

PRODUCT DATA SHEET

SikaBiresin® RE321-24

Rigid polyurethane resins for electrical applications

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaBiresin® RE321-24	Component B SikaForce®-020
Chemical base	Polyol	Isocyanate
Color	Beige	Brown
	mixed	Beige
Density	1.62 kg/l	1.2 kg/l
	cured	1.55 kg/l
Mixing ratio	by weight	100 : 30
	by volume	100 : 40
Viscosity (CQP538-2)	12 000 mPa·s	90 mPa·s
	mixed	2200 mPa·s
Pot life (CQP021-3 / Gel Timer TECAM)	18 minutes	
Shore D hardness (CQP023-1 / ISO 868)	D1	89 ^A
	D15	87 ^A
Tensile strength (CQP036-2 / ISO 527)	45 MPa ^A	
Tensile modulus (CQP036-2 / ISO 527)	4500 MPa ^A	
Elongation at break (CQP543-1 / ISO 527)	1.5 % ^A	
Thermal conductivity (CQP116-1 / ISO 8301)	0.6 W/m.K ^A	
Water absorption (CQP 051-1 / ISO 62)	24 hours at 23 °C	0.08 %
Dielectric constant (IEC 60250)	ε 100 Hz	4.2 ^A
Dissipation factor (IEC 60250)	tan δ (100 Hz)	0.03 ^A
Volume resistivity (IEC 60093)	1000 V	2.10 ¹⁵ ^A
Coefficient of thermal expansion (CQP053-1 / ISO 11359)	55 x 10 ⁻⁶ 1/K ^A	
Glass transition temperature (CQP053-1 / ISO 11359)	70 °C ^A	
Service temperature	-40 – 130 °C	
Shelf life	12 months	9 months

CQP = Corporate Quality Procedure

^{A)} cured for 16 hours at 80 °C and 24 hours at 23 °C

DESCRIPTION

SikaBiresin® RE321-24 is an 2-component thermosetting polyurethane compound for electrical insulation.

The Product possesses self-extinguish properties.

PRODUCT BENEFITS

- Low water absorption
- High glass transition temperature
- Self-extinguish (internally tested)

AREAS OF APPLICATION

Casting resin for mechanical and numerous electrical applications such as capacitors, transformers or electric components especially for low or medium voltage when requiring high glass transition temperature and fire resistance.

This product is suitable for experienced professional users only.

Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

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METHOD OF APPLICATION

Product preparation

All surfaces in contact with the Product must be clean and dry.
Pre-treatment steps must be confirmed by preliminary tests on original substrates considering specific requirements.

Mixing process

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 temperature of 70 °C until the crystals have disappeared.
Allow to cool down to requested processing temperature.
Component A must be stirred thoroughly before to be mixed.
Both components must be mixed homogeneously respecting the defined mixing ratio.

Application

SikaBiresin® RE321-24 is usually processed with an adequate processing equipment (dosing unit), but manual application is possible as well.
The ideal mixing process must be defined based on the specific process parameters. In case a mixer is required, the appropriate mixer must be determined by tests.
The material and processing temperature shall be between 18 °C – 25 °C. Consider the shorter pot life and lower viscosity if the Product is processed at higher temperatures.
The curing must be performed at temperature ≥ 18 °C.

Note: Both 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

Both components must be stored at temperature between 15 °C and 25 °C in original unopened containers.

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 Industry.
Copies of the following publications are available on request:

- Safety Data Sheets

PACKAGING INFORMATION

SikaBiresin® RE321-24 (A)

Drum	300 kg
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SikaForce®-020 (B)

Pail	20 kg
Drum	250 kg

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.

DISCLAIMER

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