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

TCR-J-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 02 / 2023

PROPERTIES
- Polyurethan
- Low viscosity
- 2 part addition cure
- Thermal conductivity: 1.5 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

PROPERTY	UNIT	CASTING RESIN	HARDENER
MATERIAL		Polyurethan	Aromatic Isocyanate
Colour		Natural	Brown
Density @ 22 °C	g/cm³	2.45 – 2.55	1.20 – 1.25
Mixing Ratio	Weight	100 : 8	
Viscosity (@ 22 °C, 10 rpm)	mPas	45,000 – 50,000	160 – 240
Viscosity (Mixed, @ 22 °C, 10 rpm)	mPas	5,800 – 6,500	
Hardness	Shore D	40 – 50	
Tensile Strength	psi	580	
Elongation at Break	%	25	
Water absorption (30 days @ 23 °C)	%	0.2	
Young Modulus	kpsi	9.4	
Coefficient of Thermal Expansion < Tg, TMA > Tg, TMA	 1 x 10^{-6}/K 1 x 10^{-6}/K	 72.5 141.7	
Curing Shrinkage	%	< 1	
Pot Life (100 g @ 22 °C / adjustable)	min	25 – 35	
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 (1.5 mm)	
RoHS Conformity	2015 / 863 / EU	Ja	
Class of Insulation		F	
TECHNICAL			
Thermal Conductivity	W/mK	1.5	
Operating Temperature	°C	- 50 to + 160	
Dielectric Strength	kV/mm	28	
Volume Resistivity (@ 23 °C, 50 % rel. H.)	Ohm - cm	1 x 10^{15}	
Dielectric Constant (Ɛr)	@ 50 Hz / 1 kHz / 1 MHz @ 23°C	5.6 / 4.5 / 3.9	
Dielectric Loss Factor (tan δ)	@ 50 Hz @ 23 °C	0.09	
Comparative Tracking Index (CTI)		600	

All data without warranty and subject to change. Please contact us for further data and information.

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