

INSPIRING INNOVATION

VS-213A, No-Clean Solder Paste

Product Data Sheet

Product Highlights

- n ROL0 flux classification
- n Designed for LGA, BGA, and CSP components
- n Halogen free per EN14582 test method
- n Excellent wetting on all common surface finishes
- n Clear residue
- n Low voiding

Test Desults

- n Long stencil life
- n RoHS II and REACH compliant

Available Alloys

Alloy	Temp °C	Temp °F
96.5Sn/3.0Ag/0.5Cu	217-220	423-428

Packaging

500 gram cartridges

Test Results			
Test J-STD-004 or other requirements (as stated)	Test Requirement	Result	
Copper Mirror	IPC-TM-650: 2.3.32	L: No breakthrough	
Corrosion	IPC-TM-650: 2.6.15 L: No corrosion		
Quantitative Halides	IPC-TM-650: 2.3.28.1 L: <0.5%		
Electrochemical Migration	IPC-TM-650: 2.6.14.1 L: <1 decade dro (No-clean)		
Surface Insulation Resistance	IPC-TM-650: 2.6.3.7	L: 100 M (No Clean)	
85 °C, 85% RH@ 168 Hours			
Tack Value	IPC-TM-650: 2.4.44	34g	
Viscosity - Malcom @ 10 RPM/25 °C (x10³mPa/s)- SAC305 T3/T4	IPC-TM-650: 2.4.34.4	Print: 120-185 Dispensing: 105-150	
Visual	IPC-TM-650: 3.4.2.5 Clear and free from precipitation		
Conflict Minerals Compliance	Electronic Industry Citizenship Coalition (EICC)	tion (EICC) Compliant	
REACH Compliance	ompliance Articles 33 and 67 of Regulation Contains no s (EC) No 1907/2006 >0.1% w/w t as a SVHC o for use in sole		

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Printer Operation

The following are general guidelines for stencil printer optimization with VS-213A. Some adjustments may be necessary based on your process requirements.

Print Speed: 25-150 mm/sec Squeegee Pressure: 70-250g/cm of blade Under Stencil Wipe: Once every 10-25 prints, or as necessary

Stencil Life

- > 12 hours @ 30-45% RH and 20-25 °C
- ~ 4 hours @ 45-75% RH and 20-25 °C

Amtech Low Oxide Powder Distribution

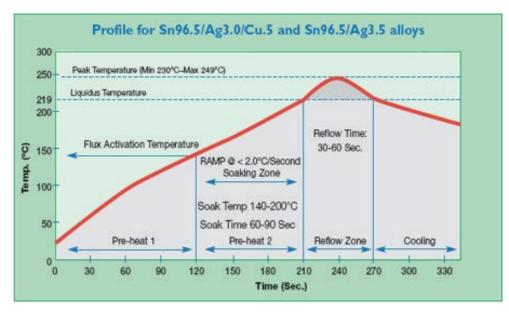
Micron Size	Туре	Pitch Requirements
45-75µ	Туре-2	24 mil and above
25-45µ	Туре-3	l 6-24 mil
20-38µ	Туре-4	12-16 mil
l 5-25µ	Туре-5	8-12 mil
5-15µ	Type-6	5-8 mil
2-11µ	Туре-7	< 5 mil

Note: Type-6 and Type-7 may not be available in certain alloys. Other powder distributions are available on request.

Storage

Solder paste should be stored between 3-8 °C (37-46 °F) to obtain the maximum refrigerated shelf life of six months. Unopened solder paste stored at room temperature, 25 °C (77 °F) will have a one-month shelf life. Syringes and cartridges should be stored vertically in the refrigerator with the dispensing tip down. Allow 4-8 hours for solder paste to reach an operating temperature of 20-25 °C (68-77 °F). Keep the solder paste container sealed while warming the solder paste to operating temperature.

NEVER FREEZE SOLDER PASTE.



Recommended Profile

This profile is designed to serve as a starting point for process optimization using VS-213A. To achieve better results with voiding or to reduce tombstoning, consider using a longer soaking zone, (170-220 °C) for 60-90 seconds, with a more rapid pre-heat stage. If there is evidence of solder de-wetting, consider lowering the peak reflow temperature, or reduce the time above liquidus to <60 seconds.