



Why Anodizing is Important

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A fairly simple process that's used to protect an aluminum surface from undue damage and wear, [anodizing aluminum](#) adds a protective coating of aluminum oxide to the metal itself. The durability and longevity of the finish is in direct correlation to how thick the applied coating actually is. Aluminum oxide is extremely strong and effective against weathering, but the process allows you to color the metal with dyes without the chance of future flaking or peeling due to the electrochemical bonding process.

Benefits of Anodizing

The primary advantage of anodizing your aluminum component is increased durability and lifespan. While it won't completely protect aluminum components as well as sheltering it from the weather, the difference between the maintenance required to reapply the coating and using organic coatings is massive. Anodized surfaces sometimes take on dirt and stains, but through a simple cleaning process (usually a mild detergent will do it) you can restore the finish to like-new status.

Restored anodized finishes have a lifespan of about 20 years, which far exceeds that of a coat of non-volatile organic paint. Harder than powder coating, anodizing is ideal for areas of high traffic or heavy equipment use, as the coating won't actively take damage from physical contact or harsh chemicals. It also won't be affected by sunlight, as UV light is the primary cause of surface coating failure and damage.

Good and Bad Applications

As with every aspect of production and manufacturing, there's [a right and wrong way to anodize your aluminum](#). The mitigating factors include both thickness and quality of the anodic coating process, but thinner coatings provide a much lesser level of protection to physical abuse.

Bottom line: the thicker, higher-quality anodic coatings are, the longer they'll last and protect your aluminum products from wear and tear. Simple.

Downsides of Anodizing

The major disadvantage of anodizing aluminum is the material's lack of chemical resistance. After long-term exposure to corrosive substances, an anodic coating can break down. Urban areas are especially susceptible to this, as acidic pollutants in the air can cause building materials to break down.

Ready to create a custom-milled enclosure with anodized aluminum materials that won't break down or discolor? [Download Front Panel Designer](#) to create your own design for free and get a quote within the program itself. For all other inquiries, [contact Front Panel Express!](#)

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