

DESCRIPTION

Casting resin for mechanical and numerous electrical applications especially for low or medium voltage.
Example: potting transformers, capacitors .

PROPERTIES

- Two-component liquid polyurethane resin
- High thermal conductivity
- Rigid
- Low viscosity

PHYSICAL PROPERTIES					
Composition			POLYOL RE 12840	ISOCYANATE RE 1010	MIXED
Mix ratio by weight			100	30	
Mix ratio by volume at 25°C			100	40	
Aspect			liquid	liquid	liquid
Colour	RE 12840 POLYOL	-(84) -(94)	brown black	dark-amber	brown black
Viscosity at 25°C (mPa.s)		BROOKFIELD LVT	7,000	20	800
Specific gravity at 25°C		ISO 1675 : 1985	1.60	1.22	-
Specific gravity cured product at 23°C		ISO 2781 : 1996	-	-	1.58
Gel Time at 25°C on 200 g (min)	RE 12840 POLYOL	-(84) -(94)	Gel Timer TECAM		30
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	86 / 84
Tensile strength	ISO 527 : 1993	MPa	40
Elongation at break	ISO 527 : 1993	%	5
Flexural modulus	ISO 178 : 2010	MPa	4,500

⁽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
- Sloudy 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 ⁽¹⁾

Working temperature	-	°C	-40 / +130
Thermal conductivity	ISO 2582 : 1978	W/m.K	0.65
Glass transition temperature (Tg)	ISO 11359 : 1999	°C	50
Coefficient of thermal expansion (CTE) [-40 to +40]°C [+80 to +130]°C	ISO 11359 : 1999	10 ⁻⁶ K ⁻¹	40 150
Water absorption (23°C – 24 Hours)	ISO 62 :1999	%	0.25
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 ⁽¹⁾

Dielectric strength (50 Hz - 1 mm)	CEI 60243-1 E2 :1998	kV/mm	24
Dielectric constant ε (100 Hz)	CEI 60250 : 1969	-	4.0
Dissipation factor tan δ (100 Hz)	CEI 60250 : 1969	-	1.10 ⁻²
Volume resistivity (1000 V)	CEI 60093 E2 : 1980	Ω.cm	1.10 ¹⁵



BUILDING TRUST



RE 12840 POLYOL RE 1010 ISOCYANATE ELECTRICAL POLYURETHANE RESIN RIGID

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