

Press Release

Henkel Expands Temperature Stable Solder Portfolio; Develops Water Washable Solder Paste

September 28, 2015 – In early 2015, Henkel introduced the electronics market to the first-ever temperature stable solder paste, LOCTITE GC 10. Building on this success, the company has now developed a lead-free, halogen-free water washable solder paste that leverages this formulation know-how and has shown equally impressive results.

The new solder paste, LOCTITE GC 3W, is a market first for water washable materials. With temperature stability similar to that of LOCTITE GC 10, the paste offers performance stability at 26.5°C for six months and at 40°C for one month. In a formulation milestone, LOCTITE GC 3W combines the properties of high-activity flux performance and temperature stability – characteristics that have been mutually exclusive until now.

“We have taken many of the same temperature stability advantages used to develop LOCTITE GC 10 and integrated them into this new, water soluble formula,” explains Dr. Mark Currie, Henkel Global Product Manager for Solder Materials. “As compared to conventional water washable solder pastes, LOCTITE GC 3W offers storage, processing and cleaning latitude not previously available.”

LOCTITE GC 3W’s temperature stability provides similar advantages to that of its no-clean counterpart, LOCTITE GC 10. The new material boasts a stencil life of more than eight hours and abandon times greater than four hours. This is in comparison to current water soluble paste materials that generally only provide abandon times of two hours or less. In addition, while residues from most water washable materials must be cleaned within 24 hours, LOCTITE GC 3W dramatically expands the cleaning window and allows manufacturers the flexibility to clean the board seven days after board assembly.

Reflow performance of LOCTITE GC 3W is also superior to competitive pastes, providing improved solder joint reliability. The material has shown excellent coalescence in air for even the most challenging 0201, 01005 and 0.3mm pitch components. After three days at 80% relative humidity (RH), LOCTITE GC 3W exhibits absolutely no dewetting on a long soak, high temperature reflow profile and has minimal hot slump at 182°C.

“For applications such as aerospace and medical where cleaning is a requirement, LOCTITE GC 3W allows manufacturers to comply with manufacturing processes while

enjoying the benefits of improved printing and reflow stability, easy residue removal over extended time periods and superior paste management,” says Currie in conclusion. “In a nutshell, this paste delivers better performance with lower overall cost as compared to other water soluble materials.”

For more information about LOCTITE GC 3W, visit www.henkel.com/electronics or call 714-368-8000.

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