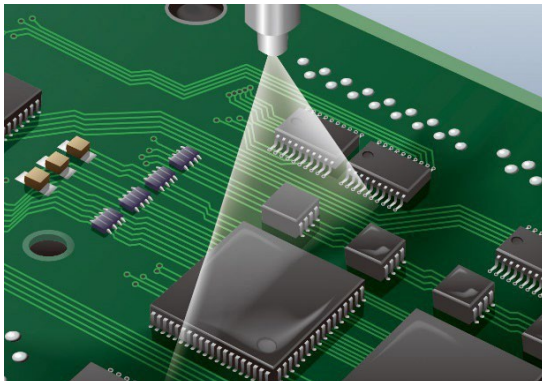
AUTHOR CONTACT:
Eric Bishop / Shin-Etsu Silicones of America, Inc.
513-232-8917 / ebishop@shinetsusilicones.com

EDITORIAL CONTACT:
Ray Farrar / Method Media LLC
(216) 861-0862 / rayf@methmedia.net

SILICONE ELONGATION INNOVATION FOR PCBs:

SHIN-ESTU SILICONES' NEW RESIN-BASED MR-COAT (01F/02F) SERIES HELPS EXTEND LIFE OF PCB COMPONENTS VIA HIGH ELONGATION / LESS STRESS CONFORMAL COATING PROPERTIES.



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Today's modern Printed Circuit Board (PCB) systems and Printed Wiring Board (PWB) applications experience extreme stress on their wire bonds and circuitry components that can significantly reduce their usage life. In an effort to combat this dilemma, Shin-Etsu Silicones of America, Inc. (SESA: A U.S. subsidiary of Shin-Etsu Chemical Co. Ltd., Japan), is launching its MR-COAT-01F & 02F conformal coating series–which features high hardness coupled with extremely high elongation for better abrasion resistance and less stress on PCB components.

The MR-COAT products are hard resin-based, one component systems that do not use toluene as a solvent making them suitable for protective coating for rigid and flexible PCB and PWB system applications–particularly those requiring high abrasion resistance and high elongation for less stress (and thus, higher life) on PCB components.

The series is the latest and most improved resin-based coating series from SESA, and offers significantly higher elongation than standard resin-based conformal coatings. Non-corrosive for general metals, they are suitable for spraying, dipping, brushing, and flow coating of PCB/PWB applications including: electronics, printed circuit boards, as well as LED signs/lights.

Unique property benefits of both materials can be optimally matched for the best coating method required for the process–while eliminating assembly steps and providing a much leaner process for production.

MR-COAT SERIES KEY FEATURES:

Both products in the low viscosity series are transparent, offer excellent electrical properties, are good for moisture/water proof coating on PCBs, and are a condensation cure (Room Temperature /Alcohol Type).

MR-COAT-01F: Features a viscosity of 70. This lower viscosity material is softer (55 Shore A), which makes it ideal when using a dipping tank process, and is also easier to spray. Notably, it features an elongation at break of 280, and a dielectric breakdown strength of 25 KV/mm.

MR-COAT-02F: Features a viscosity of 350. This higher viscosity material is harder (71 Shore A) but has a higher elongation than the softer 01F material. Notably, it features an elongation at break of 510, and a dielectric breakdown strength of 27 KV/mm.

CURING ADVANTAGE / Tack Free Time:

In Lean Manufacturing, the term Tack Free Time is used as the gage to determine just how quickly a part can be handled after being coated. SESA's MR-COAT series both are tack free in approximately five minutes or less. This is significant as you can now safely handle the parts after coating after those five minutes without the use of an oven or other extra curing process. This allows the customer to move on swiftly to other essential JIT processes.

CONCLUSION / SAFETY:

According to According to SESA's National Business Manager-RTV/TIM, Paul Alexander, "Shin-Etsu's MR-COAT silicone conformal coating series provides end-users a resin-based system that has more abrasion resistance than elastomer systems, without the use as toluene as a solvent. The abrasion resistance is high for this coating which is vital for abrasive applications such as electric welding machines that get hosed down via power washers on trucks which can damage PCBs. Ultimately, MR-COAT will protect against these types of harsh exposure."

Alexander also noted that the series uses a petroleum-based solvent that is considered a safe solvent. Using safe solvents in processing is a key to eliminating negative health effects in workers, avoiding EPA fines for overusing hazardous solvents,and preventing damage to dispensing equipment seals and packaging. Additionally, it doesn't contain, or use, toluene as athinning agent. Safety hazards associated with toluene can cause mild damage to the skin, eyes, and inhalation form dangerous fumes which can cause nausea, headaches, unconsciousness, etc.

SESA is in the process of launching the MR-COAT series and it is available now—manufacturing the products at one of their new facilities in Japan (Shin-Etsu Chemical Co., Ltd. Tokyo, President, Yasuhiko Saitoh), with no production capacity restraints. The products are packaged in 1kg square cans and 15kg pail cans. Samples are also available upon request.

For more detailed information, visit the Shin-Etsu Silicones web site at: **www.shinetsusilicones.com**

CORPORATE PROFILE: A U.S. subsidiary of Shin-Etsu Chemical Co. Ltd., Japan, Shin-Etsu Silicones of America Inc. offers vast technical and capital resources to formulate solutions as a major supplier of silicone materials to North America's medical, automotive, electronics, aerospace, cosmetics, and manufacturing industries. Shin-Etsu's premium silicone compounds incorporate leading-edge technology, staff expertise, and value-added service; offering customers the highest levels of quality and consistency in specialty silicone materials.