

## DESCRIPTION

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

Example: capacitors, transformers, electronic cards and components with UL 94 V0.

## PROPERTIES

- Two-component liquid polyurethane resin
- Semi-flexible
- Good thermal conductivity
- Very good thermal behaviour
- UL 94 V0 halogen free
- GWIT , GWFI

PHYSICAL PROPERTIES					
Composition			POLYOL RE 12551	ISOCYANATE RE 1020	MIXED
Mix ratio by weight			100	14	
Mix ratio by volume at 25°C			100	18	
Aspect			liquid	liquid	liquid
Colour	<b>RE 12551 POLYOL</b>	<b>-(94) -(96)</b>	black	dark-amber	black
Viscosity at 25°C (mPa.s)		BROOKFIELD LVT	6,000	125	2,400
Specific gravity at 25°C		ISO 1675 : 1988	1.57	1.22	-
Specific gravity cured product at 23°C			-	-	1.55
Gel Time at 25°C on 200 g (min)	<b>RE 12551 POLYOL</b>	<b>-(94) -(96)</b>	Gel Timer TECAM		30 60
Curing time at 25°C		Hours			12 - 24
Final hardness at 25°C		Days			7

MECHANICAL PROPERTIES at 23°C <sup>(1)</sup>			
Hardness	ISO 868 : 2003	Shore D1 / D15	55 / 48
Tensile strength	ISO 37 : 2011	MPa	5
Elongation at break	ISO 37 : 2011	%	50

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

## PROCESSING

Before use it is necessary to mix the POLYOL part until both colour and aspect become homogeneous. 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.

## THERMAL AND SPECIFIC PROPERTIES <sup>(1)</sup>

Working temperature	-	°C	-50 / +130
Thermal conductivity	ISO 2582 :1978	W/m.K	0.73
Glass transition temperature (Tg)	ISO 11359 : 1999	°C	-8
Coefficient of thermal expansion (CTE)	[-50 to -10]°C [+5 to +130]°C	ISO 11359 : 1999	10 <sup>-6</sup> K <sup>-1</sup> 55 155
Auto-extinguishing	UL94 : 1979	6 mm thickness	V0 <sup>(2)</sup>
Water absorption (23°C – 24 Hours)	ISO 62 :1999	%	0.3
Glow wire flammability test GWIT	NF EN 60695-2-10	°C-mm	825-8
Glow wire flammability test GWFI	NF EN 60695-2-12	°C-mm	960-8
Directive 2002/95/CE (ROHS) <sup>(3)</sup>	-	-	conform

<sup>(1)</sup> Average values obtained on standard specimens / hardening 16 hours at 80°C.

<sup>(2)</sup> UL file number: E113398.

<sup>(3)</sup> 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>
Proof tracking index	CEI 60112 : 2004	-	PTI 600 - < 0,1

## 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

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