

# **PK605DM**

# **Two-Part Thermal Conductive Gap Filler**

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 dispensing robot or by syringe.

# **FEATURES**

- / Thermal conductivity: 5.0 W/m\*K
- / Fast curing in normal atmospheric temperature
- / Great reliability
- / Great sealing in low pressure

# **TYPICAL APPLICATIONS**

- / Between CPU and heat sink
- / Between a component and heat sink
- / Power supplies
- / High speed mass storage drives
- / Telecommunication hardware
- / Electric vehicle& Automotive battery

# **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 25°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 25°C.

# 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

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**

Thermal impedance@20mils BLT 0.171 ASTM D5470 °C-in²/ W   Thermal impedance@30mils BLT 0.254 ASTM D5470 °C-in²/ W	PROPERTY	PK605DM	TEST METHOD	UNIT
Solid content     (Two-part : 100:100)     -     -       Viscosity A     110     ISO 3219     Pa.s       Viscosity B     80     ISO 3219     Pa.s       Density     3.3     ASTM D792     g/cm³       Shelf life     24 months     -     -       ROHS & REACH     Compliant     -     -       SOLID(AFTER CURE)     -     -     -       Thermal conductivity     5.0     ASTM D5470     W/m*K       Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in?/W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in?/W       Hardness     85     ASTM D5470     °C-in?/W       Hardness     85     ASTM D2240     Shore OC       Volume resistivity     >10*2     ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C     C       Operating ambient temp     20 ~ 30     -     °C     C       CURE SCHEDULE     E     20~25     By LiPOLY     min       Surfa	Color		Visual	-
Viscosity B     80     ISO 3219     Pa.s       Density     3.3     ASTM D792     g/cm³       Shelf life     24 months     -     -       ROHS & REACH     Compliant     -     -       SOLID(AFTER CURE)     -     -     -       Thermal conductivity     5.0     ASTM D5470     W/m*K       Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C       Operating ambient temp     20 ~ 30     -     °C       CURE SCHEDULE     10~15     By LiPOLY     min       Surface dry @ 25°C     20~25     By LiPOLY     min       Cure @ 100°C     40     By LiPOLY     sec	Solid content		-	-
Density     3.3     ASTM D792     g/cm³       Shelf life     24 months     .	Viscosity A	110	ISO 3219	Pa.s
Shelf life     24 months     -     -       ROHS & REACH     Compliant     -     -       SOLID(AFTER CURE)     -     -     -       Thermal conductivity     5.0     ASTM D5470     W/m*K       Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.171     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D5470     °C-in²/ W       Volume resistivity     >10°2     ASTM D5470     °C-in²/ W       Working temp (long term)     -60 ~ 200     -     °C       Volume resistivity     >10°1²     ASTM D257     Ohm-m       Working temp (long term)     20 ~ 30     -     °C       Operating ambient temp     20 ~ 30     -     °C       Pot life @ 25°C     10~15     By LiPOLY     min       Surface dry @ 25°C     25~30     By LiPOLY     min       Cu	Viscosity B	80	ISO 3219	Pa.s
ROHAR     Compliant     -       ROHS & REACH     Compliant     -     -       SOLID(AFTER CURE)     -     -     -       Thermal conductivity     5.0     ASTM D5470     W/m*K       Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D25470     Shore OC       Volume resistivity     >101²     ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C       Operating ambient temp     20 ~ 30     -     °C       CURE SCHEDULE      10~15     By LiPOLY     min       Surface dry @ 25°C     20~25     By LiPOLY     min       Cure @ 100°C     40     By LiPOLY     min	Density	3.3	ASTM D792	g/cm³
SOLID(AFTER CURE)     Solid Constraint of the second consecond constraint of the second consecond constraint o	Shelf life	24 months	-	-
