



GC 3W

solder paste



HARIMA MULTiCORE GC 3W

WATER WASH TEMPERATURE STABLE SOLDER PASTE

Following on from the GC 10, HARIMA MULTiCORE has developed a temperature stable solder paste for water wash applications. This new material is fully halogen free and combines the performance of a typical high activity flux with temperature stability, supplied in a fully water washable product.

The temperature stability of GC 3W delivers similar advantages as the no-clean GC range of materials with respect to benefits in both shipping and storage. The introduction of GC 3W enhances the range by providing a product which is readily removed in aqueous cleaning systems without requiring the addition of a saponifier or co-solvent. Post soldering residue removal is fast and easy, even at cleaning temperatures lower than required to clean similar flux systems. This, coupled with a wider cleaning window of up to seven days, provides the board manufacturer greater flexibility in the process. Improved stencil life and abandon times over previous generations of water wash pastes provide additional potential cost savings.

WATER WASH

GC 3W BENEFITS

Improved printing and stability	Improved reflow	Improved cleanability	Improved paste management
Industry's first temperature stable water wash solder paste	Excellent coalescence in air for 0201, 01005 and 0.3mm pitch components	Shorter cleaning times required at lower temperature compared to industry standard	Exceptional on-line paste utilization
Industry leader in water wash paste transfer efficiency	Zero dewetting after storage at 25 °C, 80% RH for 72 hours in long soak high temperature reflow profiles	Dual cleaning options: suitable for both spray under immersion and ultrasonics	End of day paste scrapping eliminated
Extended stencil life under high humidity production conditions	Minimal hot slump at 182 °C, improving solder joint reliability	No change in ease of residue removal after dual reflow cycles	Eliminates requirement for refrigerated storage
Exceptional cost savings from reduced amount of paste required	Exceptional cosmetic appearance for lead-free solder joints after reflow in air	No addition of co-solvents or saponifiers required	Eliminates requirement for cold or overnight shipment
Extended abandon times under high humidity production conditions	Flux technology improves total pad solderability in air with reduce paste volumes	Residue removal remains easy up to 7 days post SMT reflow	Zero start up times and no kneading
	Outperforms industry standard halide containing formulations		

GC 3W ATTRIBUTES AND BENEFITS

ATTRIBUTE		INDUSTRY STANDARD	GC 3W	BENEFIT
FLUX	Regulatory compliance	Halide or halogen containing	Zero halogens added	✓
	IPC-J-STD-004B classification	ORM1	ORM0	✓
POWDER	Particle size distribution	Type 3, 4	Type 3, 4	
STORAGE	Ambient (26.5 °C)	1 month	6 months	✓
	@ 40 °C	1 day	1 month	✓
PROCESS	On-line paste utilisation	75 %	> 95 %	✓
PRINTING	Abandon time	< 2 hours	> 4 hours	✓
	Stencil life	< 4 hours	> 8 hours	✓
	Startup time	4-24 hours	Immediate	✓
	Slump (IPC TM-650 2.4.35)	0.3 mm	0.2 mm	✓
REFLOW	Soak temperature	150-180 °C	150-180 °C	
AQUEOUS CLEANING	Time/temperature	5-10 minutes @ 55-75 °C	5 minutes @ 45-60 °C	✓
	Maximum cleaning delay	< 24 hours	Up to 7 days	✓
RELIABILITY	SIR post cleaning	Pass	Pass	
	Voiding performance	< 10 %	< 10 %	

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