

## DESCRIPTION

Casting resin for mechanical and numerous electrical applications especially for low or medium voltage.  
Example: transformers, electronic cards and components.

## PROPERTIES

- Two-component liquid polyurethane resin
- Solvent free
- Semi-flexible
- Good thermal behaviour
- According UL 94 V0

PHYSICAL PROPERTIES					
			RE 12551	RE 1010	
Composition			POLYOL	ISOCYANATE	MIXED
Mix ratio by weight			100	14	
Mix ratio by volume at 25°C			100	18	
Aspect			liquid	liquid	liquid
Colour	RE 12551 POLYOL	-(94) -(96)	black	dark-amber	black
Viscosity at 25°C (mPa.s)			BROOKFIELD LVT	6,000	20
Specific gravity liquid component at 25°C			ISO 1675 : 1988	1.57	1.22
Specific gravity cured product at 23°C (g/cm <sup>3</sup> )				-	1.55
Pot life at 25°C (200 g) (min.)	RE 12551 POLYOL	-(94) -(96)	Gel Timer TECAM		40 60
Curing time at 25°C (200gr)			Hours		12 - 24
Final hardness at 25°C (200gr)			Days		7

MECHANICAL PROPERTIES at 23°C <sup>(1)</sup>			
Hardness	ISO 868 : 2003	Shore D1 / D15	38 / 31
Tensile strength	ISO 37 : 2004	MPa	5
Elongation at break	ISO 37 : 2004	%	130

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

## PROCESSING

**Before use** Isocyanate RE 1010: check carefully the absence of crystallisation or dimerisation on each package:

- solid particle presence
- cloudy liquid

In case of crystallisation or dimerisation, the product must be placed in an oven at 60°C until complete decrystallisation (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.**

It is necessary to mix the POLYOL part until both colour and aspect become homogeneous. 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.

THERMAL AND SPECIFIC PROPERTIES <sup>(1)</sup>			
Working temperature	-	°C	-50 / +120
Thermal conductivity	EN 993-15	W/m.K	0.73
Glass transition temperature (Tg)	ISO 11359 : 2002	°C	-14
Coefficient of thermal expansion (CTE) (-50°C to -10°C) (+5°C to +130°C)	ISO 11359 : 1999	10 <sup>-6</sup> K <sup>-1</sup>	57 157
Auto-extinguishing	According to UL94	6 mm thickness	V0
Water absorption (23°C – 24 Hours )	ISO 62 :1999	%	0.3
Directive 2002/95/CE (ROHS) (2)	-	-	conform

(1) Average values obtained on standard specimens / hardening 16 hours at 80°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 <sup>(1)</sup>			
Dielectric strength (50 Hz - 1 mm)	CEI 60243-1 E2 :1998	kV/mm	22
Dielectric constant ε (100 Hz)	CEI 60250 : 1969	-	7
Dissipation factor tan δ (100 Hz)	CEI 60250 : 1969	-	0.14
Volume resistivity (1000 V)	CEI 60093 E2 : 1980	Ω.cm	5.10 <sup>14</sup>

### 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 product safety data sheet.

### STORAGE CONDITIONS

Storage at a temperature below 5°C can provoke crystallisation and dimerisation of the ISOCYANATE RE 1010. Shelf life is 12 months for the POLYOL and 12 months for ISOCYANATE 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.).

### 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