

PK404DM

Two-Part Fast Curing Thermally Conductive Gel

LiPOLY PK404DM is a two-part liquid gap filler, fast cured at room temperature or elevated temperature. With a thermal conductivity of 3.6 W/m*K, PK404DM provides high thermal conductivity and low thermal impedance. It is ideally suited for dispensing using the LiPOLY dispensing robot or by syringe. Available in 50ml and 400ml cartridges.



Features-

- Thermal conductivity: 4.0W/m*K
- Ultra soft
- High compressibility
- Low oil-bleed
- Naturally tacky for ease of manufacturing

Applications-

- Between CPU and heat sink.
- Between a component and heat sink.
- Power supplies
- High speed mass storage drives
- Telecommunication hardware

Configurations-

- Cartridges: 50ml, 400ml
- Other special and custom sizes are available upon request

Typical Properties-

PROPERTY	PK404DM	TEST METHOD	UNIT
Color	Blue (A part)	visual	-
	White(B part)		
Solid content	100%(Two-part: 1:1)	-	-
Viscosity A	47	THERMO HAAKE RV1 C35/2 TiL R=4.0 (1/s)	Pa.s
Viscosity B	48	THERMO HAAKE RV1 C35/2 TiL R=4.0 (1/s)	Pa.s
Density	3.0	ASTM D792	g/cm3
Shelf Life	6 months	-	-
SOLID (AFTER CURE)			
Thermal Conductivity	3.6	ASTM D5470	W/m*K
Thermal Impedance@10mils BLT	0.25	ASTM D5470	°C-In ² /W
Thermal Impedance@20mils BLT	0.47	ASTM D5470	°C-In ² /W
Thermal Impedance@30mils BLT	0.73	ASTM D5470	°C-In ² /W
Hardness (Shore 00)	83	ASTM D2240	-
Volume Resistivity	1012	ASTM D257	Ohm-cm
Working Temp (long term)	-55 to 205°C	-	°C
Operating ambient Temp.	20 to 30°C	-	°C
Flame Rating	V-0	UL94	-
CURE SCHEDULE			
Pot Life	10~15 min	-	-
Cure @ 25°C (min)	30 min	-	-
Cure @ 100°C (sec)	72 sec	-	-
Cure @ 150°C (sec)	20 sec	-	-
RELIABILITY			
Thermal Impedance	initial	250 hr	500 hr
80°C Aging	0.17	0.18	0.18
125°C Aging	0.17	0.19	0.18
85°C/85% RH	0.17	0.18	0.18

※These data are provided for reference only. Engineers are reminded to test the material in varied application.

Dispensing Instructions-

Use the disposable plastic static mixing nozzles to mix parts A and B together to the desired ratio. Liquid gap fillers can be dispensed using an automatic dispensing machine or a manual dispensing tool that can be provided by LiPOLY upon request/purchase. The disposable plastic static mixing nozzles cannot be re-used.

Storage-

Two-part liquid gap fillers should be stored in climate-controlled environments at or below 25°C. Keep liquid gap fillers away from direct sunlight and away from high-temperature environments.

Shelf Life-

12 months unopened under standard room conditions.

Precautions-

The two-part liquid gap filler may not cure properly if it comes into contact with certain substances, including amine, sulfur, organophosphorus compounds, and organotin compounds. Please avoid the following substances when handling: (N, P, S, Sn, Pb, Hg, Sb, Bi, As)

Ensure a clean mixing container is used (e.g.: paper cup or plastic cup) before injecting the A and B parts into the mixing container. The plasticizer, wax from the cups, varnish or the epoxy from the oven may contaminate the A and B parts. You are reminded to pre-test the gap filler before using it.