

PRODUCT DATA SHEET

RE 22904 (A) RESIN / RE 22904-X7 (B) HARDENER

ELECTRICAL EPOXY RESIN RIGID

DESCRIPTION

Casting epoxy resin for mechanical and numerous electrical applications requiring good properties at high temperature as well as a high thermal conductivity.

PROPERTIES

- Two-components liquid epoxy resin
- Rigid
- Long pot life
- High glass transition temperature
- Good thermal resistance
- Chemical resistance

PHYSICAL PROPERTIES

Composition			RESIN RE 22904-97 (A)	HARDENER RE 22904-X7 (B)	MIXED
Mix ratio by weight			100	13	
Mix ratio by volume at 25 °C			100	24	
Aspect			Liquid	Liquid	Liquid
Colour			Black	Amber	Black
Viscosity at 25 °C	(mPa.s)	ISO 2555 : 2018	55,000	75	6,000
Specific gravity at 25 °C	(g/cm3)	ISO 1675 : 1985	1.67	0.92	-
Specific gravity cured solid		ISO 2781 : 1996	-	-	1.56
Gel time at 25 °C (200 g)	(min)	Gel Timer TECAM			200
Hardness of the filler		Mohs			7

MECHANICAL PROPERTIES at 23 °C ⁽¹⁾

Hardness	ISO 868 : 2003	Shore D1 / D15	92 / 90
Tensile Strength		MPa	57
Tensile modulus of elasticity	ISO 527 : 1993	Mpa	7,500
Elongation at break		%	0.9
Compressive Strength	ISO 604 : 2002	MPa	137

(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	-50 à + 160
Thermal conductivity	EN 993-15	W/m.K	-
Glass transition temperature (T _g)	ISO 11359 : 2002	°C	130
Coefficient of thermal expansion (CTE) [+30 to +90]°C	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	40
[+130 to +170]°C			110
Auto-extinguishing	Selon UL 94	-	-
Water absorption (23 °C – 24 Hours)	ISO 62 : 1999	%	-
Directive 2015/65/EU (ROHS) ⁽²⁾	-	-	Conform

(1) Average values obtained on standard specimens / Hardening 16 hours at 120°C and 24 hours at 23°C.

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

DIELECTRIC AND INSULATING PROPERTIES at 23 °C ⁽¹⁾

Dielectric strength (50 Hz - 1 mm)	CEI 60243-1 E2 : 1998	kV/mm	24
Dielectric constant ϵ (100 Hz)	CEI 60250 : 1969	-	4.2
Dissipation factor $\tan \delta$ (100 Hz)	CEI 60250 : 1969	-	0.05
Volume resistivity (1000 V)	CEI 60093 E2 : 1980	Ω .cm	-

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

PROCESSING

- Before use HARDENER (B) RE22904-(X7) check carefully the absence of crystallisation on each package:
 - Solid particle presence
 - Cloudy liquid
- In case of crystallization, the HARDENER must be placed in an oven at 60°C until the complete decrystallisation (24-48 hours maximum). Rehomogenize and return to room temperature. After shaking the product into the package, the product is not clear, DO NOT USE THE PRODUCT.
- During processing, keep the HARDENER (B) RE 22904-(X7) above 20°C to keep it away from crystallizing
- A settling phenomenon can be observed on the RESIN part. In this case, blending of the RESIN part is necessary to obtain a homogenous colour and aspect. This doesn't affect the quality of the product.
- Both parts (RESIN and HARDENER) must be mixed at a temperature higher than 20°C according to the mix ratio indicated on the technical datasheet. 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 20 to 30°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

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HARDENER

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Sika Advanced Resins

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

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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