



# LOCTITE GC 3W – THE GAME CHANGER

## TEMPERATURE STABLE, WATER WASH SOLDER PASTE

Expanding on its breakthrough temperature stable platform and the successful debut of LOCTITE GC 10, Henkel has developed the market's first-ever temperature stable water, wash solder paste, LOCTITE GC 3W. The new fully halide- and halogen-free formulation combines the properties of high-activity flux performance and temperature stability – characteristics that, until now, have been mutually exclusive.

The temperature stability of LOCTITE GC 3W delivers similar benefits as its no-clean counterpart, LOCTITE GC 10, and provides exceptional results in aqueous cleaning systems without the addition of saponifiers or cosolvents. Post-reflow residue

removal is fast and easy, and the cleaning window has dramatically expanded, allowing manufacturers the flexibility to clean boards seven days after assembly. Stencil life and abandon times are superior to previous-generation water wash formulas, and storage stability is extended to provide game-changing, water-washable performance.



[www.soldergamechanger.com](http://www.soldergamechanger.com)





## LOCTITE GC 3W BENEFITS

IMPROVED PRINTING AND STABILITY	IMPROVED REFLOW	IMPROVED CLEANABILITY	IMPROVED PASTE MANAGEMENT
Extended abandon times under high humidity production conditions	Excellent coalescence in air for 0201, 01005 and 0.3 mm pitch components	Dual cleanability options: ultrasonic and spray under immersion	Exceptional on-line paste utilization
Extended stencil life under high-humidity production conditions	After 3 days at 80% RH, zero dewetting on long soak, high-temperature, reflow profile	Low temperature, shorter cleaning time compared to industry standard	Reduces end-of-day paste scrapping
Industry leader in water wash paste-transfer efficiency	Minimal hot slump at 182°C, improving solder joint reliability	Easy residue removal over the longest post-reflow cleaning time: 0201, 0402, BGA, CSP, QFP, QFN (0.23 mm pitch)	Eliminates refrigerated pre-production and warehouse storage
Exceptional cost savings from reducing the required amount of paste	Best-in-class cosmetic appearance for Pb-free solder joints	No change in residue removal after dual reflows	Eliminates cold pack, dry ice and overnight shipping
Industry's first high-temperature stable, water wash solder paste	New flux technology improves total pad solderability in air with reduced solder paste volumes	No additional saponifiers or cosolvents required	Improved shipping logistics management
	Outperforms halide-containing, industry standard formulations		

## LOCTITE GC 3W ATTRIBUTES

ATTRIBUTES	CURRENT TECHNOLOGY	LOCTITE GC 3W
Regulatory Compliance	Halide/halogen containing	Zero halogens added
Particle Size Distribution	Type 3, 4	Type 3, 4
Performance Stable at 26.5°C	1 month	6 months
Performance Stable at 40°C	1 day	1 month
Abandon Time	< 2 hours	> 4 hours
On-line Paste Utilization	75%	> 95%
Start-up Time	4 – 24 hours	0 hours
Cleaning Time/Temperature	5 – 10 min. at 55-75°C	5 min. at 45 – 60°C
Soak Temperature (reflow)	150 – 180°C	150 – 180°C
Stencil Life	< 4 hours	> 8 hours
SIR Post Cleaning (in accordance with IPC9201A)	Within 24 hours	Within 7 days
Voiding Performance (in accordance with IPC7095B)	< 10%	< 10%
Slump Performance (in accordance with IPC TM-650 2.4.35)	0.3 mm	0.2 mm



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