

Product Data Sheet

FORMOSA No Clean Solder Paste
Model: PF606-P25

Specification:

NO	Item	Specification	Standard
1	Appearance	Gray paste , No foreign , No Stiff	
2	Alloy	Sn/Ag3.0/Cu0.5/x	JIS-Z-3282
3	Melting Point	217~219	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	11 ± 0.5wt%	JIS-Z-3197, 6.1
7	Halide Content	0	JIS-Z-3197, 6.5
8	Viscosity	200 ± 30 Pa.s (25±1 , 10rmp,Malcom)	JIS-Z-3284, Annex 6
9	Flux Type	ROL0	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	75% 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 ⁹ up	IPC-TM-650, 2.6.3.3
7	Electro Migration Test	1×10 ¹² up Pass	IPC-TM-650, 2.6.14.1
8	Viscosity Test(25 ,10rmp)	200 ± 30 Pa.s	JIS-Z-3284. Annex 6
9	Tack Test (gf)	140 up(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 , 85% RH

Test Conditions : 65 , 85% RH

ALLOY COMPOSITION

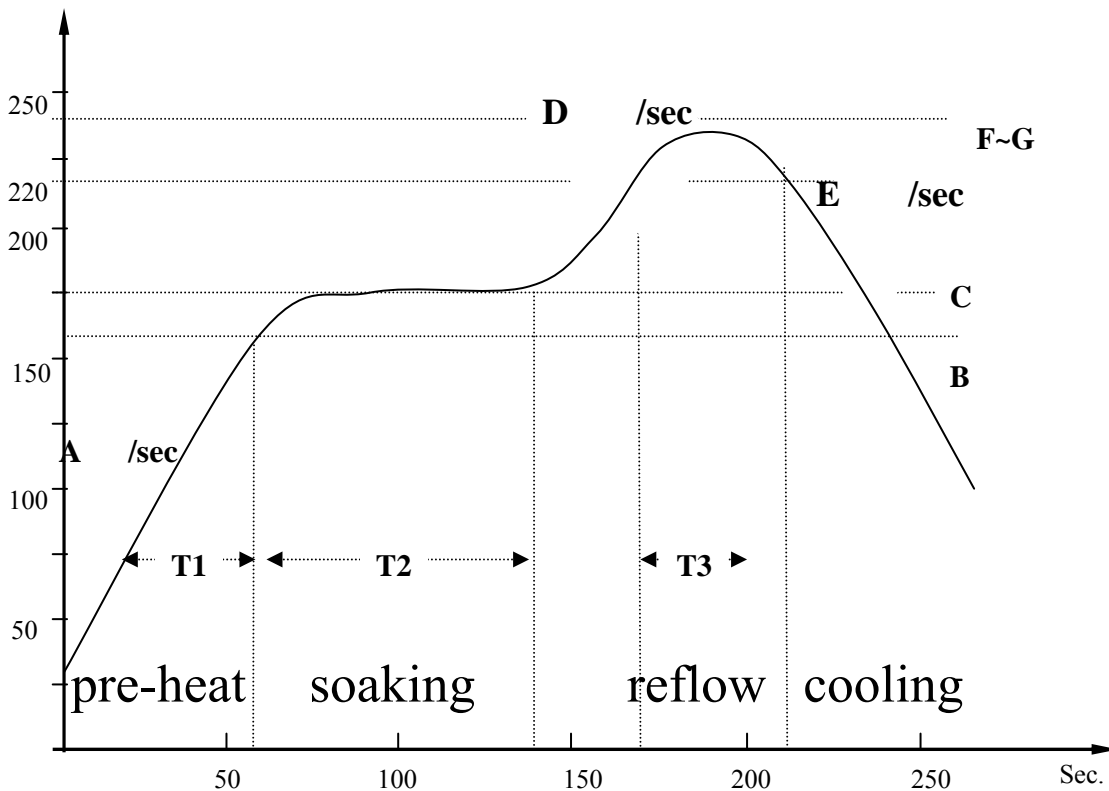
(Sn)	(Ag)	(Cu)	(Ni)	(Ge)	(Zn)	(Al)	(Sb)	(Fe)	(As)	(Bi)	(Cd)	(Pb)
REM.	3±0.3	0.5± 0.2	0~ 0.01	0~ 0.01	0.002 MAX	0.002 MAX	0.05 MAX	0.02 MAX	0.03 MAX	0.1 MAX	0.002 MAX	0.05 MAX

Patent No. : Japanese Patent No. 3296289。 U.S Patent No. 6179935B1.

Japanese Patent Alloy Composition : Sn ; 1.0 Ag 4 , 0<Cu 2 , 0<Ni 0.5 , 0<Ge 0.1

U.S Patent Alloy Composition : Sn ; 0<Ag 4 , 0<Cu 2 , 0<Ni 1 , 0<Ge 1

Temperature Profile



- A: ramp up rate during preheat:** 1.0~3.0 /sec
- B~ C : soaking temperature:** 155~185
- D: ramp up rate during reflow:** 1.2~2.3 /sec
- E: ramp down rate during cooling:** 1.0~6.0 /sec
- F~G : peak temperature:** 230~250
- T1: preheat time:** 50~80 sec
- T2 : dwell time during soaking:** 60~120 sec
- T3 : time above 220 : 30~100 sec**

Handling and Storage Instruction

1. Storage

- (1) Keep in 0~10 °C temperature.
- (2) Expiration period: 6 months from production date. 7 days storage in (25 ± 2 °C) (sealed condition)
- (3) Keep out of direct sunlight.

2. Operation Manual (Sealed)

- (1) Keep solder paste in room temperature (25 ± 2 °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.

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