



# Environmentally sealed washers

US company SURE-BOND™ has introduced a very simplistic and cost-effective solution to solve the issue of degradation of electrical systems ,connections grounding, and bonding, due to corrosion and weathering – the Environmentally Sealed Washer.

When an electrical connection is exposed to the elements, weathering and water intrusion cause harmful corrosion in the connection. Together with galvanic corrosion, these hazards commonly break down the bonded, electrically conductive materials creating an insulation barrier between them. This causes the electrical bonding connections to fail.

With the SURE-BOND™ Environmentally Sealed Washer (ESW), part of the SURE-BOND™ electrical bonding and grounding hardware portfolio, a very simplistic and cost-effective solution has been created to solve this major problem.

“Safety and reliability are at the forefront of our mission and we recognise the importance of electrical grounding to protect against equipment damage, fire and shock hazards,” explains SURE-BOND™. “We therefore designed the ESW to provide 360 degree protection against corrosion and degradation of electrical connections. The product is embedded in an air and water-tight silicone layer and an electrical connection between two metallic surfaces requires the ESW to be present when the connections are exposed to corrosive environments.

Under the USA’s National Electrical Code (NEC) 250 Article, grounding and bonding star washers are included as a method of grounding and bonding. The NEC was created for the protection and safeguarding of industrial personnel and property from potential dangers associated with electrical installations.

Some of the key features and benefits of the ESW include being sealed to prevent contamination and corrosion, while allowing the washer to pierce and create an electrical connection to the surface. Being inside an air-tight and water-tight sealed environment, the electrical connection is ideal for outdoor use; all wire connections throughout the system are also protected. Among several further benefits, the ESW is suitable for AC and DC connections and for use in high and



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low voltage applications. It reduces the chance of galvanic corrosion, due to contact between dissimilar metals, and, overall, the product improves safety and reliability, at the same time as reducing costs.

With solar energy growing exponentially, and the cost of solar continuing to fall as more homes, businesses and industries set up photovoltaic solar electrical systems, SURE-BOND™ believes there is a huge opportunity spanning many different electrical system categories, although it seems to be the solar energy business on which the company has its focus at this time. It believes it can improve the safety and long-term costs associated with solar array up-keep and maintenance, particularly through the use of its ESW. +



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