Do the math!
Get fewer defects and greater yield with ALPHA OM-5100.

- Increase print deposit consistency
- Reduce random solderballs
- Reduce mid-chip solderballs
- Improve joint cosmetics

Switch to new ALPHA OM-5100

Cookson Electronics ASSEMBLY MATERIALS

Introducing

ALPHA OM-5100

Are you falling short of process yield goals? You may be using the wrong solder paste! Try ALPHA OM-5100 and you will find a solution to these worrisome problems. With ALPHA OM-5100 you get:

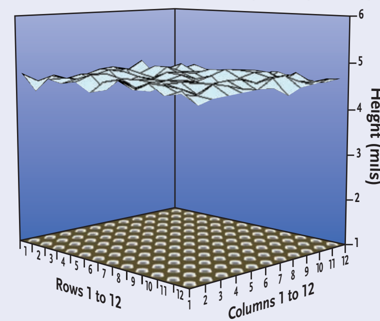
- Higher reflow yields with minimal paste deposit variation, solderballs and cosmetic defects
- Wide print process window that speeds implementation and improves response to pause
- Excellent joint cosmetics enable you to meet your demanding requirements.

To learn more about the benefits of switching to ALPHA OM-5100, contact us at one of the phone numbers listed below.
Please visit our web site at www.alphametals.com.

ALPHA OM-5100 Delivers High Yields.

- Reduced solder defects:
  - Excellent deposit-to-deposit consistency.
- Improved reflow yields:
  - Very good mid-chip solderball performance
  - Reduced random solderballing

Topographical Analysis
of 12 by 12 BGA Height (12 mil (0.3mm) Circles)

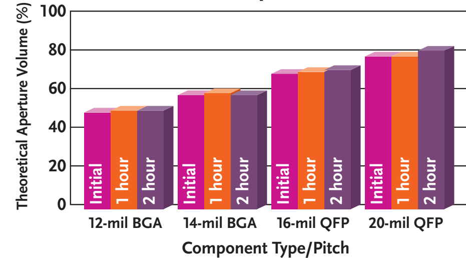


Level topography demonstrates minimal height variation – less than .55 mil – on an area array application.

ALPHA OM-5100 Provides a Wide Print Process Window

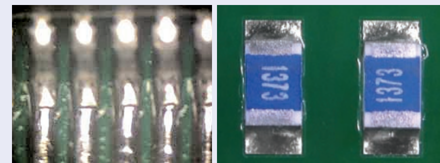
- Response to Pause:
  - Excellent response to 2 hour pause with zero knead strokes
- Ease of Implementation:
  - Wide print window suits most print applications with minimal to no production line changes.
- Wipe Frequency:
  - Capable of printing >10 prints without wiping on 0.4 mm (16 mil) pitch

Two-Hour Response to Pause



ALPHA OM-5100 Delivers Excellent Joint Cosmetics

- Excellent joint cosmetics:
  - Bright and shiny solder joints with straight ramp and soak profiles
  - Colorless flux residues, with excellent underfill compatibility
- Pad coverage:
  - Excellent solder spread, even after second side reflow processing



ALPHA OM-5100 Performance Summary

Process Benefit	ALPHA OM-5100 Attributes	Performance Capability
Print Process Window	Print Definition	Excellent print repeatability to 0.3 mm (12 mil) circles and 0.4 mm (16 mil) pitch QFP.
	Response to Pause	Zero knead strokes required on 0.3 mm (12 mil) circle apertures and 0.4 mm (16 mil) pitch after 2 hour idle time
	Stencil Life	No change in print characteristics after 8 hours continuous printing and passes IPC J-STD 005 tack procedure after 24 hours exposure to 25-75% Relative Humidity
Print Cycle Time	Squeegee Speed	25-150 mm/sec (1-6 in/sec)
	Wet Bridging Sensitivity	Greater than 10 prints per wipe on 0.4 mm (16 mil) pitch QFP
Reflow Yield	Mid-Chip Solderballing	Excellent mid-chip solderball performance even at 0.150 mm (6 mil) stencil thickness. Evaluated on laboratory testing procedure
	Random Solderballs	'Preferred' per IPC J-STD 005
	Post-Reflow Cosmetics	Bright, smooth, shiny joints. Low volume and colorless to light amber flux residue, suitable for BGA and CSP component underfill performance.
	Pad Surface Compatibility	Excellent solder spread on CuOSP, NiAu, Immersion Ag – even after one prior reflow.
	Pin Testability	Greater than 92% first pass strike on over 10,000 test points (evaluated in laboratory testing based on flat pad and via in pad designs)

Cookson Electronics ASSEMBLY MATERIALS

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