

4900P



SAC305 Solder Paste—No-Clean

4900P is a no-clean solder paste made from a blend of high-purity, non-recycled tin, silver and copper metal powder mixed with a no-clean flux. This halogen-free and lead-free solder paste is designed for extreme flux activity and the enhanced printing requirements of ultra-fine pitch applications. It provides excellent wetting on copper OSP-coatings. Wide reflow process windows combined with high thermal stability yield solder joints with smooth surfaces.

4900P is the best lead-free solder paste for facilitating high speed printing. It can yield brick-like prints even when using ultra-fine pitch stencils as small as 0.3 mm.



Features & Benefits

- Alloy exceeds J-STD-006C and meets ASTM B 32 purity requirements
- Flux meets J-STD-004B
- Repeatable and consistent printing characteristics
- Long stencil and tack life facilitate high speed printing
- Excellent wettability
- Suitable for air or nitrogen atmospheres
- Medium-soft, non-cracking residues

Available Packaging

Cat. No.	Packaging	Net Vol.	Net Wt.
4900P-25G	Syringe	0.88 mL	25 g
4900P-250G	Jar	8.81 mL	250 g

Contact Information

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Properties

Flux Classification	ROLO
Flux Type	Rosin
Flux Activity	Low
Copper Mirror	No removal
Corrosion Test	Pass
Electromigration	Pass
Solder Ball Test	Pass
Slump Test	
@ 25 °C, 0.63 vert./horiz.	No bridges
@ 150 °C, 0.63 vert./horiz.	No bridges
@ 25 °C, 0.33 vert./horiz.	No bridges
@ 150 °C, 0.33 vert./horiz.	Pass
Viscosity, poise	1600–1900
Acid Number (mgKOH/g sample)	117
Halides (by weight)	<0.05 %
Post Reflow Flux Residue	5.5 %
Metal Loading	88.5 %
Surface Insulation Resistance (SIR)	2.0 x 10 ¹⁰ Ω
Bellcore (Telecordia)	5.3 x 10 ¹⁰ Ω
Tack	
Initial	124 g
Retention @ 24 h	111 g
Retention @ 72 h	98 g

Application Instructions

Read the product SDS before using this product (downloadable at www.mgchemicals.com).

1. Take solder paste out of refrigerator and allow it to reach room temperature prior use.
2. For syringe: Remove the cap from the syringe. Do not discard cap.
 - a. Insert plunger to the back of the syringe. For better control, insert needle to the tip.
 - b. Dispense paste onto the desired area and place component on top.
3. For jar: Apply paste using a wooden stick to the desired area and place component on top.
4. Apply heat using a heat gun.
5. Clean tip to prevent contamination and material buildup.
6. Replace the cap on the syringe.
7. (Optional) Clean residue with MG #8241-T or #8241-W Isopropyl Alcohol Wipes.

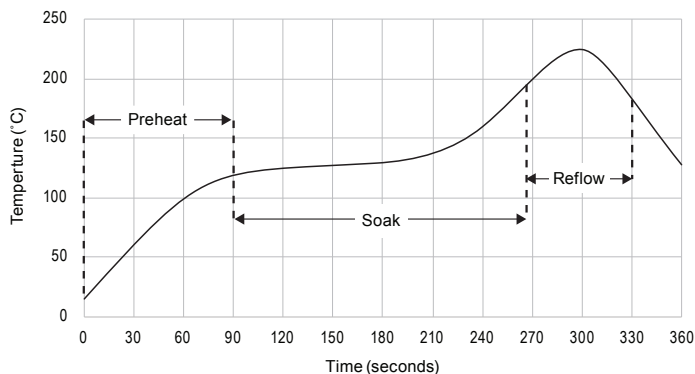
Reflow

Best results have been achieved when the paste is reflowed in a forced air convection oven with a minimum of 8 zones. The following is a recommended profile for a forced air convection reflow process.

Preheat Zone—It is the ramp zone, which elevates the temperature of the PCB to the desired soak temperature. The rate of temperature rise should not exceed 2.5 °C/s to avoid thermal shock stress.

Soak Zone—It exposes the PCB to a stable temperature that allows the components to reach a uniform temperature. It allows the flux to concentrate and the volatiles to escape from the paste.

Reflow Zone—It is the spike zone, which elevates the temperature of the PCB assembly from the activation temperature to the recommended peak temperature.



Storage and Handling

Store refrigerated between 2–10 °C in an upright position with tip down to prevent flux separation and air entrapment.

Unopened Container

Shelf Life @ 2–10 °C	1 year
Shelf Life @ 20–25 °C	6 months

Disclaimer

This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

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