

ALCHEMIX® PU 7241

*Two Part Polyurethane Electrical Encapsulant
80 – 85 Shore D Hardness*

ALCHEMIX PU 7241 is a high performance electrical encapsulant for cable jointing applications. The low resin viscosity facilitates easy mixing and the rapid infill of joints. The resin cures to a hard product that exhibits excellent adhesion, water resistance and outstanding electrical properties.

Special Features

- Excellent flow characteristics
- High hardness
- Excellent adhesion
- Outstanding electrical properties
- Excellent water resistance
- Low reaction exotherm

Mix Ratio

	PU 7241A : PU 7241B
By Weight	100 : 19
By Volume	100 : 26

Product Data

Property	Units	PU 7241A	PU 7241B	Mix
Material	-	Formulated Polyol	Isocyanate	Polyurethane
Appearance	-	Beige Liquid	Brown Liquid	Black Liquid
Viscosity (25°C)	mPa.s	12,000 – 20,000	180 – 240	4,500 – 7,500
Density (25°C)	g/cm ³	1.68 – 1.73	1.21 – 1.25	1.58 – 1.63
Pot Life (200g, 25°C)	Minutes	-	-	8 – 12
Minimum Cure Time	Hours	-	-	4
Full Cure (200g, 25°C)	Hours	-	-	48

Technical Data Sheet

Cured Properties

Properties	Units	Typical Values (Full Cure)
Hardness	Shore D	80 – 85
Tensile Strength	MPa	15
Elongation	%	2.1
Linear Shrinkage	500 x 50 x 10 mm	<0.05%
Thermal Conductivity	W/m/°C	0.68
Coefficient of Thermal Expansion	K ⁻¹	5 x 10 ⁻⁴
Water Absorption	-	0.06%
Maximum Operating Temperature (Continuous)	°C	120

Electrical Properties

Properties	Units	Typical Values (Full Cure)
Dielectric Strength	kV/mm	18
Permittivity (50Hz, 20°C)	-	5.4
Volume Resistivity	ohm-cm	20 x 10 ¹⁴

Method of Use

ALCHEMIX PU 7241 can be hand mixed or machine dispensed. Compatibility with mixing machine should be tested prior to large scale usage. ALCHEMIX PU 7241A and B should be mixed at the stated ratio; deviation from this ratio will reduce the physical properties of the material. Pre-weighed twinpacks are available for easy mixing and dispensing, please contact Alchemie Ltd for more details.

Technical Data Sheet

Both components should be thoroughly mixed; incomplete mixing will give wet spots, and will reduce the physical properties of the cured system. ALCHEMIX PU 7241 is designed to be used and cured at room temperature.

Storage

ALCHEMIX PU 7241A and B should be stored in original, unopened containers between 20 and 25°C. ALCHEMIX PU 7241B may crystallize partially or completely if not stored at above 20°C. Like all polyurethanes, both components are moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, ALCHEMIX PU 7241A and B will have a shelf life of 6 months, from the date of production.

Packaging

ALCHEMIX PU 7241A is supplied in 5.47 litre and 147 litre containers.
ALCHEMIX PU 7241B is supplied in 1.46 litre and 202.8 litre containers.
Other pack sizes are available on request.

(Please contact Alchemie Ltd for bulk supply or supply in twinpacks)

Further Information

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended process and use.

Before using any of our products, users should familiarize themselves with the relevant Technical and MSDS provided by Alchemie Ltd.

Technical Data Sheet

Alchemie Limited

Alchemie Ltd develop, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.

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