



The importance of corrosion protection for electrical systems

Protection from corrosion is vital for safeguarding infrastructure and equipment, reducing costs, ensuring safety, and maintaining the reliability and longevity of critical electrical and electronic systems across various industries. Corrosion protection is critically important for several reasons:

Safety:

Corrosion can compromise the integrity of electrical components, leading to potential safety hazards. Damaged or corroded components can result in electrical short circuits, fires, or other dangerous situations.

Reliability:

Electrical systems are expected to function reliably over extended periods. Corrosion can lead to unexpected failures and downtime, disrupting operations and causing financial losses.

Performance:

Corrosion can degrade the performance of electrical connections, leading to increased resistance and reduced efficiency. This can result in wasted energy, increased operating costs, and reduced system performance.

Longevity:

Proper corrosion protection measures can extend the lifespan of electrical components and systems. By preventing or mitigating corrosion, you can reduce the frequency of maintenance

and replacement, saving both time and money.

Energy Efficiency:

Corrosion can increase energy consumption. For example, in HVAC systems, corroded heat exchangers are less efficient, leading to higher energy bills.

Health and Safety:

Corrosion can compromise the safety of equipment and systems, leading to accidents and injuries. For instance, corrosion in the aviation industry can pose a significant risk to flight safety.

Reduced Maintenance Costs:

Dealing with the corrosion related issues listed above can be costly. Preventing corrosion through protective measures is always more cost-effective in the long run than repairing or replacing damaged components. Corrosion protection measures, such as coatings and inhibitors, can reduce the need for frequent maintenance and repair, saving both time and money.

Environmental Impact:

Corrosion can lead to the release of hazardous materials, such as lead, into the environment. Proper corrosion protection measures can reduce the environmental impact of electrical systems.

Economic Impact:

Corrosion costs industries billions of dollars each year in repair, maintenance, and replacement of corroded equipment. Effective corrosion protection measures can significantly reduce these costs.

Maintaining Signal Integrity:

In sensitive electronic systems, corrosion can affect the quality of signals and data transmission. For example, in telecommunications or data centres, corrosion-induced signal degradation can lead to communication errors, false signals or even data loss.

Aesthetic Considerations:

In some cases, electrical systems are visible to the public or customers. Corrosion can be unsightly and negatively impact the image and reputation of an organization.

Preventive Maintenance:

Implementing corrosion protection measures as part of a preventive maintenance program can help identify and address potential corrosion issues before they escalate, minimizing the risk of unexpected failures. Corrosion can cause equipment failures and operational disruptions. Corrosion protection measures ensure the reliable operation of critical electrical systems.

Regulatory Compliance:

In many industries, regulations and standards are in place that require the use of corrosion protection methods to ensure the safety and reliability of electrical systems. This is why **SuperCORR A** is specified in the maintenance manuals for many aircraft manufacturers. Compliance with these regulations is essential to avoid legal and financial consequences.

Overall, corrosion protection is vital for safeguarding electrical and electronic equipment, reducing costs, ensuring safety, and maintaining the reliability and longevity of critical systems across various industries.

Common methods of corrosion protection for electrical systems include the use of corrosion-resistant materials, coatings, sealants, periodic inspections, and maintenance, as well as environmental controls to reduce exposure to corrosive elements. Overall, prioritizing corrosion protection is essential for ensuring the safety, reliability, and longevity of electrical systems.

Specialist Barrier Film Corrosion Protection

EnviroTech Europe supplies advanced corrosion protection products, based on approved synthetic materials, to provide quality solutions to a 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. Use **SuperCORR A** to protect connectors, electrical systems and switches and mechanical controls during servicing. It's ability to displace water from exposed contacts can ensure reliable operation in extreme conditions, all from one small aerosol can.

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 the damaged equipment or 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.

APPROVED

- Industry approval from: NASA, Boeing Aircraft, Bombardier, Embraer, Lear, Gulfstream, Hawker-Beechcraft, Cessna, Raytheon, Polish Airforce, Northrop-Grumman, Royal Navy and Royal Norwegian Air Force.
- Exceeds Mil C 81309 Corrosion Prevention Compounds.
- Approved in US Tri-Service Corrosion Manuals.

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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