

POLYURETHAN POTTING GEL

TCR-V-PU-2C-HV-AL

dispensable / 2 parts / high viscosity

TCR-V-PU-2C-HV-AL is a 2-part addition cure polyurethan potting compound which is filled with thermally conductive fillers of high temperature stability. It is characterised by very good dielectric and mechanic properties and is suited for encapsulating electric and electronic parts such as transformers, capacitors, inductors, sensors, LEDs and can be moulded or dispensed under normal conditions at room temperature or in vacuum. Its rheologic behaviour allows for usage in geometries that are difficult to access.



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PROPERTIES

- Polyurethan
- High viscosity
- 2 part addition cure
- Thermal conductivity: 3.5 W/mK
- Almost zero stress on components
- Dispensable or mouldable
- Solvent-free
- High resistivity against water and humidity
- Free of halogenated flame retardants

AVAILABILITY

- Tinplate container

APPLICATION EXAMPLES

Thermal link of:

- Inductors
 - Capacitors
 - LED
 - Battery packs
- For use in Automotive applications
/ Telecommunication / Controlling
units / Industrial PCs

Technical Data Sheet

PROPERTY	UNIT	CASTING RESIN	HARDENER
MATERIAL		Polyurethan	Aliphatic Isocyanate
Colour		Natural	Transparent
Density @ 22 °C	g/cm ³	2.1 – 2.3	1.10 – 1.15
Mixing Ratio	Weight		100 : 9
Viscosity (@ 22 °C, 10 rpm)	mPas	150,000 – 200,000	450 – 750
Viscosity (Mixed, @ 22 °C, 10 rpm)	mPas		110,000 – 130,000
Hardness	Shore D		35 – 45
Water absorption (30 days @ 23 °C)	%		0.4
Coefficient of Thermal Expansion < T _g , TMA	1 x 10 ⁻⁶ /K		156.2
> T _g , TMA	1 x 10 ⁻⁶ /K		187.9
Curing Shrinkage	%		< 1
Pot Life (100g @ 22 °C / adjustable)	min		30 – 50
Curing Time @ 22 °C / Full chemical hardening	h / days		16 – 30 / 10 – 14
Shelf Life (from Date of Manufacturing, unopened @ 15 – 25 °C)	Months		6
Flammability (Equivalent)	UL 94		VO (5.6 mm)
RoHS Conformity	2015 / 863 / EU		Yes
Class of Insulation			B
TECHNICAL			
Thermal Conductivity	W/mK		3.5
Operating Temperature	°C		- 40 to + 130
Dielectric Strength	kV/mm		28
Volume Resistivity (@ 23 °C, 50% rel. H.)	Ohm - cm		1 x 10 ¹⁵
Dielectric Constant (ε _r)	@ 50 Hz / 1 kHz / 1 MHz @ 23 °C		5.5 / 4.5 / 3.9
Dielectric Loss Factor (tan δ)	@ 50 Hz @ 23 °C		0.09
Comparative Tracking Index (CTI)			600

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