V9 NO CLEAN SOLDER PASTE

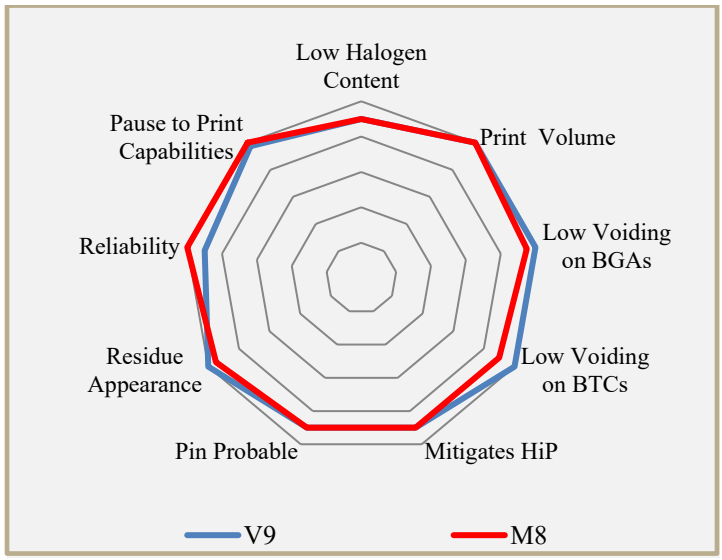
FEATURES

- Low-Voiding: as low as 1% on BGA and <5% on BTCs
- Capable of Consistent Printing with Area Ratio <0.66
- High Reliability (SIR)
- Drop-in for M8
- REACH and RoHS* Compliant
- Available in SAC305 T4

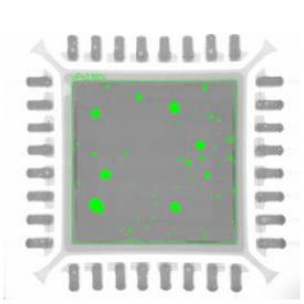
DESCRIPTION

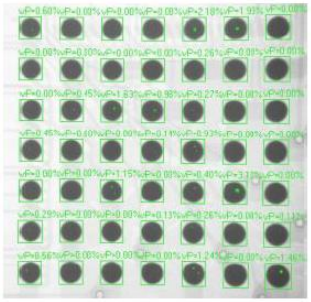
V9 Low-Voiding No Clean solder paste is formulated for near-zero voiding on BGA, BTC and LED soldering applications. Significant void reduction achievable on all surface finishes including ENIG, ImSn and OSP. V9 exhibits stable print performance on fine feature devices over 12 hours. V9 post-process residue is easily pin-probed and has high SIR values.

CHARACTERISTICS



*Lead-free alloys.





HANDLING & STORAGE

PARAMETER	TIME	TEMPERATURE
Sealed Refrigerated Shelf Life	6 Months	0°C-12°C (32°F-55°F)
Sealed Unrefrigerated Shelf Life	1 Month	< 25°C (< 77°F)

Do not add used paste to unused paste. Store used paste separately; keep unused paste tightly sealed with internal plug or end cap in place. After opening, solder paste shelf life is environment and application dependent. See AIM's paste handling guidelines for further information. Alloy and storage conditions may affect shelf life. Please refer to V9 Certificate of Analysis for product specific information.

CLEANING

Pre-Reflow: AIM stencil cleaner effectively removes solder paste from stencils while in process. Stencil cleaner can be hand applied or used in under stencil wipe equipment. Stencil cleaner will not dry paste and will enhance transfer properties. Do not over-apply stencil cleaner. Do not apply stencil cleaner to stencil topside. Isopropanol (IPA) is not recommended in process but may be used as a final stencil rinse.

Post-Reflow Flux Residue: Residues can remain on the assembly after reflow and do not require cleaning. Where cleaning is mandated, AIM has worked closely with industry partners to ensure that residues can be effectively removed with common defluxing agents. Contact AIM for cleaning information.

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REFLOW PROFILE

Detailed profile information may be found at http://www.aimsolder.com/reflow-profile-supplements. Contact AIM for additional information.

