

DESCRIPTION

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

Example: capacitors, transformers, electric components.

PROPERTIES

- Rigid
- Fast cure
- Self extinguish
- Good thermal conductivity

PHYSICAL PROPERTIES				
Composition		POLYOL RE 12851	ISOCYANATE RE 1030	MIXED
Mix ratio by weight		100	20	
Mix ratio by volume at 25°C		100	28	
Aspect		liquid	liquid	liquid
Colour		Beige	dark amber	beige
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	20,000	200	3,800
Specific gravity at 25°C	ISO 1675 : 1985	1.66	1.22	-
Specific gravity cured product at 23°C	ISO 2781 : 1996	-	-	1.63
Gel Time at 25°C on 200 g (min)	Gel Timer TECAM			10
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	85 / 82
Tensile strength	ISO 527 : 1993	MPa	28
Elongation at break	ISO 527 : 1993	%	4
Flexural modulus	ISO 178 : 2010	MPa	2800
Charpy impact	ISO 179/1eU : 1994	kJ/m ²	8

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

PROCESSING

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.

THERMAL AND SPECIFIC PROPERTIES ⁽¹⁾

Working temperature	-	°C	-50 / +130
Thermal conductivity	EN 993-15	W/m.K	0.75
Glass transition temperature (T _g)	ISO 11359 : 1999	°C	+ 43
Coefficient of thermal expansion (CTE)	[-20 to +30]°C [+50 to +120]°C	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹ 70 145
Auto-extinguishing	According UL94 : 1979	6 mm	V0 ⁽³⁾
Water absorption (23°C – 24 Hours)	ISO 62 : 1999	%	0.17
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⁾ Internal tests

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	-	5.0
Dissipation factor tan δ (100 Hz)	CEI 60250 : 1969	-	0.04
Volume resistivity (1000 V)	CEI 60093 E2 : 1980	Ω.cm	2.10 ¹⁶

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