

# N-putty-s

## Non-Silicone Thermal Conductive Putty

LiPOLY N-putty-s series is a non-silicon thermally conductive material without volatilization of low molecular siloxane, and low total volatile gas. With a thermal conductivity of 3.5 W/m\*K, the high deformation can perfectly fill small air gaps to eliminate tolerances. It also can overcome overflow and drying problems to increase the thermal conductivity. N-putty-s is a great alternative to thermal grease and ideally suited for dispensing using the dispensing robot.

### ■ FEATURES

- / Thermal conductivity:3.5 W/m\*K
- / Bond line thickness:100-1000μm
- / Non-silicone resin materials
- / Designed to remove manufacturing tolerances
- / Does not produce stress on delicate components
- / No vertical flow
- / Dispensable for serial manufacture
- / For any high compression and low stress application

### ■ TYPICAL APPLICATION

- / Between CPU and heat sink
- / Between a component and heat sink
- / High speed mass storage drives
- / Telecommunication hardware
- / Flat-panel displays
- / Set-top box
- / IP CAM
- / 5G base station & infrastructure
- / EV electric vehicle

### ■ CONFIGURATIONS

- / Cartridges: 30ml, 55ml, 330ml
- / Bucket: 1kg, 25kg

### ■ PRESERVATION

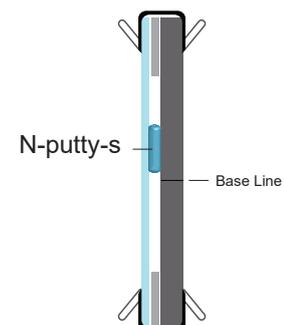
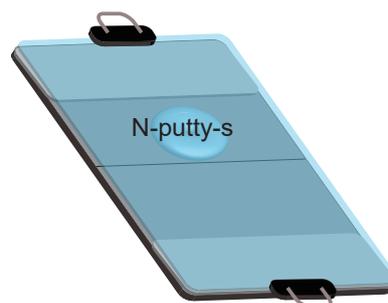
It can be preserved for 60 months under the condition of unopened and under room temperature 25°C.

### ■ TYPICAL PROPERTIES

PROPERTY	N-putty-s	TEST METHOD	UNIT
Color	Gray	Visual	-
Resin base	Non-Silicone	-	-
Viscosity	15000	DIN 53018	Pa.s
Density	3.0	ASTM D792	g/cm <sup>3</sup>
Application temperature	-60~150	-	°C
Bond line thickness	100~1000	-	μm
Shelf life	60 months	-	-
ROHS & REACH	Compliant	-	-
ELECTRICAL			
Dielectric breakdown	12	ASTM D149	KV/mm
Volume resistivity	>10 <sup>13</sup>	ASTM D257	Ohm-m
THERMAL			
Thermal conductivity	3.5	ASTM D5470	W/m*K
Thermal impedance@10psi	0.066	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@30psi	0.059	ASTM D5470	°C-in <sup>2</sup> / W
Thermal impedance@50psi	0.051	ASTM D5470	°C-in <sup>2</sup> / W

### ■ VERTICAL RELIABILITY

Using 1.0mm pad as a gap control, put the putty between the aluminum and the glass panel mark the initial position. Then, place it in the oven with 125°C for 1,000 hours and observe its displacement after reliability test



Material no dropped or changed after high temperature aging testing