

# N-putty2-s

## Non-Silicone Thermal Conductive Putty

LiPOLY N-putty2-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 5.0 W/m\*K, the high deformation can perfectly fill small air gaps to eliminate tolerances. It can also overcome spillage and drying issues to increase thermal conductivity, making it ideal for dispensing with dispensing robots.

### ■ FEATURES

- / Thermal conductivity:5.0 W/m\*K
- / Bond line thickness:100~1500μm
- / 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 30°C.



### ■ TYPICAL PROPERTIES

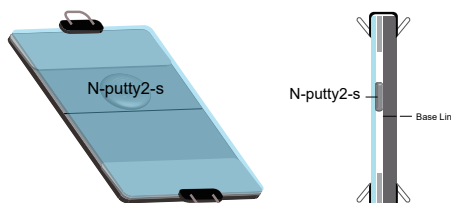
| PROPERTY  | N-putty2-s        | TEST METHOD | UNIT                   |
|---|-------------------|-------------|------------------------|
| Color   | Gray              | Visual      | -                      |
| Resin base  | Non-Silicone      | -           | -                      |
| Viscosity   | 15000             | DIN 53018   | Pa.s                   |
| Flow Rate (30cc EFD tube, 2.35mm Orifice diameter, 90psi&60s) | 14                | By LiPOLY   | g/min                  |
| Density   | 3.2               | ASTM D792   | g/cm <sup>3</sup>      |
| Application temperature                                       | -60~150           | -           | °C                     |
| Bond line thickness   | 100~1500          | -           | μm                     |
| Shelf life  | 60 months         | -           | -                      |
| ROHS & REACH  | Compliant         | -           | -                      |
| <b>ELECTRICAL</b>   |                   |             |                        |
| Dielectric breakdown  | 12                | ASTM D149   | KV/mm                  |
| Volume resistivity  | >10 <sup>13</sup> | ASTM D257   | Ohm-m                  |
| <b>THERMAL</b>  |                   |             |                        |
| Thermal conductivity  | 5.0               | ASTM D5470  | W/m*K                  |
| Thermal impedance@10psi / 80°C                                | 0.045             | ASTM D5470  | °C-in <sup>2</sup> / W |
| Thermal impedance@30psi / 80°C                                | 0.040             | ASTM D5470  | °C-in <sup>2</sup> / W |
| Thermal impedance@50psi / 80°C                                | 0.036             | ASTM D5470  | °C-in <sup>2</sup> / W |

### ■ PLEASE NOTE

/ Using Automatic Homogenizer can improve the sedimentation phenomenon rapidly to achieve a homogeneous effect. We strongly recommend put cartridge in homogenizer for 3~5 minutes before dispensing the material.  
Notice: if material homogenized more than 24 hours, it must be homogenized again while use it.

### ■ VERTICAL RELIABILITY

Using 1.5mm 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