SHENMAO TECHNOLOGY

FORMOSA No-Clean Solder Paste

Model: PF602-P26

Halide-Free

Rev. 2011/03/29 Ver. 3

— Specification —

Item	Specification	Standard
Appearance	Gray paste w/o visible foreign and clusters	
Alloy composition	Bi / Sn42	JIS-Z-3282
Melting Point	139 ℃	
Particle Size	(Type 3) +45µm < 1%，—20µm < 10% (Type 4) +38µm < 1%，—20µm < 10%	IPC-TM-650, 2.2.14
Powder Shape	Spherical	
Flux Content	10.5 ± 1.0wt%	JIS-Z-3197, 8.1.2
Halide Content	0.0 wt% (in flux)	J-STD-004A
Viscosity	180 ± 50 Pa · s (25±1 ℃, 10rpm, Malcom)	JIS-Z-3284, Annex 6
Flux Type	ROL0	J-STD-004A

— Test Content —

Test Item	Test Result	Test Method
Copper Plate Corrosion Test	Pass	JIS-Z-3197, 8.4.1
Spreading Test	> 70%	JIS-Z-3197, 8.3.1.1
Ion Chromatography Test	0.0 wt%	IPC-TM-650 Method 2.3.28.1
Copper Mirror Test	Pass	IPC-TM-650, 2.3.32
Viscosity Test(25℃,10rpm)	180 ± 50 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

— Reliability Test —

S.I.R. Test ▲	> 1×10^{9} Ω, Pass	IPC-TM-650, 2.6.3.3
Electro Migration Test ◆	Pass	IPC-TM-650, 2.6.14.1

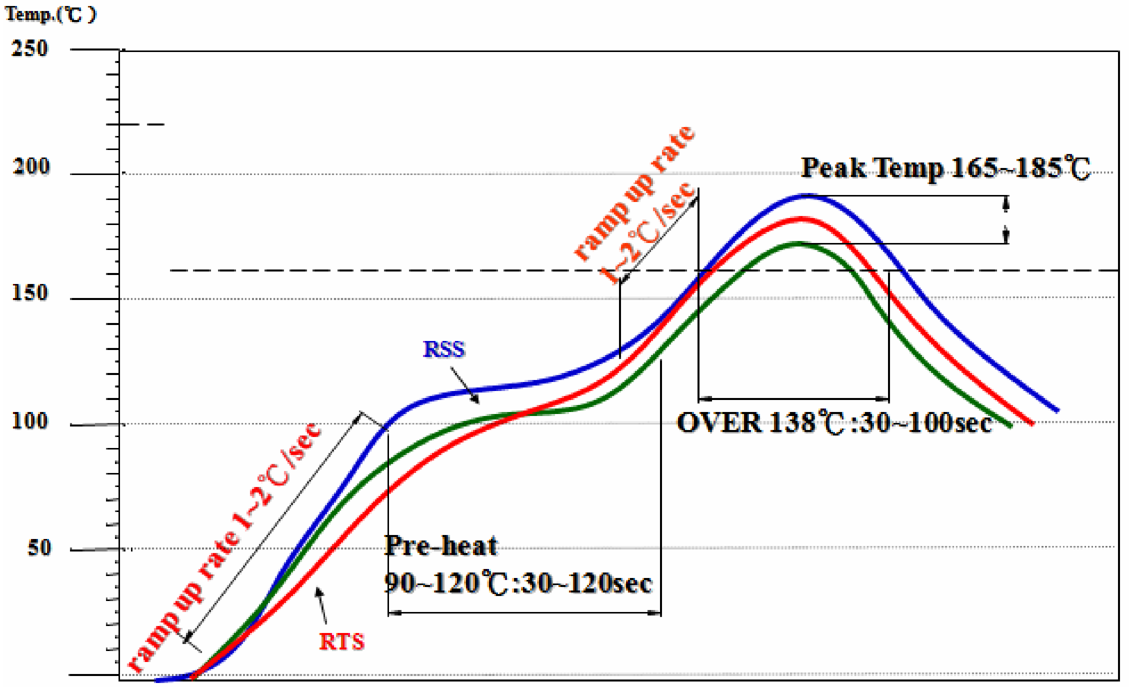
▲Test Conditions：85 ℃, 85% RH for 168 hrs ◆Test Conditions：65 ℃, 88.5% RH for 596 hrs

— Alloy Composition —

鉍 (Bi)	錫 (Sn)	銀 (Ag)	銅 (Cu)	鎳 (Ni)	鋅 (Zn)	鋁 (Al)	銻 (Sb)	鐵 (Fe)	砷 (As)	鎘 (Cd)	金 (Au)	鉛 (Pb)
REM.	41~ 43	0.1 MAX	0.05 MAX	0.01 MAX	0.001 MAX	0.001 MAX	0.05 MAX	0.02 MAX	0.03 MAX	0.002 MAX	0.05 MAX	0.05 MAX

(Wt%)

— Temperature Profile —



ramp up rate(30~90 ℃) :	**1.0~2.0 ℃/sec**
pre-heating time(90~120 ℃) :	**30~120 sec**
time period above 138 ℃ :	**30~100 sec**
ramp up rate during reflow:	**1.0~2.0 ℃/sec**
peak temperature:	**165~185 ℃**
ramp down rate during cooling:	**1.0~6.0 ℃/sec**

—Handling and Storage Instructions—

1. Storage

(1) Refrigerate pastes at 0~10 ℃ helps prolong shelf life; normal shelf life is 6 months from production date (sealed jars).

(2) Keep away from direct sunlight.

2. Operation Manual (Sealed)

(1) Allow pastes to reach ambient printing temperature prior to use for 3 - 4 hrs. Do not heat to raise temperature abruptly.

(2) Well mix paste with plastic spatula for 1-3 mins before use. Mixing time depends on tool type.

3. Operation Manual (Opened)

(1) At first, add 2/3 jar of solder paste onto the stencil. Do not add more than 1 jar.

(2) Add a little amount of paste at a time on the stencil according to printing speed.

(3) It is recommended to finish fresh paste within 24 hrs. To maintain paste quality, make sure not to store used paste and fresh paste in the same jar.

(4) After printing, it is suggested to place components to be mounted on the circuit board and reflow within 4 – 6 hrs.

(5) If printing process was interrupted for more than 1 hr, be sure to remove paste remnant from stencil and seal them in the jar.

(6) It is recommended to keep printing environment at 22~28 ℃and RH of 30~60%.

(7) To clean up printed circuit boards, it is suggested to use ethanol or isopropanol.

Contact Information

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