

# PRODUCTS DATA

## FORMOSA No Clean Solder Paste

### Model: SH-6311

**Specification:**

NO	Item	Specification	Standard
1	Appearance	Gray paste , No foreign , No Stiff	
2	Alloy	Sn63/ Pb37	JIS-Z-3282
3	Melting Point	183°C	DSC
4	Particle Size	(Type 3) +45µm 1% large , -20µm 10% less (Type 4) +38µm 1% large , -20µm 10% less	IPC-TM-650, 2.2.14
5	Powder Shape	Sphere	
6	Flux Content	9.5 ± 0.5wt%	JIS-Z-3197, 6.1
7	Halide Content	0.1 ± 0.02wt% (in flux)	JIS-Z-3197, 6.5
8	Viscosity	200 ± 30 Pa.s (25±1°C, 10rpm, Malcom )	JIS-Z-3284, Annex 6
9	Flux Type	ROL1	J-STD-004

**Physical Properties & Reliability Data**

No	Test Item	Test Result	Test Method
1	Copper Plate Corrosion Test	PASS	JIS-Z-3197, 6.6.1
2	Spread Test	90% up	JIS-Z-3197, 6.10
3	Silver Chromate Test	PASS	IPC-TM-650, 2.6.33
4	Copper Mirror Test	PASS	IPC-TM-650, 2.6.32
5	Fluorides By Spot Test	PASS	IPC-TM-650, 2.3.35.1
6	S.I.R Test ▲	1×10 <sup>9</sup> up	JIS-Z-3284, Annex 3
7	Electro Migration Test ◆	1×10 <sup>12</sup> up Pass	JIS-Z-3284, Annex 14
8	Viscosity Test(25°C, 10rpm)	200 ± 30 Pa.s	JIS-Z-3284, Annex 6
9	Tack Test (KN/m <sup>2</sup> )	125(8hr)	JIS-Z-3284, Annex 9
10	Slump Test	Less than 0.3 mm	JIS-Z-3284, Annex 8
11	Solder Ball Test	PASS	JIS-Z-3284, Annex 11

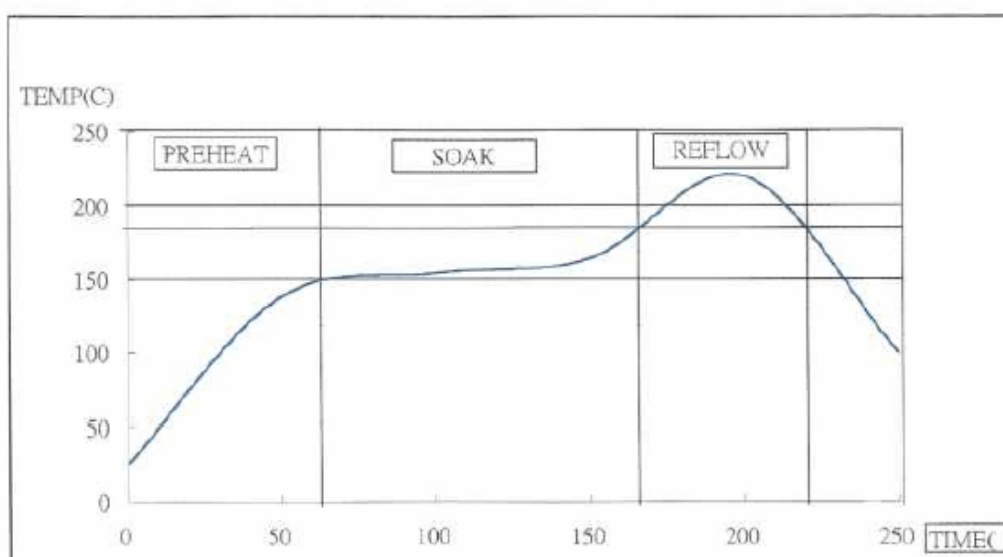
▲ Test Conditions : 85°C , 85% RH

◆ Test Conditions : 40°C , 95% RH

**ALLOY COMPOSITION**

(Sn)	(Pb)	(Cu)	(Zn)	(Al)	(Sb)	(Fe)	(As)	(Bi)	(Cd)
63	REM.	0.05	0.002	0.002	0.05	0.02	0.03	0.1	0.002
±1		MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX

**Temperature Profile**



- 1、 Ramp @ 1-3 °C/Sec to 120 - 170 °C
- 2、 Dwell @ 120 - 170 °C for 60 - 120 sec
- 3、 Ramp @ 1 - 2 °C/sec to 210 - 230 °C peak temperature Temp. over 200 °C for 30 - 60 sec
- 4、 Ramp down to room temperature 1 - 3 °C/sec



**No-Clean**  
**Solder Paste**



### **Handling and Storage Instruction**

#### **1. Storage**

- (1) Keep in 0~10°C temperature.
- (2) Expiration period: 6 months from production date (sealed condition).
- (3) Keep out of direct sunlight.

#### **2. Operation Manual (Sealed)**

- (1) Keep solder paste in room temperature ( $25 \pm 2^\circ\text{C}$ ) for 3~4 hours. Do not use any heater to raise temperature.
- (2) Kindly mixed averagely for 1~3 minutes according to necessity.

#### **3. Operation Manual (Opened)**

- (1) At first, add 2/3 can of solder paste onto the stencil, do not add more than 1 can of which.
- (2) Add solder paste a little at a time according to production procedure.
- (3) To maintain the solder paste quality, please make sure not to storage the opened can with sealed can.
- (4) Use new opened solder paste at the beginning of the next day. Mix opened solder paste with sealed one at ratio 1:2, add a little at a time during printing.
- (5) Soon after printing, please make sure all components to be mount on printed circuit board between 4~6 hours.
- (6) Please withdraw solder paste from stencil and seal kindly if printing progress would pause for more than 1 hour.
- (7) After continuously printing for 24 hours, kindly withdraw printed solder paste and follow step (4).
- (8) It is recommended to clean both side of stencil every 4 hours manually to ensure printing quality.
- (9) Kindly keep room temperature between 22~28°C, room humidity RH 30~60% is recommended.
- (10) To clean up the defect printed board, kindly use isoprophyl alcohol or IPA.

### **Contact Information**



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