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SOLDER-SUB
PSS8150

Polymer Conductor
Ambient Storable Paste
<0.0002 ohm-cm
>1000 psi Bond Strength
Instant Bonding Upon Reflow

IDEAL FOR:

- Flip Chip Solder Replacement
- Special Bonding Pattern
- Direct Chip Attachment

DESCRIPTION:

Solder Sub PSS8150 is a silver filled, high bond strength polymer conductor paste. It can be deposited onto wafer to form flip chip polymer bumps. Once "B-staged", the bumped wafer or dies may be stored at ambient until reflow die-attachment. PSS8150 polymer conductor bumps form instant bonding upon reflow above 200°C @ 10 psi (calculate base on bumped area which is much smaller than die area). With bond strength of >1,000 psi and flexibility down to -55°C, they form reliable joints for any mis-match substrates.

PSS8150 is designed for replacing solder joints in flip-chip applications parts that may be operating continuously at 150°C. Compatible flexible underfill (MEE7650) is recommended to give additional strength, thermal conduction, environmental and external protection.

AVAILABILITY:

PSS8150 is available in jars of various sizes.

APPLICATION PROCEDURES:

- (1) Deposit paste onto passivated contact pads.
- (2) B-stage to dry at 80-100°C for 30 min. or longer. Short exposure of a few seconds.
- (3) Heat the substrate to 180-200°C and position the contact pads.
- (4) Apply pressure of 10 psi (calculate on the basis of pad area) and reflow to bond instantly.

CAUTION: This product may cause skin irritation. Avoid skin contact. If contact does occur, wash immediately with soap and water. Please refer to MSDS for more details.

The information contained herein is believed to be reliable. All recommendations or suggestions are made without guarantee inasmuch as conditions and methods of commercial use are beyond our control. Properties given are typical values and not intended for use in preparing specifications. The user is advised to evaluate the product in the manner the product is to be used in manufacturing and in the final product. Under no circumstance shall A.I. Technology be liable for accidental, consequential or other damages arising from the use or handling of this product.

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TYPICAL PROPERTIES*

Electrical Resistivity (200°C/ 10 sec.)	1x10 ⁻³ ohm-cm
Dielectric Strength (Volts/mil)	Not Applicable
Glass Transition Temp.(°C)	-55
Lap-Shear Strength	N/A
Device Push-off Strength	>600 psi >4.1 N/mm ²
Hardness (Type)	85 (A)
Cured Density (gm/cc)	3.5
Thermal Conductivity	>38 Btu-in/hr-ft ² -°F >5.4 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	80
Maximum Continuous Operation Temp. (°C)	150
Avg. Viscosity(0.5 rpm, 24°C) Thixotropic Index=4	150,000 cp

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REFLOW TEMPERATURES:

Temperature	Time	Pressure
>200°C	0.5-5 sec	10 psi

SHELF LIFE:

Storage temperature	Shelf Life
25°C	1 yr

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