PRINTING

RECOMMENDED INITIAL PRINTER SETTINGS - DEPENDENT ON PCB AND PAD DESIGN	
Parameter	Recommended Initial Settings
Squeegee Pressure	0.4 - 0.7kg/25mm
Squeegee Speed	13 – 152 mm/second
Snap-off Distance	On Contact 0.00 mm
PCB Separation Distance	0.75 - 2.0 mm
PCB Separation Speed	3 - 20 mm/second

TEST DATA SUMMARY

NAME	TEST METHOD	RESULTS	
IPC Flux Classification	J-STD-004A 3.3	ROL0	
IPC Flux Classification	J-STD-004 Current Rev	ROL1	
NAME	**TEST METHOD**	**TYPICAL RESULTS**	**IMAGE**
Copper Mirror	J-STD-004B 3.4.1.1 IPC-TM-650 2.3.32	LOW	
Corrosion	J-STD-004B 3.4.1.2 IPC-TM-650 2.6.15	PASS	Before After 
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	Br: 0.44% Cl: 0.0% Typical	
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	PASS	
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	PASS	

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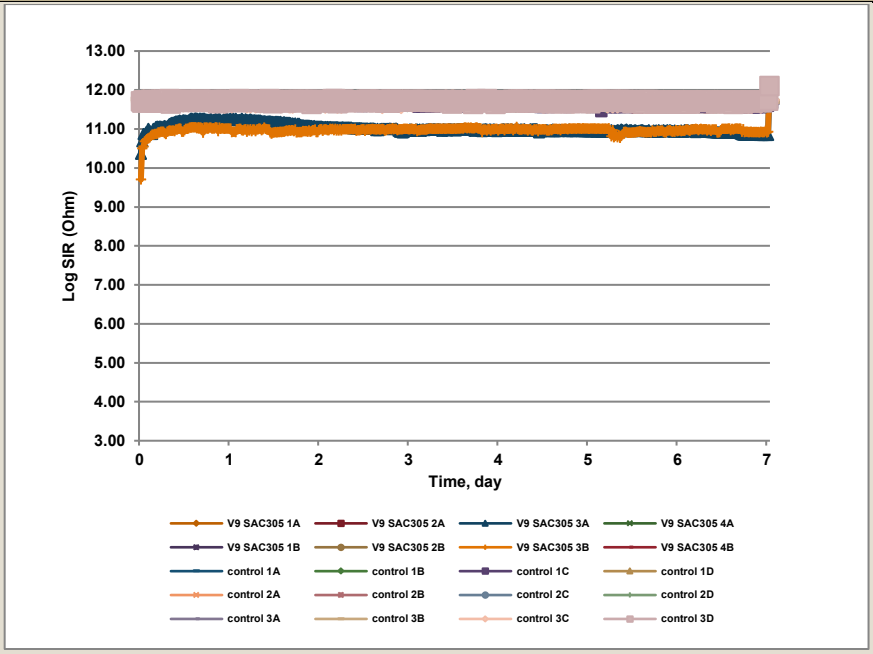
NAME	TEST METHOD	TYPICAL RESULTS	IMAGE
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	All measurements on test patterns exceed 100 MΩ	
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	94.14% Typical	
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	139.03 mg KOH/g Typical	
Viscosity (Malcom)	J-STD-005A 3.5.1 IPC-TM-650 2.4.34	150-250 Pa·s Typical	
Visual	J-STD-004B 3.4.2.5	PASS	
Slump	J-STD-005A 3.6 IPC-TM-650 2.4.35	PASS	

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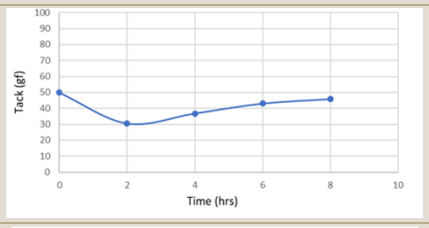
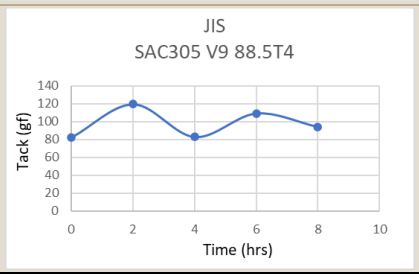
NAME	TEST METHOD	TYPICAL RESULTS	IMAGE
Spread Test	J-STD-004B 3.7.2 IPC-TM-650 2.4.46	PASS	
Solder Ball	J-STD-005A 3.7 IPC-TM-650 2.4.43	PASS	 15 min  4 hrs
Tack	J-STD-005A 3.8 IPC-TM-650 2.4.44	36.1 gf Time 0 Typical	
Tack	JIS Z 3284 Annex 9	82.5 gf Time 0 Typical	

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