

# Product Data

## One Component Heat Curable Silicone Adhesive LA650S

LA650S is a one-component, semi-flowable, heat curable silicone adhesive designed for electrical and electronic applications. This product cures with heating in a short period of time to a tough silicone elastomer.

### KEY FEATURES

- ◆ Easy to use - one component system
- ◆ Semi-flowable consistency: almost no flow at 1mm diameter bead.
- ◆ Heat accelerated cure
- ◆ Primerless adhesion to many substrates – Plastics, Metals, Ceramics and Glass
- ◆ Non-corrosive to metals
- ◆ Excellent high and low temperature resistance

### TYPICAL APPLICATIONS

- ◆ Sealing and adhesive between plastics and metals/ceramics in various electronic parts  
– Semiconductor modules, automotive electronics units, home appliance assemblies

### TYPICAL PROPERTY DATA

(JIS K 6249)

UNCURED PROPERTIES		
Appearance		Black, semi-flowable
Viscosity (23°C)	Pa·s {P}	110 {1100}
CURED PROPERTIES (90min @ 125°C)		
Appearance		Black, elastic rubber
Density (23°C)	g/cm <sup>3</sup>	1.10
Hardness (Type A)		64
Tensile strength	MPa {kgf/cm <sup>2</sup> }	6.2 {63}
Elongation	%	140
Adhesive strength <sup>*1</sup>	MPa {kgf/cm <sup>2</sup> }	4.6 {47}
Volume resistivity	Ω·cm	6.0×10 <sup>15</sup>
Dielectric strength	kV/mm	22
Dielectric constant (60Hz)		2.9
Dissipation factor (60Hz)		0.01
Thermal conductivity <sup>*2</sup>	W/(m·K)	0.19 {4.5×10 <sup>-4</sup> }

\*1 Nickel lap shear, 1mm thickness

\*2 In-house test method

*Typical property data values should not be used as specifications.*

## ADHESION CAPABILITY

### Suitable substrates

- Metals: Aluminum, Copper, Ni plate, Stainless steel
- Plastics: PPS, PBT, Epoxy resin, Polyester, Phenolic resin
- Rubbers: Heat cured silicone rubber
- Inorganics: Glass, Ceramics

### Unsuitable substrates

- Plastics: PP, PE, Fluorocarbon resin, Poyacetal
- Rubbers: Silicone RTV, Fluorocarbon rubber

## HANDLING AND SAFETY

- ◆ Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.
- ◆ All parts should be as clean and dry as possible prior to application.
- ◆ Wear eye protection and protective gloves at all times when working with this product.
- ◆ Maintain adequate ventilation in the work place at all times.
- ◆ When returning to room temperature, allow the contents to return to room temperature before opening the container to avoid condensation.

## STORAGE

- ◆ Store at cold temperature (0~10°C) to prevent a viscosity increase.
- ◆ Keep out of the reach of children.

Issued Sep. 2006/1st revised July 2007

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### **FOR INDUSTRIAL USE ONLY**

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