

PROVISIONAL PRODUCT DATA SHEET

SikaBiresin® TD300 TD150

PATENTED BIO-BASED EPOXY CASTING RESIN WITH HIGH TRANSPARENCY FOR DEEP POUR IN ONE SHOT

APPLICATIONS

- For applications in art, interior decoration and furniture to make deep pour transparent and UV resistant castings such as river table, clocks, lamps, embeddings of objects, mock-ups and trophies

MAIN PROPERTIES

- High transparency
- High UV resistance
- 38 % bio-based resin content
- Easy mixing ratio 2:1
- Low viscosity
- Self-degassing behavior
- As deep as 100 mm casting in one shot @ 17°C

DESCRIPTION

Basis	Two component epoxy system
Component A	SikaBiresin® TD300 , epoxy resin, transparent
Component B	SikaBiresin® TD150 , amine, unfilled, transparent

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
Components		SikaBiresin® TD300	SikaBiresin® TD150
Viscosity, 25 °C	mPa.s	530	100
Density	g/cm ³	1.10	0.98
Mixing ratio	by weight	100	45
Mixing ratio	by volume	100	50
		Mixture	
Color		Transparent	
Viscosity, 25 °C	mPa.s	290	
Reactivity on 630 g, 23 °C	h	20	

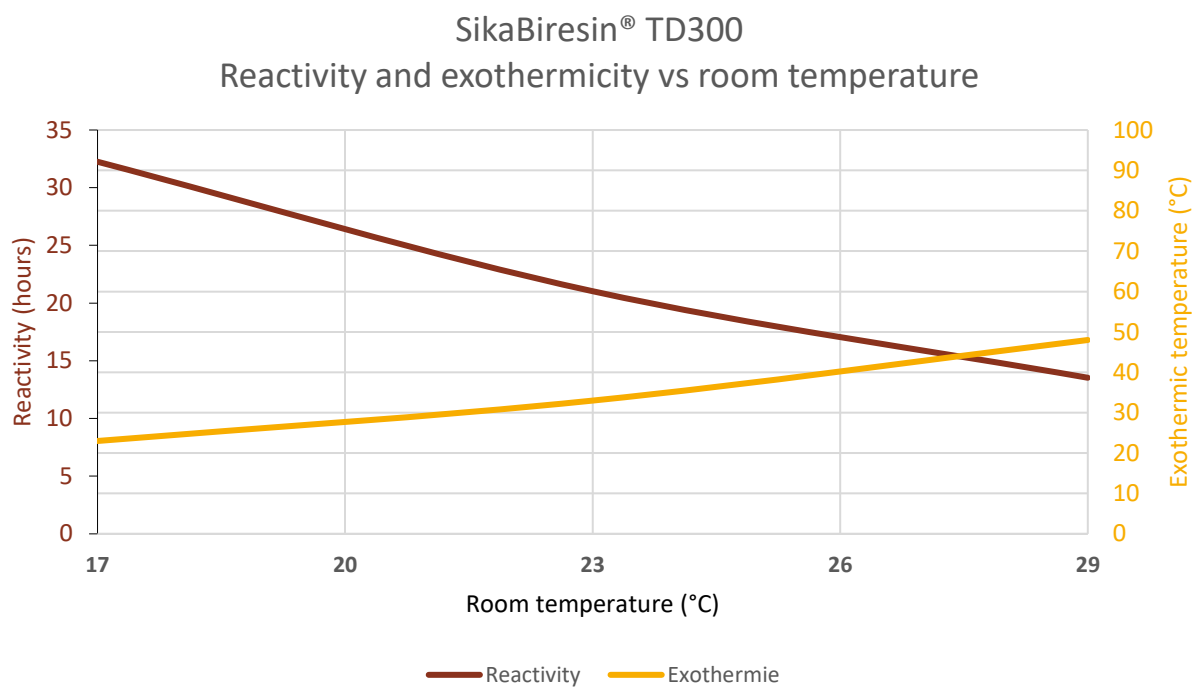


Diagram 1: casted in plastic cup – 630 g, Ø 85 mm, height 90 mm

MECHANICAL AND THERMAL PROPERTIES

(approx. values)

Shore hardness, after 7 days at 23 °C	ISO 868	D1	70
Shore hardness, after 14 days at 23 °C	ISO 868	D1	78
Elongation at maximum strength	ISO 527	%	3.2
Flexural modulus	ISO 178	MPa	1,320
Impact resistance	ISO 179	kJ/m ²	40
Glass transition temperature (TG)	ISO 11359-2	°C	45

SPECIFIC PROPERTIES

Maximum casting thickness on plate 350 mm x 300 mm	Room temperature		Thickness (mm)
	11 kg	17 °C	100
	7 kg	23 °C	60
	3 kg	29 °C	25

PACKAGING UNITS

■ Resin (A), SikaBiresin® TD300	5 kg / 200 kg / 1000 kg
■ Hardener (B), SikaBiresin® TD150	2.25 kg / 200 kg / 950 kg / 1000 kg

PROCESSING DATA

- According to long pot life and low viscosity the casting frame must be perfectly tight. Brown PE packing tape is self-releasing from the resin and could be used in corners of the box. Resin should not bond.
- A liquid or pasty wax could be also used to prevent bonding on models and supports. The wood or porous surfaces of models must be sealed before casting the resin. Quick setting epoxy or a varnish could be used but sealer must be cured prior to casting of SikaBiresin® TD300 TD150.
- Prior to use check the material for homogeneity and crystallization.
- After prolonged storage at low temperature, crystallization of components may occur. This process can be easily reversed by heating the affected component to a maximum of 70 °C until the crystals have disappeared. Allow to cool down to requested processing temperature before use.
- Mixing should be done by hand or with an electric mixer. Be careful not to incorporate too much air while mixing. Emulsion must be avoided.
- After a primary mixing in a bucket pour the product in a second bucket and finish the mixing. Scrap well the walls of the mixing container.
- Prior to casting the mixing can be left for self-degassing for 15 to 30 minutes. Alternatively, the mixing can be evacuated in a vacuum chamber.
- Room temperature is the most important parameter to be successful in SikaBiresin® TD300 TD150 casting. There is a link in between room temperature (RT), volume of casting resin and curing speed. Excessive thickness or room temperature may induce high exothermic reaction leading to yellowing, cracks or uneven surface once cured.
- Above 7 kg volume and a casting height of more than 60 mm it is recommended to decrease the exothermic temperature by using a fan or reducing the room temperature.
- After casting and some relaxation time the remaining bubbles can be easily removed with a hot air-stream gun (sweep the surface at 15 – 20 cm of distance).
- A thin sanding and polishing are almost always needed to get shiny and flat surface. Use appropriate tools to avoid heat on the resin when polishing. Water sandpaper is advised.
- Prolonged intensive UV exposure can lead to optical changes or changes in transparency.
- Containers must be closed tightly immediately after use to prevent moisture ingress.
- Once opened the product shall be used up as soon as possible.

STORAGE CONDITIONS

Shelf life	■ Resin (A), SikaBiresin® TD300	12 months
	■ Hardener (B), SikaBiresin® TD150	12 months
Storage temperature	■ Resin (A), SikaBiresin® TD300	15 °C – 25 °C
	■ Hardener (B), SikaBiresin® TD150	15 °C – 25 °C

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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