Thermal conductivity     5.0     ASTM D5470     W/m*K       Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.254     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D2240     Shore OC       Volume resistivity     >1012     ASTM D257     Ohm-m       Working temp (long term)     -60~200     -     °C       Operating ambient temp     20~30     -     °C     °C       Pot life @ 25°C     10~15     By LiPOLY     min     °C       Surface dry @ 25°C     20~25     By LiPOLY     min     °C       Cure @ 100°C     40     By LiPOLY     min     °C	ROHS & REACH	Compliant	-	-
Thermal impedance@10mils BLT     0.092     ASTM D5470     °C-in²/ W       Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D2400     Shore OC       Volume resistivity     >10'2     ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C     OC       Operating ambient temp     20 ~ 30     -     °C     OC       Pot life @ 25°C     10~15     By LiPOLY     min     Min       Surface dry @ 25°C     20~25     By LiPOLY     min     Min       Cure @ 100°C     40     By LiPOLY     min     Min     Min	SOLID(AFTER CURE)			
Thermal impedance@20mils BLT     0.171     ASTM D5470     °C-in²/ W       Thermal impedance@30mils BLT     0.254     ASTM D5470     °C-in²/ W       Hardness     85     ASTM D2240     Shore OC       Volume resistivity     >1012     ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C     °C       Operating ambient temp     20 ~ 30     -     °C     °C <td< td=""><td>Thermal conductivity</td><td>5.0</td><td>ASTM D5470</td><td>W/m*K</td></td<>	Thermal conductivity	5.0	ASTM D5470	W/m*K
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Hardness     ASTM D2240     Shore OC       Volume resistivity     >10 <sup>12</sup> ASTM D257     Ohm-m       Working temp (long term)     -60 ~ 200     -     °C       Operating ambient temp     20 ~ 30     -     °C       CURE SCHEDULE      10~15     By LiPOLY     min       Surface dry @ 25°C     20~25     By LiPOLY     min       Cure @ 100°C     40     By LiPOLY     min	Thermal impedance@20mils BLT	0.171	ASTM D5470	°C-in²/ W
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Operating ambient temp20 ~ 30-°CCURE SCHEDULEPot life @ 25°C10~15By LiPOLYminSurface dry @ 25°C20~25By LiPOLYminCure @ 25°C25~30By LiPOLYminCure @ 100°C40By LiPOLYsec	Volume resistivity	>1012	ASTM D257	Ohm-m
CURE SCHEDULEPot life @ 25°C10~15By LiPOLYminSurface dry @ 25°C20~25By LiPOLYminCure @ 25°C25~30By LiPOLYminCure @ 100°C40By LiPOLYsec	Working temp (long term)	-60 ~ 200	-	°C
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     40     By LiPOLY     sec	Operating ambient temp	20 ~ 30	-	°C
Surface dry @ 25°C20~25By LiPOLYminCure @ 25°C25~30By LiPOLYminCure @ 100°C40By LiPOLYsec	CURE SCHEDULE			
Cure @ 25°C25~30By LiPOLYminCure @ 100°C40By LiPOLYsec	Pot life @ 25°C	10~15	By LiPOLY	min
Cure @ 100°C 40 By LiPOLY sec	Surface dry @ 25°C	20~25	By LiPOLY	min
	Cure @ 25°C	25~30	By LiPOLY	min
Cure @ 120°C     10     By LiPOLY     sec	Cure @ 100°C	40	By LiPOLY	sec
	Cure @ 120°C	10	By LiPOLY	sec

Note: All specifications provided by LiPOLY are subject to change without notice. The test methods used by LiPOLY are based on the TIM Tester method and ASTM D5470 test method. These test methods are used as the definition standards for LiPOLY. Property values provided in this document are not for product specifications or guaranteed. This document does not guarantee the performance and quality required for the purchaser's specific purpose. The purchaser needs to evaluate and verify the safety before using the material. We strongly recommend the purchaser pre-test the product and verify the performance of the product under the purchaser's specific or general uses. LiPOLY shall not be liable for incidental or consequential damages of any kind. All LiPOLY products are sold in accordance with the LiPOLY Terms and Conditions in effect at the time of purchase and a copy of which will be furnished upon request. All rights reserved, including LiPOLY trademarks or registered trademarks of LiPOLY or its affiliates. Statements concerning possible or suggested uses made herein shall not be lied upon or be constructed as a guaranty of patent infringement. Copyright 2022 LiPOLY.