

SACB1053 4-5M097 (Syringe Packaging) No Clean Solder Paste



Product Description

Asahi SACB1053, Sn95.5Ag1.0Cu0.5Bi3.0 solder alloy was developed to have better wettability in reflow soldering process. It is cost effective while shows comparable mechanical strength with SAC305.

SACB1053 4-5M097 (Syringe Packaging) is formulated specially for optimal characteristics in all types of dispensing applications with a wide range of needle diameters. The syringe packaging is packaged void-free as to ensure consistent dispensing in high speed automated process and prevent dried out issue.

Application

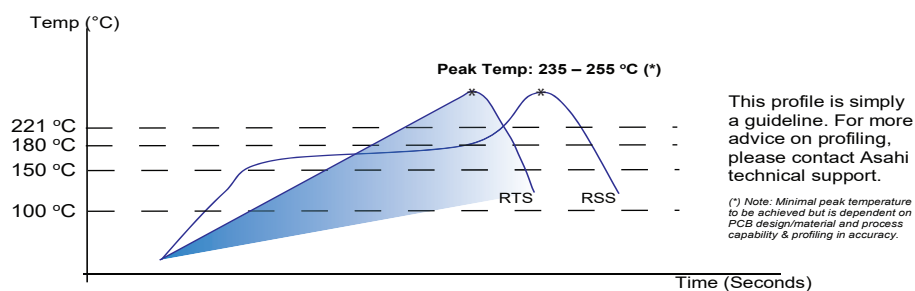
SACB1053 4-5M097 is designed for standard stencil printing. The printing speed can be set at 25 - 100 mm/sec. Its optimum printing condition is 23 to 25 °C and humidity of 50 to 65 %RH, with at least 24 hours stencil life of continuous printing (process dependant). This paste could be used on the 0.4mm pitch pattern. Adjustment may be necessary based on specific process requirement.

Specification (Preliminary)

Item	Result
Alloy	
Alloy Composition	Sn95.5/Ag1.0/Cu0.5/Bi3.0
Melting Temperature	211 - 221 °C
Differential Scanning Calorimetry	
Powder Size	20 - 38 μm, Type IV, Mesh Size -400 / +635
IPC TM-650 2.2.14	
Paste Flux	
Flux Content	14.0 +/- 1.0 wt%
IPC-TM-650 2.2.20	
Halide Content	Not detected
JIS Z 3197 8.1.4.2.1	
Water Extract Resistivity	> 1 x 10 ⁵ Ω-cm
JIS Z 3197 8.1.1	
Copper Mirror Test	Classified as "L", Pass
IPC-TM-650 2.3.32	
Copper Corrosion Test	Pass
IPC-TM-650 2.6.15	
Flux Activity Classification	ROLO
IPC J-STD-004	
Solder Paste	
Viscosity (2nd day)	
IPC-TM-650 2.4.34	300 - 600 kcPs
JIS Z 3284 Annex 6	50 - 150 Pa.s
Thixotropic Index	0.30- 0.80
JIS Z 3284 Annex 6	
Tackiness	> 24hrs (> 100gf)
JIS Z 3284 Annex 9	
Surface Insulation Resistance	> 1 x 10 ⁸ Ω, Pass
(85°C, 85%RH, 168hrs)	
IPC-TM-650 2.6.3.3	
Electromigration	Pass
(85°C, 88.5%RH, 596hrs)	
IPC-TM-650 2.6.14.1	
Slump Test	Pass
JIS Z 3284 Annex 7, Annex 8	
Solder Ball Test	Pass
IPC-TM-650 2.4.43	
JIS Z 3284 Annex 11	
Residue Dryness Test	Pass
JIS Z 3284 Annex 12	

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Recommended Reflow Profile



	RTS (Ramp To Spike) Profile	RSS (Ramp Soak Spike) Profile
Ramp up rate (100-150°C)	3°C/sec max	3°C/sec max
Soaking (150-180°C)	-	40-120 sec
Reflow Time (>221°C)	30-90 sec	30-90 sec
Peak Temperature	235-255°C	235-255°C
Cooling Rate	6°C/sec max	6°C/sec max

Residue Removal

Residue removal is not needed as this is a no clean solder paste. For assemblies that require cleaning, call Asahi technical support.

Storage, Handling and Shelf Life

Solder paste has to be thawed to room temperature (~25°C) prior using to avoid condensation.

Generally the solder paste could last for 6 months from date of manufacturing, if kept under proper condition and temperature of 0 - 10 °C. The syringe should be stored upright with the tip pointing downwards to avoid flux separation from solder powder throughout the shelf life of solder paste.

Health and Safety

Do not handle the paste with your bare hand. Use proper tool when handling the paste. If the paste touches the skin, wash thoroughly with soap and water. For more information, please refer to Material Safety Data Sheet.

Packaging

Packaging Type	Weight	Packaging Part
Syringe	100g	G
	75g	B
	35g	A

Solder Paste Product Coding System:

Alloy Type Powder Size - Series Type Formula Type - Packaging Part

Example: SACB1053 4-5 M097-B

DISCLAIMER OF LIABILITY

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