BUILDING TRUST

PRODUCT DATA SHEET

SikaBiresin® RE 891-98 RESIN / SikaBiresin® RE 203 HARDENER*

*(previously RE 22891-(98) / RE 2030)

ELECTRICAL EPOXY RESIN
RIGID – SELF-EXTINGUISH UL 94

DESCRIPTION

Casting resin for mechanical and numerous electrical applications especially for low or medium voltage when requiring an extinguishing characteristic.

Example: capacitors, coils, transformers, protection electrical motor

PROPERTIES

- Rigid
- High thermal resistance
- Chemical resistance
- Self-extinguish UL 94 V0 6 mm

PHYSICAL PROPERTIES

Composition			POLYOL SikaBiresin® RE 891-(98)	HARDENER SikaBiresin® RE 203	MIXED
Mix ratio by weight			100	12	
Mix ratio by volume at 25 °C			100	19	
Aspect			liquid	liquid	Liquid
Colour			black	amber	black
Viscosity at 25 °C	(mPa.s)	ISO 2555 : 2018	6.700	280	3.000
Specific gravity at 25 °C	(g/cm^3)	ISO 1675 : 1985	1,58	1,03	-
Specific gravity cured solid		ISO 2781 : 1996	-	-	1,49
Gel time at 25 °C (200 g)	(min)	Gel Timer TECAM			200
Gel time at 60 °C (112 g)	(min)	Trombomat			40

MECHANICAL PROPERTIES at 23 °C (1)

Hardness	ISO 868 : 2003	Shore D1 / D15	88 / 86
Tensile Strength	ISO 527 : 1993	MPa	40
Elongation at break		%	1,8
Flexural modulus	ISO 178 : 2010	MPa	5.000
Compressive strength at yield	ISO 604 : 2002	MPa	80
CHARPY Impact	ISO 179/1eU : 1994	kJ/m²	7
Initial hardness at 25°C (50 Shore D) Initial hardness at 25°C (>80 Shore D)	ISO 868 : 2003	hr hr	10 20

(1) Average values obtained on standard specimens / Hardening 16 hours at 80°C and 24 hours at 23°C

THERMAL AND SPECIFIC PROPERTIES (1)

Working temperature	-	°C	-40 to + 150
Maximun working temperature	-	°C	+160
Thermal conductivity	EN 993-15	W/m.K	0,65
Glass transition temperature (Tg)	ISO 11359 : 1999	°C	65
Coefficient of thermal expansion (CTE) [+20 to +50]°C [+90 to +130]°C	ISO 11359 : 1999	10^{-6} K^{-1}	 60 130
Auto-extinguishing	UL94 : 1979	6 mm	V0(3)
Water absorption (23°C – 24 Hours)	ISO 62 : 1999	%	0,1
Directive 2015/863/EU (ROHS) (2)	-	-	Conform

(1) Average values obtained on standard specimens / Hardening 16 hours at 80°C and 24 hours at 23°C.

(2) European directive on the restriction of the use of certain hazardous substances electrical and electronic equipment.

(3) UL file number E113398

DIELECTRIC AND INSULATING PROPERTIES at 23°C (1)

Dielectric strength (50 Hz - 1 mm)	CEI 60243-1 E2 :1998	kV/mm	27
Dielectric constant Ɛ (100 Hz)	CEI 60250 : 1969	-	4
Dissipation factor tan δ (100 Hz)	CEI 60250 : 1969	-	0,04
Volume resistivity (1.000 V)	CEI 60093 E2 : 1980	Ω.cm	5.10^{15}

(1) Average values obtained on standard specimens / Hardening 16 hours at 80°C and 24 hours at 23°C

PROCESSING

- Settling may be observed on the RESIN. In that case, it is necessary to mix the RESIN part until both colour and aspect become homogeneous. This is not harmful for the product quality.
- Both parts (RESIN and HARDENER) have to be mixed at a temperature higher than 18°C according to the mix ratio indicated on the technical data sheet. Before casting check that parts or moulds are free of any trace of moisture.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheets.

STORAGE CONDITIONS

Shelf life is 12 months for the RESIN and 12 months for HARDENER in a dry place and in their original unopened containers at a temperature between 15 to 25°C.
Any open can must be tightly closed under dry inert gas (dry air, nitrogen, etc…).

PACKAGING

Packaging information on request, please contact your local sales representative or find your local contact on www.sikaadvancedresins.com

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.

VALUE BASES

All technical data stated in this Product Data Sheet 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

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