

Flexible polyurethane resin

PRODUCT DESCRIPTION

U4291 A+B is a flexible, two-part polyurethane resin that has a low viscosity and low embedment stress. The resin has been developed for encapsulation of delicate components requiring environmental protection in harsh damp conditions. The material may be supplied in Kit Twinpack and Bulk form.

U4291 A+B can be used for several applications: Encapsulation of delicate components, transducers, inductance coils.

U4291 is compliance with REACH and RoHS regulations. If you want a certificate, please contact us (info@abchimie.com).

FEATURES

- Low mixed viscosity
- Fast curing
- Low embedment stress
- Low water absorption
- Excellent electrical insulation characteristics

APPLICATION and CURING CONDITIONS

Mix Ratio by Weight (A : B) **3,86 : 1**

Mix Ratio by Volume (A : B) **4,03 : 1**

Curing (150mL)	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
Room Temperature (20-25°C)	15-18min	25-30min	24	72
60°C	-		4	8
80°C	-		1	2

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required.

PROPERTIES

U4291 A+B liquid

Physical data	Resin : part A	Hardener : part B
Colour	Clear	Amber
Specific Gravity	1,0	1,05
Viscosity (mPas) @25°C	400-800	150-350

U4291 A+B cured

Peak Exotherm (250g)	45°C
Shrinkage (volume)	0.2%
Thermal conductivity	0.22 W/mK
Temperature range	-50 to +120°C (application & geometry dependent)
Dielectric Strength	18 kV/mm
Volume Resistivity	10.10 ¹⁴ ohm-mm
Shore A Hardness	14-20
Heat Deflection	Flexible
Flame retardant	No
Loss Tangent	0.02 @ 50 Hz
Permittivity	3.2 @ 50 Hz
Tg	-25°C
Comparative tracking index	>600 V
Water Absorption	0.6% (30 days @ 25°C)
Elongation at break	≈75%

PACKAGING:

U4291 A+B K05K

REFERENCES

Kit 5 kg

STORAGE AND SHELF LIFE:

Material stored in the original unopened containers under cool dry condition between 10 and 25°C will have a shelf life of at least one-year. Once used the containers must be kept sealed to prevent effects from water, air or contaminants.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing.

Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties.

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.