



BUILDING TRUST



RE 11451A-(95) POLYOL RE 1010 ISOCYANATE ELECTRICAL POLYURETHANE RESIN HYDROLYSIS RESISTANCE SOFT – UL 94 V0

DESCRIPTION

Casting resin for electrical applications especially for low or medium voltage.
Example: electronic cards and fragile components.

PROPERTIES

- Two-component liquid polyurethane resin
- Long pot life
- Flexible
- Good electrical properties
- Good hydrolysis resistance
- Self extinguish UL 94 V0

PHYSICAL PROPERTIES				
Composition		POLYOL RE 11451A-(95)	ISOCYANATE RE 1010	MIXED
Mix ratio by weight		100	10	
Mix ratio by volume at 25°C		100	10.3	
Aspect		liquid	liquid	liquid
Colour		black	amber	black
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	4,000	20	2,150
Specific gravity at 25°C	ISO 1675 : 1985	1.26	1.22	-
Specific gravity of cured product at 23°C	ISO 2781 : 1996	-	-	1.28
Gel time at 25°C on 110 g (min)	Gel Timer TECAM			50

MECHANICAL PROPERTIES at 23°C ⁽¹⁾				
Hardness		ISO 868 : 2003	Shore A1 / A15	47 / 43
Tensile strength		ISO 37 : 2011	MPa	1.1
Elongation at break		ISO 37 : 2011	%	145

⁽¹⁾ Average values obtained on standardized specimens / Hardening 16 hours at 80°C

PROCESSING CONDITIONS

Before use Isocyanate RE 1010: check carefully the absence of crystallisation or dimerization on each package:
- solid particle presence or cloudy liquid .

In case of crystallisation or dimerization, the product must be placed in an oven at 60°C until complete decrystallization (16 hours maximum). Rehomogenize and return to room temperature. After shaking the product into the package, the product must be as clear as water.

If after treatment, the product is not clear, DO NOT USE THE PRODUCT.

Settling may be observed on the Polyol. In that case, it is necessary to mix the POLYOL part until both colour and aspect become homogeneous. This is not harmful for the product quality.

Both parts (POLYOL and ISOCYANATE) 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.

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RE 11451A-(95) POLYOL RE 1010 ISOCYANATE ELECTRICAL POLYURETHANE RESIN

HYDROLYSIS RESISTANCE
SOFT – UL 94 V0

THERMAL AND SPECIFIC PROPERTIES ⁽¹⁾

Working temperature	-	°C	-55 / +115
Maximal temperature (500h) ⁽²⁾		°C	125
Thermal conductivity	ISO 2582 : 1978	W/m.K	0.4
Glass transition temperature (T _g)	ISO 11359 : 1999	°C	-40
Coefficient of thermal expansion (CTE) [+10 to +115]°C	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	200
Autoextinguibility	UL94 : 1979	12.7 mm	V0 ⁽⁴⁾
Water absorption (23°C – 24 Hours)	ISO 62 : 1999	%	0.3
Directive 2011/65/EU (ROHS) ⁽³⁾	-	-	conform

⁽¹⁾ Average values obtained on standardized specimens / Hardening 16 hours at 80°C

⁽²⁾ At this temperature, mechanical properties will change. User has to check compatibility with the target application

⁽³⁾ European directive on the restriction of the use of certain hazardous substances electrical and electronic equipment.

⁽⁴⁾ 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	22
Dielectric constant ε (50 Hz)	CEI 60250 : 1969	-	6.0
Dissipation factor tg δ (50 Hz)	CEI 60250 : 1969	-	0.06
Transverse resistivity (1 000 V)	CEI 60093 E2 : 1980	Ω.cm	1.3.10 ¹²

HANDLING PRECAUTIONS

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

- Ensure good ventilation.
- Wear gloves, safety glasses and waterproof clothes

For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life is 12 months for Polyol and 12 months for Isocyanate in a dry place and in their original unopened containers at a temperature between 15 and 25°C

Any open must be tightly closed under dry inert gas (dry air, nitrogen, etc...).

GUARANTEE

The information contained in this technical data sheet result from research and tests conducted in our Laboratories under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON guarantee the conformity of their products with their specifications but cannot guarantee the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The responsibility of AXSON is strictly limited to reimbursement or replacement of products which do not comply with the published specifications.