The importance of corrosion protection for avionic and electronic components

Corrosion protection for avionic and electronic components involves a combination of design and maintenance considerations and practices. Environmental testing helps to assess the performance of components under various conditions, including temperature extremes, vibration, humidity, chemical contaminants, moisture and salt exposure. Regular inspection can detect any signs of corrosion, allowing preventive maintenance, cleaning, and application of protective coatings. Corrosion protection is crucial for avionic and electronic components for several reasons:

Reliability and Performance:
Avionic and electronic components are critical for the reliable operation of aircraft and other electronic systems. Corrosion can compromise the functionality of these components, leading to malfunctions, errors, and, in extreme cases, complete failure. Corrosion protection measures help ensure the reliability and optimal performance of these systems.

Safety:
In aviation, safety is paramount. Corrosion can weaken structural components, compromise electrical connections, and interfere with the proper functioning of sensors and control systems. Protecting avionic and electronic components from corrosion is essential to maintain the structural integrity and safety of aircraft.

Longevity and Cost Efficiency:
Avionic and electronic components are often expensive and designed for long-term use. Corrosion can significantly reduce the lifespan of these components, leading to premature failure and the need for costly replacements. Corrosion-related damage can result in expensive repairs and replacements.

Implementing effective corrosion protection measures is a cost-effective strategy in the long run, as it helps prevent the need for frequent maintenance and replacements.

Harsh Environmental Conditions:
Aircraft electronic systems are exposed to a variety of harsh environmental conditions, including moisture, salt spray, temperature extremes, and chemical contaminants. These conditions can accelerate corrosion processes.

Maintaining Electrical Connections:
Corrosion on electrical connectors can lead to increased resistance, poor conductivity, and signal degradation. This can affect the accuracy and reliability of data transmission in electronic systems.

Regulatory Compliance:
Aviation and electronic industries are subject to stringent regulations and standards. Many regulatory bodies, such as the Federal Aviation Administration (FAA) in the United States, have specific requirements for corrosion prevention and control. Adhering to these regulations is crucial for ensuring the airworthiness and safety of aircraft.

In summary, corrosion protection for avionic and electronic components is essential for ensuring the reliability, safety, and longevity of critical systems and components. It is a proactive approach to mitigate the damaging effects of corrosion and maintain optimal performance in demanding environments. By incorporating a corrosion protection strategy into the maintenance processes, it is possible to enhance the corrosion resistance of avionic and electronic components, ensuring their reliability and longevity in challenging environments.

SuperCORR A Specialist Barrier Film Corrosion Protection

EnviroTech Europe supplies advanced corrosion protection products, based on approved synthetic materials, to provide quality solutions to a diverse range of lubrication and corrosion problems.

SuperCORR A is a unique and proprietary formulation with long-lasting, anti-corrosion inhibitors providing a superior lubrication coefficient and protection against moisture, wear, general and fretting corrosion, static electricity, corona, and other electro migration problems. The non-flammable film is only 7 microns (0.007mm) in thickness, is not a wax or oil-based product and is formulated without sulphates, chlorides, petroleum-based material, or halogens, to meet the EU RoHS directive.

SuperCORR A is unexcelled in preventing failures of electrical systems and electronic equipment caused by corrosion as well as preventing the corrosion of metal components surfaces, including those of components comprised of dissimilar metals such as those found in aerospace environments. The ability to displace water from exposed contacts can ensure reliable operation in extreme conditions.

The use of ***SuperCORR A*** for corrosion control can not only bring financial savings in reduced maintenance and replacement costs but more importantly greater safety. It is much simpler and a lot less costly to prevent corrosion than to repair or replace damaged avionic equipment or a component that failed because of corrosion.

SuperCORR A is packaged in aerosol cans making access to component parts easy for engineering crews in difficult locations and conditions. Unpainted mild steel will not rust on exterior surfaces directly exposed to sea water environments for at least 6 months, protecting electrical connectors, switches, chains, drive shafts from corrosion while maintaining lubrication on moving surfaces.

EFFICIENT AND ECONOMICAL

- Extremely long-lasting, specially formulated and proprietary anti-corrosive inhibitor.
- Eliminates premature failure of components created by moisture, general or fretting corrosion.
- Prevents deterioration and contamination on all surfaces of electronic and electrical equipment and mechanical close tolerance moving components.
- Reliability increased, maintenance intervals increased and costs reduced, manufacturers save costly warranty service calls or product re-call.

HISTORY

SuperCORR A was originally developed for the U.S. Air Force to comply with military specifications and to prevent electrical and electronic components from systems failures caused by corrosion. It became the industry standard for avionic corrosion protection within MROs (maintenance, repair and operations) and OEMs (overhaul and original equipment manufacturers). It's unique ability to displace water and provide a performance enhancing level of corrosion protection has led to it being used in many other applications and industries worldwide.

FURTHER INFORMATION

Please visit our website **https://www.envirotech-europe.com/supercorr-a** for information about other uses and applications for ***SuperCORR A***.

For more advice, please telephone us on +44 (0) 20 8281 6370 or use our website contact form. All products are supplied and supported by EnviroTech Europe Ltd. Manufactured in the United Kingdom and available on short delivery times through our dedicated team of distributors worldwide.

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