POLYURETHAN POTTING GEL
TCR-L-PU-2C-LV-AR dispensable / 2 parts / low viscosity

TCR-L-PU-2C-LV-AR 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 transformators, 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.

Release 12 / 2020

PROPERTIES
- Polyurethan
- Low viscosity
- 2 part addition cure
- Thermal conductivity: 2.1 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

PROPERTY	UNIT	CASTING RESIN	HARDENER
MATERIAL		Polyurethan	Aromatic Isocyanate
Colour		Blue	Brown
Density @ 22 °C	g/cm³	2.4 – 2.5	1.20 – 1.25
Mixing Ratio	Weight	100 : 8	
Viscosity (@ 22 °C, 10 rpm)	mPas	100,000 – 120,000	15 – 35
Viscosity (Mixed, @ 22 °C, 10 rpm)	mPas	10,000 – 15,000	
Hardness	Shore D	50 – 60	
Tensile Strength	psi	870 – 1,160	
Elongation at Break	%	9 – 10	
Young Modulus	kpsi	8 – 8.7	
Curing Shrinkage	%	< 1	
Pot Life (100 g @ 22 °C / adjustable)	min	10 – 30	
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	V0 (4.0 mm)	
RoHS Conformity	2015 / 863 / EU	Yes	
Class of Insulation		B	
TECHNICAL			
Thermal Conductivity	W/mK	2.1	
Operating Temperature	°C	- 40 to + 165	
Dielectric Strength	kV/mm	28	
Volume Resistivity (@ 23 °C, 50 % rel. H.)	Ohm - cm	1 x 10^{15}	
Dielectric Constant (εr)	@ 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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