LiPOLY®
SHIU LI TECHNOLOGY CO.,LTD

NEP220

Non-Silicone Two-Part Thermal Conductive Adhesive

LiPOLY NEP220 is a silicone-free two-part liquid gap filler that does not volatilize low-molecular-weight siloxane. With high viscosity and good adhesion, it can be fast cured at room temperature or elevated temperature. With a thermal conductivity of 2.2 W/m*K, NEP220 provides high thermal conductivity and low thermal impedance. It is ideally suited for dispensing using the dispensing robot or by syringe.

FEATURES

/ Thermal conductivity: 2.2 W/m*K
/ Can be applied with dispenser
/ Room Temperature curing or heating curing
/ Low compression stress during assembly
/ Excellent adhesion to metal & PCB

TYPICAL APPLICATION

/ Electronic components: IC、CPU MOS、Mother Board、Wireless Hub Telecom Device 、Automotive electronics、Computer 、 Peripherals and High frequency magnetic inductor
/ Between any heat-generating component and a heat sink.
/ 5G base station & infrastructure
/ EV electric vehicle

CONFIGURATIONS

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

PRESERVATION

It can be preserved for 60 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.)

TYPICAL PROPERTIES

PROPERTY	NEP220	TEST METHOD	UNIT
Color	Black Gray (A part) Black (B part)	Visual	-
Resin base	Epoxy	-	-
A:B	100:100	-	-
Viscosity A	170	ISO 3219	Pa.s
Viscosity B	167	ISO 3219	Pa.s
Thixotropic Index	3.4	ISO 3219	-
Density	2.6	ASTM D792	g/cm³
Application temperature	-40~120	-	°C
Surface dry	25°C / 1.5 hr	By LiPOLY	-
Curing condition1	25°C / 3.5 hr	By LiPOLY	-
Curing condition2	40°C / 1.5 hr	By LiPOLY	-
Curing condition3	60°C / 30 min	By LiPOLY	-
Curing condition4	80°C / 10 min	By LiPOLY	-
Hardness	90	ASTM D2240	Shore A
Elongation at break	<1	ISO527	%
Tensile strength	65	ISO527	N/cm²
Lap shear to aluminum	350	ASTM D1002	N/cm²
Shelf life	60 months	-	-
ROHS & REACH	Compliant	-	-
ELECTRICAL			
Dielectric breakdown	14	ASTM D149	KV/mm
Volume resistivity	$>10^{11}$	ASTM D257	Ohm-m
THERMAL			
Thermal conductivity	2.2	ISO 22007-2	W/m*K