

The Importance of Pre-Treatments, Primers, and Paints



In today's world of frequent air travel, the upkeep and maintenance of aircraft present many technical challenges. All metal surfaces deal with the threat of corrosion, a problem that can come from their environment, storage, cleaning, and climate, among other factors.

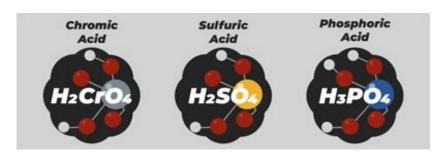
Corrosion Prevention

The most effective way to deter corrosion is to implement a specific prevention plan combining the most suitable pretreatments, primers, and paints while taking into account the above variables. Ideal corrosion solutions optimize affordability and mitigate exposure to hazardous materials. In addition to acting as sealants, products like pretreatments, primers, and paints further combat corrosion by resisting condensation, regulating temperature, and increasing adhesive strength.

Corrosion Pre-Treatment

The first step in any corrosion solution is perhaps the most imperative: preventing the problem before it begins with the use of a pretreatment method. For aircraft, this involves depositing a substrate onto the aluminum surface prior to priming and painting. Two options for this phase are anodization and chemical conversion coating. Both serve the same purpose, and are highly effective and economical.

Some of the most common anodizing agents are listed in the picture below.



In the corrosion prevention process for aircraft, pretreatment is followed by the sealant phases, in which aircraft parts will receive primer and a paint topcoat. First, the primer is applied.

The primary functions of primers are:

- Corrosion protection
- Enamel & sealant adhesion
- Barrier between dissimilar materials

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