

## Electrical polyurethane resin

### PRODUCT DESCRIPTION

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

<b>Resin</b>	<b>U69-42 A</b>	100 parts by weight	100 parts by volume
<b>Hardener</b>	<b>U69-42 B</b>	16 parts by weight	20 parts by volume

U69-42 part A and part B are compliant with REACH and RoHS regulations. If you want a certificate, please contact us ([info@abchimie.com](mailto:info@abchimie.com)).

### COMPONENTS DESCRIPTION:

#### **1-1 Resin U69-42 A**

Modified aliphatic polyol based resin

<b>density (25°C)</b>	ISO 1675/1985		1,57
<b>viscosity (25°C)</b>	BROOKFIELD LVT	mPa.s	7000

#### **1-2 Hardener U69-42 B**

MDI based hardener

<b>density (25°C)</b>	ISO 1675 :1985		1,22
<b>viscosity (25°C)</b>	BROOKFIELD LVT	mPa.s	20

### CURING :

Gel time, at 25 °C on 200g mixing

U69-42	Black resin:	30min
U69-42 W	White resin:	50min

Mixing density :1.55 (ISO 2781 : 1996)

Initial viscosity of mixing (25 °C, BROOKFIELD LVT) : 1100mPa.s

Curing time, at 25°C on 200g mixing : 12 to 24h

## **PROPERTIES on cured resin:**

<i>Properties</i>	<i>Standard</i>	<i>Unit</i>	<i>Value</i>
Tensile strength	ISO 37 : 2004	MPa	7
Elongation at break	ISO 37 : 2004	%	110
Coefficient of thermal expansion	ISO 11359 :1999	10 <sup>-6</sup> K <sup>-1</sup>	45 /140
Hardness	ISO 868 : 2003	D1/D15	46/ 36
Glass transition temperature	ISO 11359 : 2002	°C	-5
Dielectric strength (50 Hz - 1 mm)	CEI 60243-1 E2 :1998	kV/mm	25
Dielectric constant $\epsilon$ (100Hz)	CEI 60250 : 1969		7,7
Dissipation factor tg $\delta$ (100Hz)	CEI 60250 : 1969		0,12
Volume resistivity (1000V)	CEI 60093 E2 :1980	$\Omega$ .cm	2.10 <sup>14</sup>
Thermal conductivity	EN 993-15	W/m°K	0,7
Water absorption(23°C -24h)	ISO 62 :1999		0,3

## **PROCESSING:**

Before use Isocyanate U69-42 B (or U001B) : check carefully the absence of crystallisation or dimerization on each package:

- Solid particle presence.
- Cloudy liquid.

In case of crystallisation or dimerization, the product must be placed in on oven at 60°C until complete decrystallisation (16 hours maximum). Rehomogeneize 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.

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.

## **STORAGE AND SHELF LIFE:**

Storage temperature: 5 to 30°C

A temporary lower temperature during few days (transport) doesn't distort varnish properties.

Shelf life: 12 months after the date of manufacturing

Self life is 12months for the resin and the hardener in a dry place and in their original unopened containers at a temperature between 15 and 25°C.

Any open can must be tightly closed under dry inert gas (dry air, nitrogen...).

*All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. ABchimie cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.*