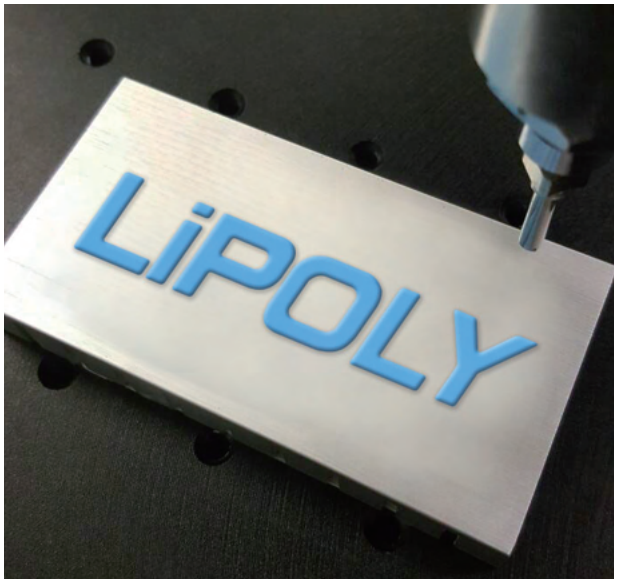
PK404DM

Two-Part Thermal Conductive Gap Filler

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 dispensing robot or by syringe.

FEATURES

/ Thermal conductivity: 3.6 W/m*K
/ Fast curing in normal atmospheric temperature
/ Great reliability
/ Great sealing in low pressure



TYPICAL APPLICATION

/ Between CPU and heat sink
/ Between a component and heat sink
/ Power supplies
/ High speed mass storage drives
/ Telecommunication hardware
/ Electric vehicle& Automotive battery
/ 5G base station & infrastructure
/ EV electric vehicle

CONFIGURATIONS

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

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 30°C. Keep liquid gap fillers away from direct sunlight and away from high-temperature environments.

PRESERVATION

It can be preserved for 24 months under the condition of unopened and under room temperature 30℃. (Note:The product may experience oil-powder separation after being stored for an extended period, which is a natural sedimentation phenomenon caused by the density difference between silicone oil and powder. This does not affect its functionality and can be used as normal. It is recommended to stir the product evenly before use.)

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.

PLEASE NOTE

/ The two-part items, due to the different liquid levels of the agents the mixture cannot reach a 1:1 ratio it might cause curing not entirely. We recommend to squeeze out 1.5g treat as waste.

/ It's recommended that the diameter of mixing tube outlet should be 3mm at least, which can solve the possible problem of poor fluidity caused by ambient temperature.

TYPICAL PROPERTIES

PROPERTY	PK404DM	TEST METHOD	UNIT
Color	Blue (A part) White (B part)	Visual	-
Solid content	100% (Two-part : 100:100)	-	-
Viscosity A	47	ISO 3219	Pa.s
Viscosity B	48	ISO 3219	Pa.s
Density	3.0	ASTM D792	g/cm³
Shelf life	24 months	-	-
ROHS & REACH	Compliant	-	-
SOLID(AFTER CURE)			
Thermal conductivity	3.6	ASTM D5470	W/m*K
Thermal impedance@10mils BLT	0.252	ASTM D5470	°C-in²/ W
Thermal impedance@20mils BLT	0.471	ASTM D5470	°C-in²/ W
Thermal impedance@30mils BLT	0.568	ASTM D5470	°C-in²/ W
Hardness	80	ASTM D2240	Shore OO
Working temp (long term)	-60 ~ 200	-	°C
Operating ambient temp	20 ~ 30	-	°C
ELECTRICAL			
Dielectric breakdown	8	ASTM D149	KV/mm
Surface resistivity	>10¹⁰	ASTM D257	Ohm
Volume resistivity	>10¹⁰	ASTM D257	Ohm-m
CURE SCHEDULE			
Pot life @ 25°C	10~15	By LiPOLY	min
Surface dry @ 25°C	20~25	By LiPOLY	min
Cure @ 25°C	25~30	By LiPOLY	min
Cure @ 100°C	60	By LiPOLY	sec
Cure @ 120°C	20	By LiPOLY	sec