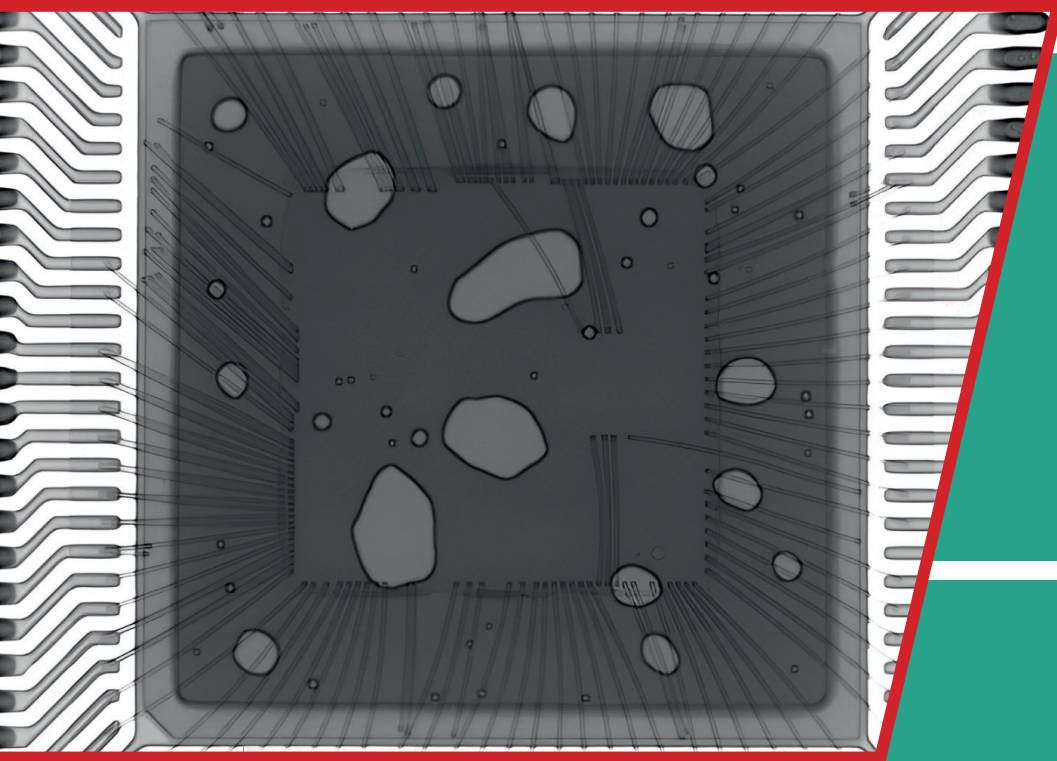




GC 18

solder paste



HARIMA MULTiCORE GC 18

LOW VOIDING, TEMPERATURE STABLE SOLDER PASTE

HARIMA MULTiCORE GC 18 is the latest in the GC range of temperature stable solder pastes. From the same stable as GC 10, this new material combines the stability performance of its predecessor with improved thermal dissipation in bottom terminated devices due to reduced voiding within the solder joint.

HARIMA MULTiCORE GC 18 remains stable whether stored at room temperature for 12 months or for one month at elevated temperature (up to 40 °C) and is designed to provide excellent transfer efficiency for fine-pitch components and good fluxing action on challenging surface finishes.

GC18 is optimised to reduce the occurrence of voids in component joints, being especially effective on reducing voids in large ground-plane devices such as QFN's, DPAK's and MOSFET's. With its specially designed fully halogen-free activator package thus it eliminates expensive nitrogen atmosphere reflow, reduces PPM defects and rework resulting in reduced processing costs.

LOW VOIDING

GC 18 BENEFITS

Improved stability	Improved reflow	Post reflow reliability	Improved paste management
On-line stencil stability. Good process capability after up to 12 hours printing	Excellent coalescence in long, hot profiles for 0201 and 0.4mm pitch components	Specially formulated to provide low voiding in soldered joints of Bottom Terminated Components (BTC's - QFN, DPAK, LGA)	Exceptional on-line paste utilization
At least 12x longer than conventional paste	Excellent coalescence after storage of printed paste for up to 48 hours at 80% RH	Residues are compatible with encapsulation technologies	End of day paste scrapping eliminated
Elevated temperature stability: x100 over conventional paste	Minimal hot slump at 190 °C	Post reflow residues are benign and cleanable with existing chemistries (if required)	Eliminates requirement for cold packs or overnight shipment
Improved logistic management	Exceptional cosmetic appearance for lead-free solder joints	Flux residues are suitable for in-circuit test (ICT) even after multiple reflows	Eliminates requirement for refrigerated storage
Excellent long-term tackiness when small print deposit volumes required	Wide process window in both air and nitrogen	High SIR improves moisture resistance in challenging end applications	No refrigeration provides immediate start up

GC 18 ATTRIBUTES AND BENEFITS

ATTRIBUTE		INDUSTRY STANDARD	GC 18	BENEFIT
FLUX	Regulatory compliance	Halide-free or halogen-free	Zero halogens added	✓
	IPC-J-STD-004B classification	ROLO	ROLO	
POWDER	Particle size distribution	Type 3, 4	Type 3, 4	
	Alloy	SAC305	SAC305	
STORAGE	Ambient (26.5 °C)	1 month	12 months	✓
	@ 40 °C	1 day	1 month	✓
	@ 50 °C	None	1 week	✓
PROCESS	On-line paste utilisation	75 %	> 95 %	✓
PRINTING	Abandon time	Up to 4 hours	Up to 24 hours	✓
	Stencil life	Up to 8 hours	Up to 12 hours	✓
	Startup time	4-24 hours	Immediate	✓
REFLOW	Soak temperature	150-180 °C	150-200 °C	✓
	Voids: BGA	IPC Class III	IPC Class III	
	Voids : Chip components	< 20 %	< 10 %	✓
	Voids: QFN 3mm x 3mm	25 %	< 10 %	✓
	Voids: QFN 12mm x 12mm	50 %	< 20 %	✓
	Voids: low maximum temperature	> 240 °C	> 235 °C	✓
	Time above liquidus (217°C)	20-90 seconds	60-120 seconds	

LOW VOIDING