

N800C

Non-Silicone Thermal Conductive Pad

LiPOLY N800C is a silicone-free thermal interface material based on a non-silicone resin system. It contains no low-molecular-weight siloxane volatiles and features low outgassing characteristics, eliminating concerns of contamination and electrical contact issues. N800C complies with ASTM E595 requirements, making it ideal for applications demanding high cleanliness and reliability. With excellent flexibility, high thermal conductivity, low compression force, and high compressibility, N800C minimizes mechanical stress on components while maintaining low thermal resistance and outstanding heat dissipation performance.

FEATURES

- / Thermal conductivity: 17.0 W/m*K
- / It's made by non-silicone resin materials
- / Low contact thermal resistance
- / With electrical insulation
- / Outstanding thermal conductivity
- / Applicable to optical and sensitive electric components

TYPICAL APPLICATION

- / HDDS
- / Optical appliance
- / 5G base station & infrastructure
- / EV electric vehicle

SPECIFICATIONS

- / Sheet form
- / Die-cut parts



TYPICAL PROPERTIES

PROPERTY	N800C	TEST METHOD	UNIT
Color	Gray	Visual	-
Surface tack 2-side/1-side	2	-	-
Thickness	Customized	ASTM D374	mm
Density	3.3	ASTM D792	g/cm ³
Hardness	50	ASTM D2240	Shore OO
Application temperature	-60~125	-	°C
Low molecular Siloxane (D3 to D20 total)	N.D	Gas Chromatography	%
Total Mass Loss (TML ≤ 1.0%)	0.0448	ASTM E595	%
Collected Volatile Condensable Materials (CVCN ≤ 0.10%)	0.0264	ASTM E595	%
Water Vapor Regained	N.D.	ASTM E595	%
ROHS & REACH	Compliant	-	-
COMPRESSION@1.0mm			
Deflection @10 psi	8	ASTM D5470 modify	%
Deflection @20 psi	28	ASTM D5470 modify	%
Deflection @30 psi	55	ASTM D5470 modify	%
ELECTRICAL			
Dielectric breakdown	8	ASTM D149	KV/mm
Surface resistivity	>10 ¹¹	ASTM D257	Ohm
Volume resistivity	>10 ¹⁰	ASTM D257	Ohm-m
THERMAL			
Thermal conductivity	17.0	ASTM D5470	W/m*K
Thermal impedance@10 psi	0.122	ASTM D5470	°C-in ² / W
Thermal impedance@20 psi	0.103	ASTM D5470	°C-in ² / W
Thermal impedance@30 psi	0.058	ASTM D5470	°C-in ² / W

The chemical formula indicates that if Cyclic polydimethylsiloxane (HO-[Si(CH₃)₂O]_n-H) is non-reaction, it's volatile anytime and everywhere. For example, when the electric products which has been put in a confined space, the volatile of low-molecular-weight siloxanes will makes the electric products uncontacted.

Thermal Impedance vs. Pressure vs. Deflection

