



# Lead-Free Solder Paste

## PF606-P

Rev. 2016/03/01 Ver. 02-01

### BASIC OVERVIEW



SnAg3.0Cu0.5X Solder Paste  
 Low Halide  
 No Clean  
 Low Voiding

### APPLICATIONS

Universal Lead-Free SMD Solder Paste  
 Wide Range of Applications and PCB designs

### FEATURES

Appearance	Gray paste w/o visible foreign and clusters	
Alloy Composition	Sn/Ag3.0/Cu0.5/x	JIS-Z-3282
Melting Point	217~219 °C	
Particle Size	(Type 3) +45μm < 1% , - 20μm < 10% (Type 4) +38μm < 1% , - 20μm < 10% (Type 5) +25μm < 1% , - 15μm < 10% (Type 6) +15μm < 1% , - 5μm < 10%	IPC-TM-650, 2.2.14
Powder Shape	Spherical	
Flux Content	11.5 ± 1.0 wt%	JIS-Z-3197, 8.1.2
Halide Content	<0.5 wt% (in flux)	J-STD-004
Viscosity	200 ± 30 Pa.s (25±1°C, 10rpm, Malcom)	JIS-Z-3284 Annex 6
Flux Type	ROL1	J-STD-004

### Alloy Detail Composition

(Sn)	(Ag)	(Cu)	(Ni)	(Ge)	(Zn)	(Al)	(Sb)	(Fe)	(As)	(Bi)	(Cd)	(Au)	(In)	(Pb)
REM.	2.8~ 3.2	0.3~ 0.7	0~ 0.01	0~ 0.01	0.001 MAX	0.001 MAX	0.05 MAX	0.02 MAX	0.03 MAX	0.10 MAX	0.002 MAX	0.05 MAX	0.10 MAX	0.05 MAX

Patent No.: Japanese Patent No. 3296289, U.S Patent No. 6179935B1, Germany Patent No.19816671C2

(wt%)

Scan Code for Solder  
 Paste Documents





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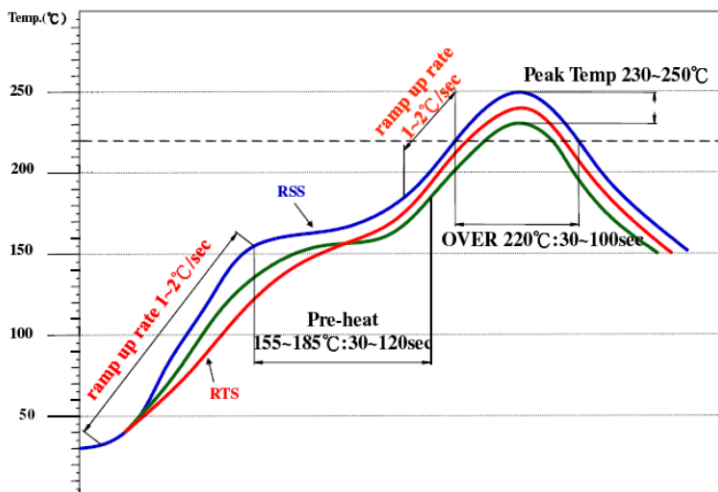
### PERFORMANCE & RELIABILITY

Copper Plate Corrosion Test	Pass	JIS-Z-3197, 8.4.1
Spreading Test	> 75%	JIS-Z-3197, 8.3.1.1
Copper Mirror Test	Pass	IPC-TM-650, 2.3.32
Viscosity Test (25°C, 10 rpm)	200 ± 30 Pa.s	JIS-Z-3284. Annex 6
Tackiness Test (gf)	> 130 (8hr)	JIS-Z-3284. Annex 9
Slump Test	Pass	JIS-Z-3284. Annex 7,8
Solder Ball Test	Pass	JIS-Z-3284. Annex 11

S.I.R. Test	▲	> 1 x 10 <sup>9</sup> Ω, Pass	IPC-TM-650, 2.6.3.3
Electro Migration Test	◆	Pass	IPC-TM-650, 2.6.14.1

▲ Test Conditions : 85 °C, 85% RH for 168hrs ◆ Test Conditions: 65°C, 88.5% RH for 596 hrs

### RECOMMENDED REFLOW PROFILE



Ramp Up Rate (30-150°C): 1.0-2.0 °C/sec

Pre-heating Time (155-185°C): 30-120 sec

Time Period Above 220°C: 30-100 sec

Ramp Up During Reflow: 1.0-2.0 °C/sec

Peak Temperature: 230-250 °C

Ramp Down Cooling Rate: 1.0-6.0 °C/sec

Note: The recommended reflow profile is provided as a guideline. Optimal profile may differ due to oven type, assembly layout or other process variables.



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### STORAGE & HANDLING:

- Refrigerate the solder paste at 0-10°C. Shelf life is 6 months from production date (sealed package).
- Keep away of direct sunlight.
- Allow the paste to reach defined printing temperature (room temperature) for 3-4 hrs. Do not heat up the solder paste rapidly.
- For jars packaging, mix the solder paste before use for 1-3 mins by plastic spatula.
- It is recommended to finish fresh paste within 24 hrs. Do not store used paste and fresh paste in the same jar.
- If printing process was interrupted for more than 1 hour, remove the remained paste from stencil and seal in the jar.
- Recommended printing environment is 22-28°C and RH 30-60%.

Note: For more information, please refer to solder paste application guideline sheet

### HOW TO ORDER

## PF606 – P – T3 – 500

Solder Alloy	Flux	Particle Size	Weight / Packaging
PF606 = SnAg3.0Cu0.5	P = ROL1	T3 = 20-45µm	30 = syringe 30g
		T4 = 20-38µm	100 = syringe 100g
		T5 = 15-25µm	150 = syringe 150g
		T6 = 5-15µm	250 = plastic jar 250g
			500 = plastic jar 500g
			600 = small cartridge 600g
			1200 = large cartridge 1200g



### CONTACTS

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