



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 longer than previous-generation water wash formulas, and storage stability is extended to provide game-changing, water-washable performance.



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 |



**Across the Board,
Around the Globe.** 
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