



AI Technology, Inc. (AIT)

AIT Introduces New Prima Protect™ conformal coating with Moisture Resistance and Hydrophobicity Similar to Parylene Coating

December 4, 2016 Princeton, Jct. NJ

Parylene is the choice for protecting electronics exposed to extreme moisture and water. However, it is costly to apply and not particularly conducive to large volume manufacturing.

AIT is proud to offer its Prima Protect™ conformal coating solution that **matches the performance of parylene coating on critical electronics**. The molecular structure of CC7130-PR has many similarities to parylene but is supplied in solvent based coating. This coatable “parylene-like” hydrophobic conformal coating can be used as substitution and replacement of standard vacuum deposited parylene. It has extreme low surface tension like that of parylene and **provides outstanding moisture and water barrier to electronic and electrical devices** used outdoors or near the sea with salt-fog exposure.

Vacuum deposited parylene coatings are cross-linked and prone to oxidation at moderate temperature of 70°C and quickly yellows when exposed to UV. Also they cannot be easily removed for reworking once deposited. CC7130-PR is a flexible coating that does not generate stress on electronic devices even at -55°C while maintaining its molecular structure at high temperature (up to 150°C and more) and can be removed with suitable stripper solvent.

In side-by-side testing with conventional commercial conformal coatings under the IPC-TM-650 for the IPC-CC830, CC7130-PR not only meets but exceeds the required 65°C and 90-98% humidity test. At the 100VDC testing, the electrical resistance exceeds 20 GΩ that is well above the 5GΩ requirement at 8 mil spacing.

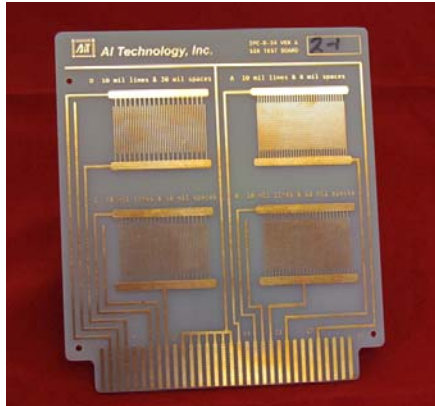
Under the more extreme testing at 1,000VDC (not part of the required test), CC7130-PR **outperformed all of the commercial acrylic and polyurethane conformal coatings with more than 200GΩ (8 mil spacing at 1,000VDC) resistance** after the temperature-humidity exposure for over 3 weeks (required testing condition is for 6 2/3days.)

For comparative testing, CC7130-PR was air-dried with a coating thickness of 10-20 micron, while the standard commercial coatings of acrylic and polyurethane were heat cured at 75 micron thickness.

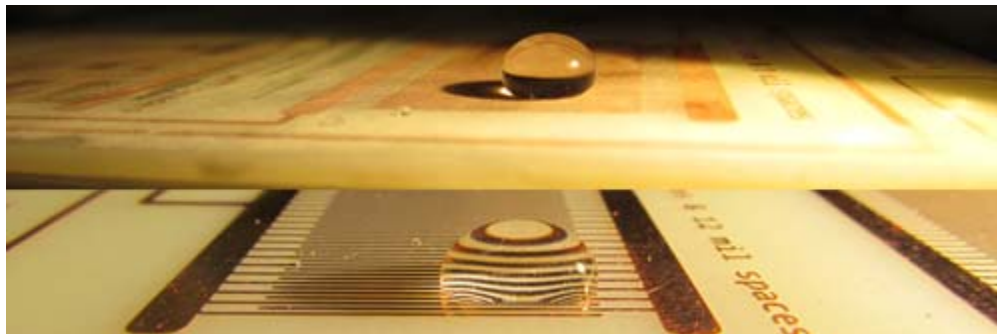
Besides traditional printed circuit board protection, CC7130-PR **is also ideal as a moisture barrier coating on critical infrastructure components** such as **electrical power stations** needing protection against corrosion in high voltage contact points. Electrical switches and other controlling electronics in industrial environments require protective coatings that **can protect against direct "acid rain" induced degradation**. Additionally it can be used in outdoor electronics such as those under the hood of automobiles, LED displays, and solar energy converters that require extended moisture protection.

Whether you are looking to coat your outdoor equipment, batteries, wiring, or even boats, [AIT's Prima Protect™ Coatings](#) are good on virtually any surface. [Consult an AIT application engineer](#) to get a personalized recommendation for your application today!

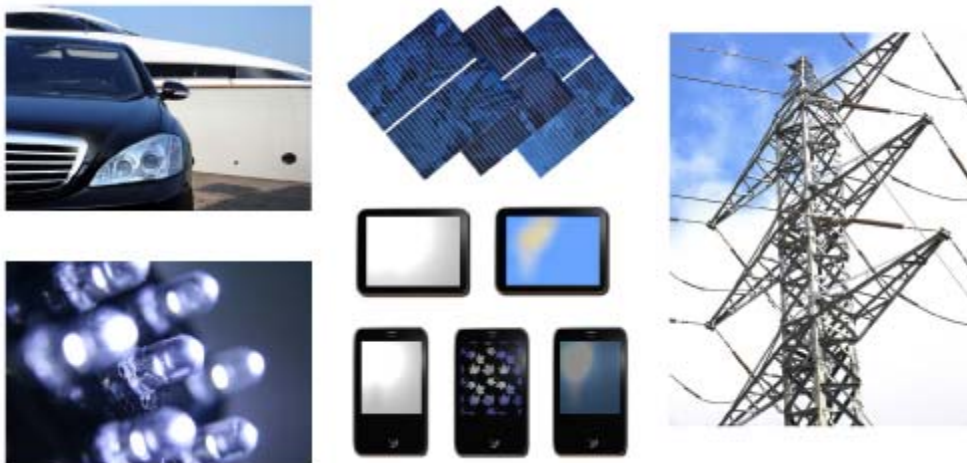
Test Board



Bead of water showing hydrophobic properties



For use in Solar Applications, LED, Auto, Marine, Power Utilities, Mobile Devices, etc.



About AI Technology, Inc.

Since pioneering the use of flexible epoxy technology for microelectronic packaging in 1985, AI Technology, Inc. (AIT) has been one of the leading forces in development and patented applications of advanced materials and adhesive solutions for electronic interconnection and packaging. AI Technology, Inc. (AIT) offers some of the most reliable adhesives and underfills for die bonding for the largest dies, stack-chip packaging with dicing die-attach film (DDAF), flip-chip bonding and underfilling and high temperature die bonding for single and multiple-chip modules for applications beyond 230°C. The company continues to provide the best adhesive solution for component and substrate bonding for both military and commercial applications. AIT's thermal interface material solutions, including our patented phase-change thermal pads, thermal greases and gels and thermal adhesives have set many bench marks of performance and reliability for power semiconductors, modules, computers and communication electronics.

For an application analysis: <http://www.aitechnology.com/analysis/>

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