

ALPHA[®] OM-220 Solder Paste

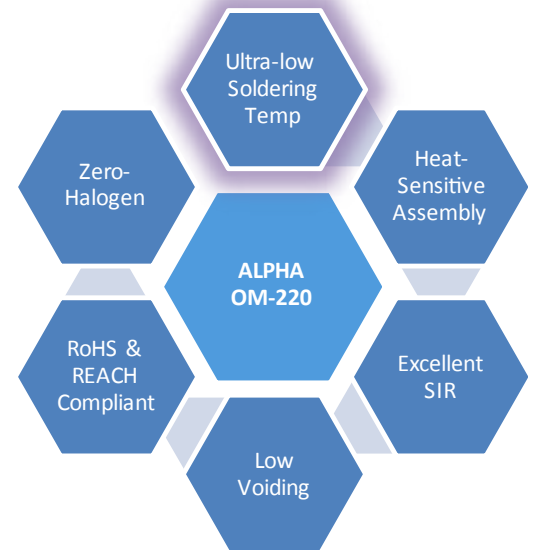
Ultra-Low Temperature Soldering (ULTS) Solution

Soldering Heat-Sensitive Components (<150 °C)

ALPHA OM-220 is a new, ultra-low temperature solder paste paired with ALPHA ULT1 alloy intended for soldering temperature sensitive components and substrates.

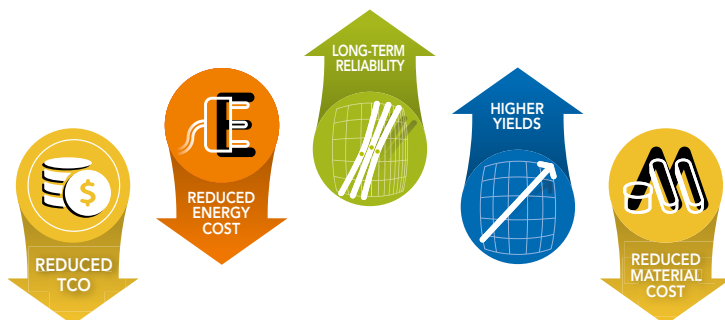
This innovative chemistry enables peak reflow temperatures below 150 °C, making it ideal for soldering heat sensitive components and sub-assemblies. In addition, ALPHA OM-220 permits cascaded / hierarchical soldering, as well as novel hermetic sealing solutions.

This technology is well suited for a broad range of applications involving temperature-sensitive assemblies, in end applications, such as consumer electronics, in-cabin automotive electronics and medical devices.



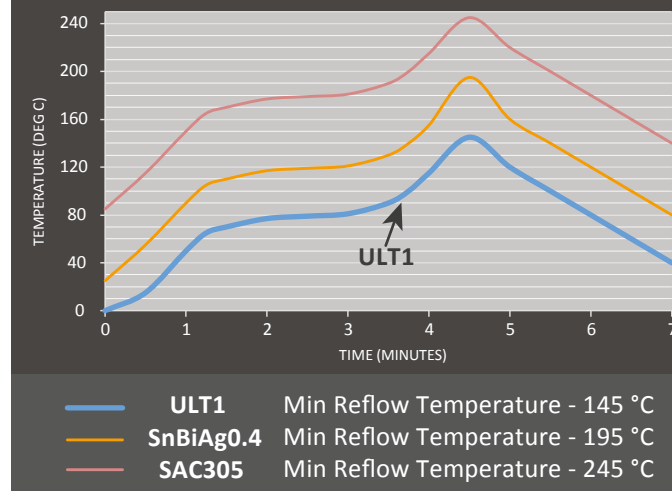
KEY FEATURES

- Low reflow peak temperature < 150 °C.
- Enables use of lower cost substrates & components.
- Reduction of warpage (component & substrate) vs SAC process.
- Excellent electrical reliability; passes JIS Z 3197 & J-STD-004B SIR testing.
- Exhibits low voiding characteristics; passes IPC-7095 Class 3 voiding on BGA components.
- Halide-free & zero-halogen compliant.



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

Minimum Reflow Peak Temperature Requirement for Alloys

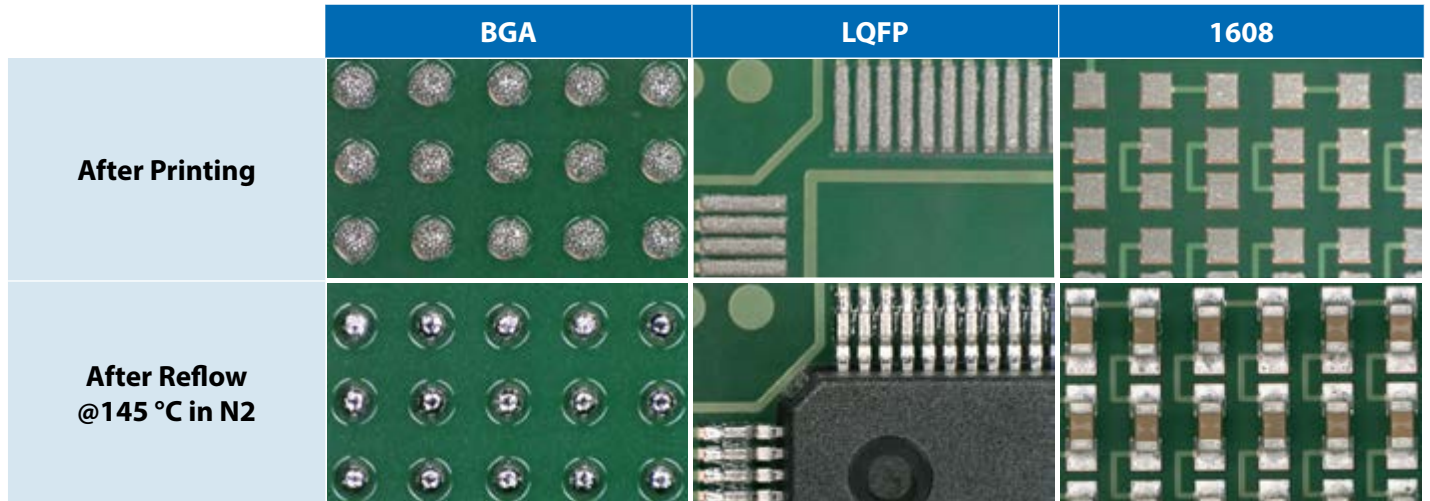


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ALPHA OM-220 ULT1 produces uniform and shiny joints with clear and soft flux residues.



PERFORMANCE SUMMARY

PROCESS BENEFITS	PROPERTIES	PERFORMANCE CAPABILITIES
Print Process Window	Fine Feature Print Definition	230 micron BGA circle with Area Ratio = 0.57
	Tack/stencil Life	8 Hour Stencil Life
	Print Speed Range	50 to 100 mm/s (2 to 4 in/sec)
Reflow Yield	Reflow Environment	Nitrogen
	Resistance to Voids	Exceeds IPC-7095 Class 3 Requirements
	Random Solderballs	Passes IPC J-STD-005A Criteria - Acceptable
	Coalescence (N2 Reflow)	Good Coalescence Down to 170 microns
Electrical Reliability	Flux Residue Characteristics	Clear, Colorless & Soft
	IPC SIR	Passes IPC J-STD-004B TM 2.6.3.7
	JIS SIR	Passes JIS Z 3197
Environmental	Classification	ROLO as per IPC J-STD-004B
	Halogen Content	Zero-Halogen



macdermidalpha.com

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