

## 504-81

*One-component conductive adhesive designed for stencil printing*

### Description

504-81 is a one component, silver filled, high purity liquid adhesive designed for the attachment of bare die to lead frame or laminate substrates.

### Advantages

504-81 is designed to deliver fast curing properties and fine line printing while providing flexibility for flex substrates. 504-81 is a 100% solids formulation that provides excellent screen life when used in screen and stencil printing applications. 504-81 cures rapidly at elevated temperatures providing a void-free bond line.

### User Instructions

Storage: Elevated temperatures reduce working life. Do not store above -40 °C. Warm at room temperature until no longer cool to the touch (20 to 60 minutes). Do not thaw in an oven.

### Disclaimer

Polymark, Inc. technical data sheets are derived from the material's typical properties and are intended as a reference only. The data contained herein is not intended for product specifications.

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### Handling Properties

#### \*Typical Values

Viscosity, Brookfield CPE#51, 25°C	
0.5 rpm	100,000 cps
5.0 rpm	25,600 cps

Color (Visual) Silver

Shelf life at -40 °C 12 months at -40 °C

### Cure Schedule

6 minutes at 110 °C
3 minutes at 150 °C

### Physical Properties

Hardness	Shore D 80
Lap Shear Strength (Al to Al @ 25 °C )	
1500 psi	
Elastic Modulus @25°C	2.0 GPa
% Solids	100%
Die Shear (1mm x 1mm)	4.0 Kg

### Electrical/Thermal Properties

Volume Resistivity	4 x 10 <sup>-4</sup> ohm•cm
Thermal Conductivity	1.5 W/m•K

### Clean Up

Polymark 504-81 can be cleaned up with solvents such as methyl ethyl ketone or isopropyl alcohol. Stencils, screens and printing tools should be allowed to dry completely before reuse. To avoid possible squeegee swelling, a high durometer, solvent-resistant material such as polyurethane should be used.

### Health and Safety

Read the product Material Safety Data Sheet (MSDS) before use. Avoid skin contact and use with adequate ventilation. If ingested, consult a physician immediately.

**Important Notice to Users:** Typical properties are shown in this technical bulletin and should not be used or taken as specifications. Contact Polymark prior to establishing specifications. The information given for product description, handling properties and cured physical properties are offered solely to assist the purchaser's own testing. Polymark, its sales agents and distributors make NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR THE FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE. This product and all information supplied in connection with it is used at the purchaser's own risk, conditions of use being beyond Polymark's knowledge or control. The purchaser assumes all risk of use or handling of the product, whether in accordance with directions or not.