

PRODUCT DATA SHEET

SikaBiresin[®] UR350 (UR 3450)

POLYURETHANE CASTING ELASTOMER – SHORE A 80 – COLD CURING

APPLICATIONS

- Production of semi flexible moulds, forming tools or parts requiring good abrasion and tear resistance properties

MAIN PROPERTIES

- Good tear resistance
- Good hydrolysis resistance
- High abrasion resistance

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin[®] UR350 , isocyanate, colourless
Component B	SikaBiresin[®] UR350 , polyol, black

PHYSICAL PROPERTIES

		Isocyanate (A)	Polyol (B)
Components		SikaBiresin[®] UR350	SikaBiresin[®] UR350
Viscosity, 25 °C	mPa.s	19,000	150
Specific gravity, 25° C	g/cm ³	1.08	1.03
Mixing ratio A:B	in parts by weight	100	35
	In parts by volume	100	36
		Mixture	
Colour		Black	
Viscosity, 25 °C	mPa.s	3,000	
Pot life, 25° C, 150 g	min	18	
Demoulding time at 23° C		24	
Demoulding time at 80° C	h	2	
Curing time at 23° C		96	
Curing time at 80° C (curing after gelification)	h	4	
Maximal casting thickness	mm	80	

MECHANICAL PROPERTIES

approx. values

Specific gravity	ISO 2781	g/cm^3	1.08
Shore hardness	ISO 868	Shore A1 / A15	A 80 / A 79
Tensile strength	ISO 37	MPa	12
Tear strength	ISO 34	kN/m	67
Elongation at break	ISO 37	%	620
BASHORE resilience	ASTM 2632	%	44
Linear shrinkage (specimen 250x50x3mm)	-	mm/m	3.6
Abrasion resistance (TABER)	ISO 5470	mm ³ / 100U	41

THERMAL AND SPECIFIC PROPERTIES

approx. values

Working temperature	-	°C	- 40 / + 80
Glass transition temperature	ISO 11357	°C	- 60
Coefficient of thermal expansion (+0° to +40° C)	ISO 11359	10^{-6} K^{-1}	230

PACKAGING UNITS

- | | |
|---|--------------------|
| ■ Isocyanate (A), SikaBiresin® UR350 | 20 kg / 6 x 1 kg |
| ■ Polyol (B), SikaBiresin® UR350 | 7 kg / 6 x 0.35 kg |

PROCESSING DATA

- The material, processing and mould temperature must be at least 18 – 25 °C.
- Recommended release agents are Sika® Liquid Wax. For more information, see Product Data Sheets of the release agents.
- Pay attention to dry conditions and dry mould surfaces while processing.
- Both components have to be mixed thoroughly according to mixing ratio and poured immediately into the released mould with beginning at the lowest point.
- Isocyanate component could be heated up to 40°C to make it more fluid but pot life will be reduced.

STORAGE CONDITIONS

Shelf life	■ Isocyanate (A), SikaBiresin® UR350	12 months
	■ Polyol (B), SikaBiresin® UR350	12 months
Storage temperature	■ Isocyanate (A), SikaBiresin® UR350	18 – 25 °C
	■ Polyol (B), SikaBiresin® UR350	18 – 25 °C
Crystallization	■ After prolonged storage below 15°C, crystallization of isocyanate may occur.	
	■ This is easily removed by warming up for 4 to 6 hours at 60 °C.	
	■ Excessive heating of both components may cause a degradation of the final cured product (temp >60°C or heating time > 12 hours).	
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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