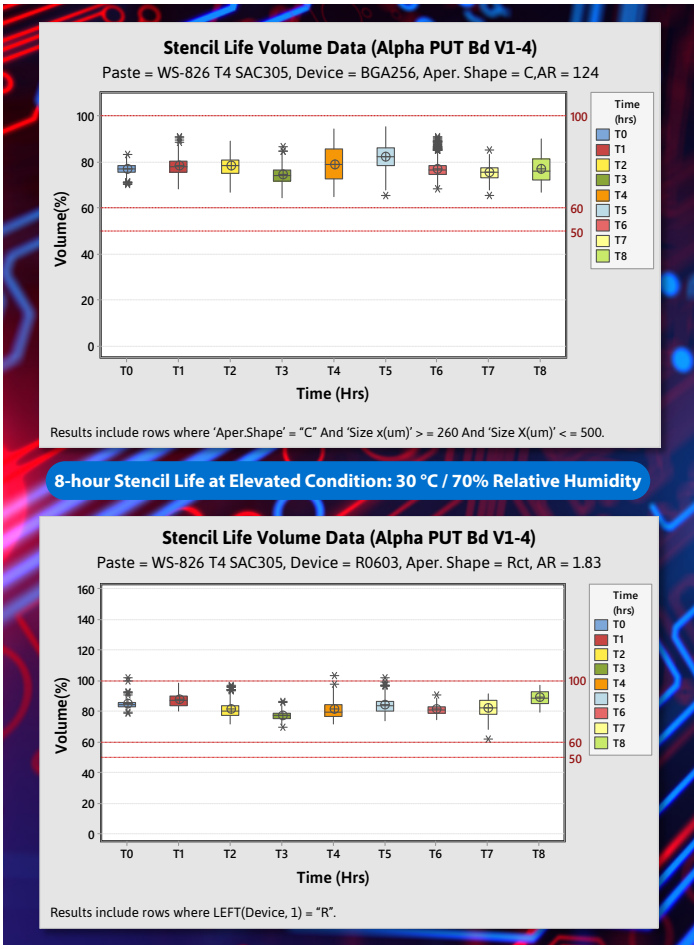
ALPHA® WS-826

Water Soluble, Lead-Free, Zero-Halogen Solder Paste

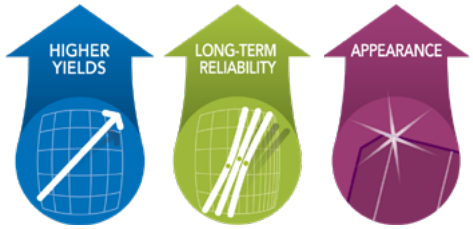
Robust water soluble solution with excellent cleanability, environmental stability and print performance in elevated processing conditions.

ALPHA WS-826 is a water soluble, lead-free, zero-halogen solder paste designed for excellent environmental stability, even in extreme operating conditions. This formulation provides consistent stencil life, tack time, and print definition. Delivering consistent print performance at elevated temperatures and humidity, excellent solderability, and easy post reflow residue cleaning, ALPHA WS-826 is ideal for automotive, communications, computing and medical applications.



Key Features

- 8-hour stencil life at ambient and elevated environmental conditions up to 30 °C/70% RH.
- Highly cleanable with batch and inline aqueous systems.
- Wide print and reflow process window.
- Reflowable in air and nitrogen.
- Available in SAC305 Type 5 powder for fine feature applications.



*Zero-halogen is defined as no halogen intentionally added to the formulation.

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IPC Hot Slump using IPC-A-20 (4 mil thick) for ALPHA WS-826 SAC305 T4

IPC Hot Slump Test		
Test Conditions	Reflow Oven 150 °C	10 min
Stencil	IPC-A-20	4 mil thick
Pad Size	0.33 x 2.03 mm	0.2 x 2.03 mm
Bridges	0.1 mm	0.125 mm
IPC Max Gap	0.25 mm	0.175 mm
Results	PASS	PASS

PERFORMANCE SUMMARY

PROCESS BENEFITS	PROPERTIES	PERFORMANCE CAPABILITIES
Print Process Window	Fine feature print definition	Excellent print definition and consistent volumetric performance down to 250 µm (10 mil) diameter with AR≥0.6
	Temperature window	Capable of printing in temperatures from 20 to 30 °C (68 to 86 °F)
	Stencil Life at ambient condition	8-hour stencil life of continuous printing with consistent transfer efficiency at 25 °C/50% RH
	Stencil Life at elevated condition	8-hour stencil life of continuous printing with consistent transfer efficiency at 30 °C/70% RH
	Print speed range	Wide process window from 50 to 150 mm/sec (2 to 6 in/sec) at AR≥0.6
	Print pressure range	6.8 to 10.7 kg at AR≥0.6
Reflow Process Yield	Peak reflow temperature	235 to 255 °C for SAC
	Resistance to Voids	Meets IPC-7095 Class 3 Classification
	Resistance to cold and hot slump	Meets/exceeds IPC J-STD-005A
	Coalescence	Excellent coalescence down to 170 µm features
	Random solderballs	Meets/exceeds IPC J-STD-005B and JIS Level 2
Electrical Reliability	SIR	Meets/exceeds modified IPC J-STD-004B requirements
	Electromigration resistance	Meets/exceeds IPC J-STD-004B requirements
	Halide content	Halide-free
	IPC J-STD-004B classification	ORM0
Environmental	Halogen Content	Zero-halogen

MacDermid Alpha ELECTRONICS SOLUTIONS

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SCAN THE CODE to know more

For more information, contact us at Assembly@MacDermidAlpha.com

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