrinkage after hardening
- High elongation at break
- Good chemical resistance

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin® UR703 , isocyanate, straw yellow
Component B	SikaBiresin® UR745 , polyol, beige

PHYSICAL PROPERTIES

		Isocyanate (A)	Polyol (B)
Components		SikaBiresin® UR703	SikaBiresin® UR745
Viscosity, 25 °C	mPa.s	~ 2,400	~ 2,000
Density, 25 °C	g/cm ³	1.04	1.22
Mixing ratio A:B	in parts by weight	60 or 70	100
		Mixture 60/100	Mixture 70/100
Colour		Beige	
Viscosity, 25 °C	mPa.s	~ 2,300	~ 2,450
Pot life, 25 °C, 160 g	min	30 – 40	
Demoulding time at 23 °C	h	~ 18	
Curing time at 23 °C	h	~ 96	
Maximal casting thickness	mm	~ 150	

MECHANICAL PROPERTIES

approx. values

		Mixing ratio A/B	60/100	70/100
Density	ISO 2781	g/cm ³	1.15	1.14
Shore hardness	ISO 868	Shore A1	A 45/50	A 50/55
Tensile strength	ISO 37	MPa	3.5	
Tear strength	ISO 34	kN/m	16	18
Elongation at break	ISO 37	%	1,300	1,100
Linear shrinkage (1000 x 50 x 10 mm)	Internal	mm/m	< 1	

THERMAL AND SPECIFIC PROPERTIES

approx. values, hardening conditions 16 h at 40 °C

Glass transition temperature	ISO 11357	°C	< 0
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PACKAGING UNITS

- Isocyanate (A), **SikaBiresin® UR703** 4.65 kg / 9.3 kg
- Polyol (B), **SikaBiresin® UR745** 13.3 kg
- Isocyanate (A), **SikaBiresin® UR703** 11.4 kg (for full container loading only)
- Polyol (B), **SikaBiresin® UR745** 8.0 kg (for full container loading only)

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.
- Beige color of the polyol could be more or less dark depending of the batch number and age of the product. This does not impact the final performances of the cast PU.
- 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.
- In case of a slightly wet model (gypsum, plaster type), ratio 70A/100B (kit 9.3+13.3 kg) has to be used in order to get a good curing on model surface.
- 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.

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Sika Advanced Resins

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STORAGE CONDITIONS

Shelf life	<ul style="list-style-type: none">■ Isocyanate (A), SikaBiresin® UR703 12 months■ Polyol (B), SikaBiresin® UR745 12 months
Storage temperature	<ul style="list-style-type: none">■ Isocyanate (A), SikaBiresin® UR703 18 – 25 °C■ Polyol (B), SikaBiresin® UR745 18 – 25 °C
Opened packagings	<ul style="list-style-type: none">■ 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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