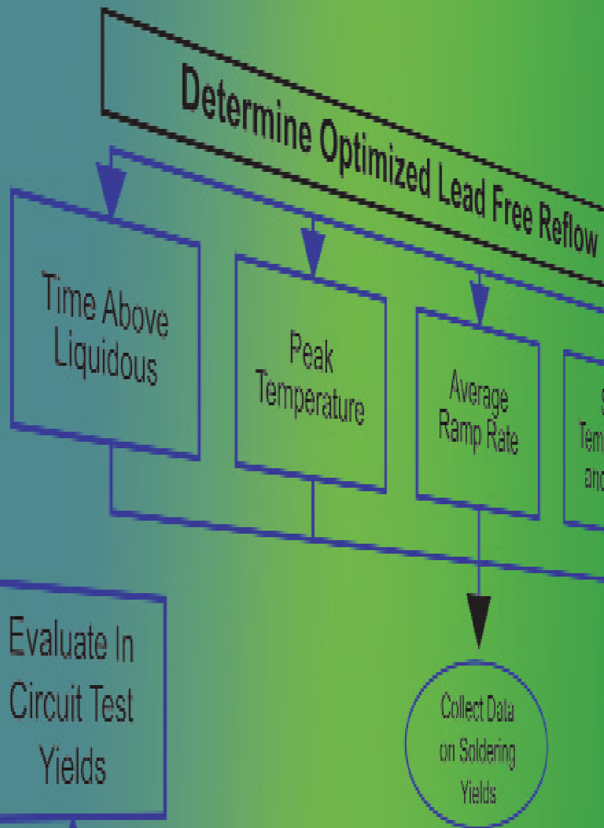
the product

ALPHA OM-338 lead-free solder paste

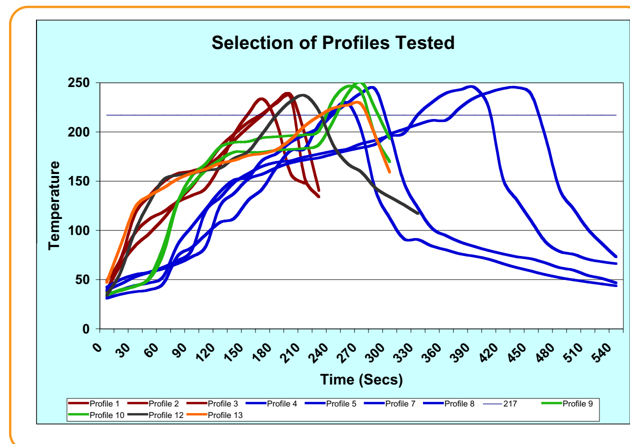
Develop a superior lead-free solder paste that simplifies the transition to lead-free soldering.

- **Lowest cost of ownership**
- **Wide reflow process window**
- **Ultra-fine pitch printing capability**
- **Outstanding voiding resistance**



ALPHA OM-338 delivers high reflow yields across a wide range of thermal profiles:

- Wide Reflow Capability, even on boards with large thermal differentials
- Excellent flux residue cosmetics even with long hot profiles
- Extremely effective vertical lead wetting supporting increased mechanical joint strength
- Excellent hot slump performance minimizes post reflow solder shorts



alpha

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SM810

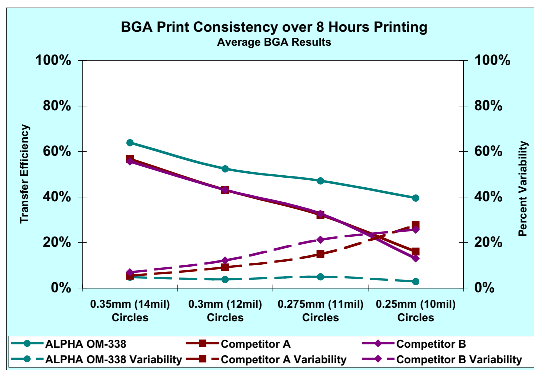
ALPHA OM-338 lead-free solder paste

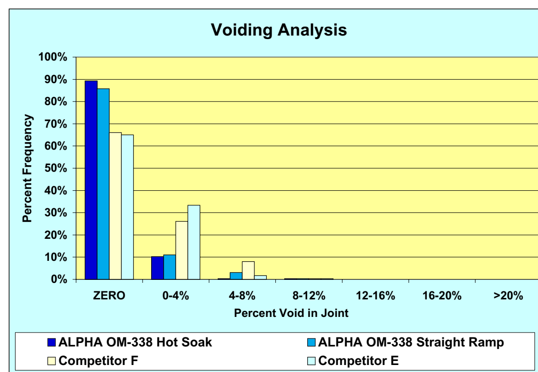
ALPHA OM-338 provides wide print process window:

- Repeatable ultra fine feature volumes deliver a high yielding lead-free print process
- Excellent fine feature print capability
- Repeatable volumes down to 0.25mm (10mil) circles and 0.4mm (16mil) pitch components
- Wide print temperature performance between 19°C and 29°C minimizing defects relating to environment

ALPHA OM-338 delivers excellent voiding performance

- Minimal voiding due to reflow profile
  - – Excellent for high yielding BGA process
- Exceeds IPC 7095 Class III BGA voiding requirements verified with and without microvia conditions
- Compatible with both Tin-Lead and Lead-Free solder ball BGA components





Performance Summary

Process Benefit	ALPHA OM-338 Attributes	Performance Capability
Print Process Window	Print Consistency	Best in class volume repeatability during 8 hours of continuous printing
	Ultra Fine Feature Transfer Efficiency	Excellent print repeatability to 0.25mm (10mil) circles and 0.4mm (16mil) pitch QFP
	Print Temperature	Excellent performance over a wide operating range of temperatures, 19°C to 29°C (66°F to 84°F)
	Response to Pause	Zero knead strokes required on 0.25mm (10 mil) circle apertures after 1 hour idle time
Print Cycle Time	Squeegee Speed	Excellent print consistency volume across a wide range of print speeds, 25mm/sec to 200mm/sec (1in/sec to 8in/sec)
Reflow Yield	Mid-Chip Solderballing	Good mid-chip solderball performance, even at 150µ (6mil) stencil thickness, using laboratory testing procedure
	Voiding Performance	Superior voiding performance. Class III as per IPC 7095 7.4.1.6
	Random Solderballs	Passes IPC J-STD 005, DIN 32513 and JIS standards
	Post-Reflow Solder Cosmetics	Bright, smooth joints, suitable for ultra fine features {sub 0.3mm (12mil) circles} reflow coalescence with low volume, clear, colorless flux residues. No discoloration of flux residue even at elevated thermal profiles
	Pad Surface Compatibility	Excellent spread on NiAu, Immersion Ag and Sn pad finishes. Consistent solder spread on Cu OSP, supporting double sided reflow
	Hot/cold Slump Performance	Excellent hot and cold slump performance. Tested as per IPC, DIN and JIS standards

Worldwide Headquarters • 600 Route 440 • Jersey City, NJ 07304 • USA • 1-800-367-5460 • www.alphametals.com
European Headquarters • Forsyth Road • Sheerwater • Woking GU215RZ • United Kingdom • 44-1483-758-400
Asia-Pacific Headquarters • 1/F, Block A • 21 Tung Yuen Street • Yau Tong Bay • Kowloon, Hong Kong • 852-3190-3100

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