

DATA SHEET

2004.3

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SI-3000A

1. FEATURES :

SI-3000A is a kind of peelable solder resist ink for screen printing application, which can be peeled physically after soldering. It used as a protective solder temporarily during electroless gold plating or HAL process.

- Toughness of solder is good even when it in plated-through holes can be peeled off easily.
- Good at resistance to solder bath.
- With very high thermal stability in action with reflow-soldering.
- Good at tearing resistant.

2. SPECIFICATION :

Main agent	SI-3000A	
Color	Blue	
Viscosity	600 ± 100dPa s (Cone / Plate Viscometer, 5min ⁻¹ / 25)	
Specific Gravity	1.2	
Curing condition	150 / 20 min (Hot air convection oven)	
Shelf life	3 months (store at dark place / 25 or belpw)	

3. PROCESS CONDITION

PROCESS		RANGE
Printing	80 mesh / 200 μm emulsion screen Thickness: 200 μm over	80 ~ 100 mesh
Post cure	150 / 20 min (Hot air convection oven)	150 / 20 min

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4. Application

Thermal curing(thickness: 200 μm)

	1 0 分	2 0 分	3 0 分	4 0 分	5 0 分	6 0 分
140	×					
150					×	×

Heat resistance(Thermal curing:150)

260 / 10sec	1pass	2pass	3pass
100 μm			
200 μm			
300 μm			

Heat resistance(Thermal curing:150 /20min)

288 / 10sec	1pass	2pass	3pass
100 μm		×	×
200 μm			
300 μm			

Chemical resistance(Thermal curing:150 /20min)

25 / 20min	10% H ₂ SO ₄	10% NaOH	PMA
100 μm			
200 μm			
300 μm			

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5. ATTENTION ON EACH PROCESS

- . As operating environment, it is desirable to deal with the ink in a clean room / 25 room temp. Normalize ink temperature and stir ink well before use.
- . The adequate thickness is above 200 μm (on the board after curing). Thinner coating might deteriorate its solder heat resistance, peelability. Curing condition should be varied according to the type of drying oven and the quantity of boards to be dried. Please set up the optimum condition based on your confirmation test. Over cure or insufficient cure may cause the deteriorate ink properties.
- . It is desirable to use ink without dilution . Even if you feel difficulty of printing due to high viscosity, dilute ink as little as possible (Max 1.5 wt%) with Reducer. For over using dilution may effect badly ink properties.
- . Pot life can become extremely short if ink temperature rise above 25 .under

6. CHARACTERISTIC

Item	Test method	Test result
Heat resistance	Rosin flux Float 260 10 sec \times 3cycle	Passed
	Rosin flux Float 288 10 sec \times 3cycle	Passed
Electro less gold plat	Ni 3 μm Au 0.3 μm	Passed

Note : The above-mentioned test data is based on our process conditions not to guarantee the results you will have.

7. NOTES

There is a possibility that this product can be the cause of skin irritation due to inhalation or stacking on the skin; please follow the notes as below,

It is desirable to work with an environment which has a ventilate equipment partly or fully because this product contains plasticizer.

Please wear protective glove and apron. If the ink got on the skin, please wash with soap.

After dealing with ink, please wash your hands and face and rinse your mouth.

No fire. Even this product corresponds to non-dangerous.

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8. Trouble shooting

Problem	Cause	Solution
Ink cannot be peeled thoroughly from plated-through holes	<ol style="list-style-type: none"> 1. Solder thickness is too thin. 2. Curing temperature is too low or curing time is not enough. 	<ol style="list-style-type: none"> 1. Using coarser screens. Taking a higher stencil built-up. Using softer squeegee. 2. Controlling thermal curing temperature or curing time.
Not good at heat resistant process	<ol style="list-style-type: none"> 2. Solder thickness is too thin. 3. Curing temperature is too low or curing time is not enough. 	<ol style="list-style-type: none"> 1. As above 2. As above
Ink cannot be peeled	<ol style="list-style-type: none"> 1. Solder thickness is too thin. 2. Curing temperature is too high or curing time is too long. 	<ol style="list-style-type: none"> 1. As above 2. As above