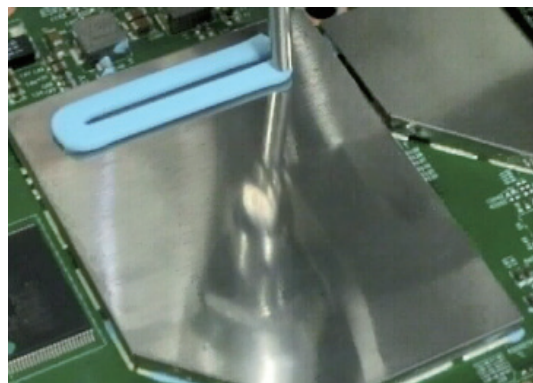


# PK404DM

## 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	-	-
<b>SOLID (AFTER CURE)</b>			
Thermal Conductivity	3.6	ASTM D5470	W/m*K
Thermal Impedance@10mils BLT	0.25	ASTM D5470	°C-In <sup>2</sup> /W
Thermal Impedance@20mils BLT	0.47	ASTM D5470	°C-In <sup>2</sup> /W
Thermal Impedance@30mils BLT	0.73	ASTM D5470	°C-In <sup>2</sup> /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	-
<b>CURE SCHEDULE</b>			
Pot Life	10~15 min	-	-
Cure @ 25°C (min)	30 min	-	-
Cure @ 100°C (sec)	72 sec	-	-
Cure @ 150°C (sec)	20 sec	-	-
<b>RELIABILITY</b>			
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-

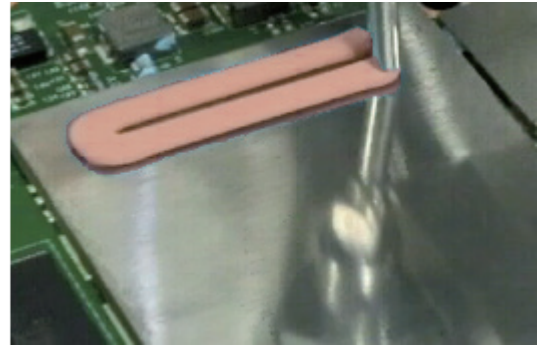
The two-part liquid gap filler may not cure properly if it comes into contact with certain substances, including amine, sulfur, organophosphorus compounds, and organotin compounds. Please avoid the following substances when handling: (N, P, S, Sn, Pb, Hg, Sb, Bi, As)

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.

# PK605DM

## Two-Part Fast Curing Thermally Conductive Gel

LiPOLY PK605DM is a two-part liquid gap filler, fast cured at room temperature or elevated temperature. With a thermal conductivity of 5.0 W/m\*K, PK605DM 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: 5.0 W/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	PK605DM	TEST METHOD	UNIT
Color	Red (A part)	visual	-
	White(B part)		
Solid content	100%(Two-part: 1:1)	-	-
Viscosity A	110	THERMO HAAKE RV1 C35/2 TiL R=4.0 (1/s)	Pa.s
Viscosity B	80	THERMO HAAKE RV1 C35/2 TiL R=4.0 (1/s)	Pa.s
Density	3.3	ASTM D792	g/cm <sup>3</sup>
Shelf Life	12 months	-	-
<b>SOLID (AFTER CURE)</b>			
Thermal Conductivity	5.0	ASTM D5470	W/m*K
Thermal Impedance@10mils BLT	0.09	ASTM D5470	°C-In <sup>2</sup> /W
Thermal Impedance@20mils BLT	0.17	ASTM D5470	°C-In <sup>2</sup> /W
Thermal Impedance@30mils BLT	0.25	ASTM D5470	°C-In <sup>2</sup> /W
Hardness (Shore 00 )	86	ASTM D2240	-
Volume Resistivity	>10 <sup>12</sup>	ASTM D257	Ohm-cm
Working Temp (long term)	-55 to 200°C	-	°C
Operating ambient Temp.	20 to 30°C	-	°C
Flame Rating	V-0	UL94	-
<b>CURE SCHEDULE</b>			
Pot Life	20~30 min	-	-
Cure @ 25°C (min)	108 min	-	-
Cure @ 100°C (sec)	2 min	-	-
Cure @ 120°C (sec)	0.5 min	-	-
<b>RELIABILITY</b>			
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.

# TPS587/588/589

## Two-Part Thermally Conductive Gap Filler

LiPOLY's TPS range are two-part silicone-based, cure in place, thermally conductive gap fillers which can be used to couple hot electronic components on PC boards with an adjacent metal case or heat-sink.



### Features-

- Thermal conductivity: 0.8/1.5/2.0 W/m\*K
- Two-part liquid gap filler
- Fast cure time

### Typical Applications-

- Automotive electronics
- Telecommunications
- Computer and peripherals
- Thermally conductive vibration dampening
- Between any heat-generating component and a heat sink

### Shelf Life-

- 12 months unopened under standard conditions

### Typical Properties-

PROPERTY	TPS587	TPS588	TPS589	TEST METHOD	UNIT
Color	White/Gray	White/Gray	White/Gray	-	-
Resin Base	Silicone	Silicone	Silicone	-	-
A:B	1:1	1:1	100:3	-	-
Viscosity (dynamic at 23")	15	20	5	ASTM D2196	PaS
Density	2.15	2.0	1.8	ASTM D792	g/cm <sup>3</sup>
Application temperature	-60~180	-60~180	-60~180	-	°C
Curing Condition 1	100°C/5 min	100°C/5 min	RT 7 day	-	-
Curing Condition 2	60°C/30 min	60°C/30 min	-	-	-
Curing Condition 3	25°C/300 min	25°C/300 min	-	-	-
Hardness	10	25	50	ASTM D2240	Shore A
<b>ELECTRICAL</b>					
Dielectric breakdown	350	350	350	ASTM D149	V/mil
Volume resistivity	>10 <sup>13</sup>	>10 <sup>12</sup>	>10 <sup>11</sup>	ASTM D257	Ohm-m
<b>THERMAL</b>					
Thermal Conductivity	2.0	1.5	0.8	ASTM D5470	W/m*K