



Dav-Tech ALUMINUM ANODIZING

***Fact:** Dav-Tech's technical expertise can help you achieve consistency in anodizing, avoiding those problems unique to anodic coatings.*

Welcome to Dav-Tech Anodizing.

Anodizing is an electrolytic process that produces a relatively inert coating on a metallic surface. When aluminum alloys are anodized, this coating is an aluminum oxide layer that is generated when the part is made anodic in the presence of a controlled electrolyte. It is the stability of the aluminum oxide that accounts for all of the protective properties of the coating.

During the anodizing process, there is a natural tendency for pores to develop in the aluminum oxide. As a result the outer layer of the coating is permeated with uniformly dispersed porosity. It is this porosity that allows the coating to accept dye penetration, and thereby allow for coloring of the anodized coating. In addition to dyes, various sealants can be used to enhance the anti-corrosion performance of the coating.

Dav-Tech specializes in anodic coatings on aluminum and aluminum alloys.

At **Dav-Tech Plating** we offer two types of anodizing on aluminum. Each type produces a product with its own specific performance qualities. The first type is produced in a sulfuric acid bath, and is therefore referred to as sulfuric acid anodizing. This coating is usually transparent with a thickness range of .0001"-.001".

The second type is produced in a chromic acid bath and is referred to as chromic acid anodizing. This anodized coating is usually .00005"-.0003" in thickness and is used when corrosion protection is required with minimal effect on fatigue strength of the substrate. In most cases it is used in conjunction with a sealant.

Due to the opacity and thinness of the anodic film, chromic acid anodize does not lend

itself to color dyeing as well as sulfuric acid anodize.

Benefits of Dav-Tech Aluminum Anodizing.

- Creates a clean surface by sealing the substrate
- Excellent corrosion resistance
- Can be used as a non-conductive finish
- Can be dyed or colored to improve product appearance
- Close dimensional control
- Excellent primer for most paints and coatings
- Unless otherwise requested, all anodizing is furnished in accordance with MIL-A- 8625.

Dav-Tech personnel can provide expert technical assistance in aluminum alloy selection.

The purer the aluminum selected to be anodized the more uniform the coating in terms of color and thickness. Non-aluminum alloying components such as copper and silicon will have an adverse effect on the anodizing process, and produce a coating that may be shaded and discontinuous.

Our experience shows that most anodizing problems are related to improper alloy selection.

Our technical staff can recommend alloys that will maximize the required anodic properties. Where the selection of materials is limited, special process procedures can be developed to ensure the anticipated performance.

Our cost-effective approach to resolving finishing problems yields a high quality product at competitive pricing.

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