

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 and EN 45545 qualification.

PROPERTIES

- Semi-flexible
- Low viscosity
- Good thermal conductivity
- UL 94 V0, EN 45545
- UL 746 HAI, HWI
- High thermal resistance RTI 150°C

PHYSICAL PROPERTIES				
Composition		POLYOL RE12531-(93)	ISOCYANATE RE1020	MIXED
Mix ratio by weight		100	14	
Mix ratio by volume at 25°C		100	18	
Aspect		liquid	liquid	liquid
Colour		black	amber	black
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	4,100	125	1,650
Specific gravity at 25°C	ISO 1675 : 1985	1.58	1.22	-
Specific gravity of cured product at 23°C	ISO 2781 : 1988	-	-	1.57
Gel Time at 25°C on 200 g (min)	Gel Timer TECAM			22
Curing time at 25°C (200 g)	Hours			12 - 24
Final hardness at 25°C (200 g)	Days			7

MECHANICAL PROPERTIES at 23°C ⁽¹⁾			
Hardness	ISO 868 : 2003	Shore D1 /D15	53 / 47
Tensile strength	ISO 37 : 2011	MPa	5
Elongation at break	ISO 37 : 2011	%	50
Tear strength	ISO 34 : 2004	kN/m	12

⁽¹⁾ 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. 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 ⁽¹⁾			
Working temperature	-	°C	- 50 / + 160
Thermal conductivity	ISO 2582 : 1978	W/m.K	0.73
Glass transition temperature (Tg)	ISO 11359 : 199	°C	- 10
Coefficient of thermal expansion (CTE) [-60 to -20]°C [-10 to +160]°C	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	40 155
Relative temperature index (RTI) : Mechanical Electrical	UL 746B	°C	150 ⁽³⁾ 150 ⁽³⁾
Auto-extinguishing	UL94 : 1999	3 mm thickness	V0 ⁽³⁾
Fire behaviour	NF EN 45545-2:2013	R22	HL2
		R23	HL3
		R24	HL3
Hot wire ignition (HWI)	UL 746 A	Category PLC	0 ⁽³⁾
High current arc ignition (HAI)	UL 746 A	Category PLC	0 ⁽³⁾
Water absorption (23°C – 24 Hours)	ISO 62 : 1999	%	0.3
Directive 2011/65/EU (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.

⁽³⁾ UL file number: E 113398.

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 (100 Hz)	CEI 60250 : 1969	-	7
Dissipation factor tan δ (100 Hz)	CEI6 60250 : 1969	-	0.14
Volume resistivity (1000 V)	CEI 60093 E2 : 1980	Ω.cm	4.10 ¹³
Comparative Tracking Index (CTI)	CIE 60112		0 ⁽³⁾
Inclined Plane Tracking (IPT) at 2.5kV	ASTM D 2303	min	60

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.



BUILDING TRUST



RE 12531-(93) POLYOL RE 1020 ISOCYANATE ELECTRICAL POLYURETHANE RESIN SEMI-FLEXIBLE – SELF EXTINGUISH – UL 94 V0

STORAGE CONDITIONS

Shelf life of both parts is **12 months** in a dry place and in their original unopened containers at a temperature between 15 to 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

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