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How to Protect Aluminum From Corrosion

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How to Protect Aluminum From Corrosion

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Accounting for about 8% of all elements in the Earth's crust, aluminum is a common metal that's used to make a variety of products. You can find aluminum in automobiles, airplanes, roofing materials, transformers, conductors, nuts, bolts, kitchen appliances and more. It's often preferred over other metals because of its combination of strength, rust resistance, low weight, and ductility. But if you're going to invest in an aluminum product, you should take precautions to protect it from corrosion.

Does Aluminum Corrode? What Causes Aluminum Oxidation?

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Aluminum is rust-resistant, meaning it doesn't degrade due to oxidation caused by iron and oxygen. Rust only occurs in iron and other metals that contain iron. Steel, for example, is susceptible to rust because it contains iron. Unless it's a special type of rust-resistant steel, such as stainless steel, it will develop the copper-colored flakes known as rust. Aluminum doesn't contain iron, however, so it's naturally protected from rust.

Even though it doesn't rust, aluminum can still suffer from corrosion. Some people assume that rust and corrosion are the same, but this isn't necessarily true. Corrosion refers to the chemically triggered degeneration of metal caused by environmental elements. In comparison, rust refers to a specific type of corrosion in which iron oxidizes from exposure to oxygen. Again, aluminum can develop corrosion, but it can't develop rust. Without iron, aluminum is fully protected from rust.

How to Protect Aluminum From Corrosion

When aluminum begins to corrode, it will become weaker. Like rust, corrosion eats away at the respective metal. This isn't a fast process. Rather, it can take weeks, months, or even years for an aluminum product to corrode. Given enough time, however, aluminum products can develop large holes caused by corrosion. This is why it's important to prevent aluminum from corrosion.

One way to protect aluminum from corrosion is to store it in a climate-controlled environment. Corrosion is the result of environmental factors, such as moisture, triggering a chemical reaction in the aluminum. If possible, store your aluminum product or products in a climate-controlled environment where it's not exposed to rain, humidity or other natural elements.

You can also have aluminum clear coated for protection against corrosion. Clear coating involves the application of a protective layer over the surface of the aluminum. Some aluminum products feature an invisible clear coat layer that protects the metal from the environment. Once applied, the alumin

itself is never exposed to its surrounding environment, thus protecting it from corrosion.

Summery

Although aluminum is naturally protected from rust, because of environmental elements corrosion can still occur from the chemically triggered degeneration of metal. It may take a while for aluminum to corrode but it should still be protected. To prevent corrosion in aluminum it needs to be in a climate-controlled environment or treated with a clear coating.

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