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TECHNICAL BULLETIN

Anodized Finishes

The aluminum anodizing process successfully combines science with nature to create one of the worlds best metal finishes. It is an electrochemical process that thickens and toughens the naturally occurring protective oxide. The resulting finish, depending on the anodized aluminum process, is the second hardest substance known to man, second only to the diamond. The anodic coating is part of the metal, but has a porous structure, which allows secondary infusions, (i.e. organic and inorganic coloring, lubricity aids, etc.).

The process of anodizing aluminum is the only one in the metals industry that satisfies each one of the factors that must be considered when selecting a high performance aluminum finish:

Durability— Most anodized products have an extremely long life span and offer significant economic advantages through maintenance savings. Anodizing is a reacted finish that is integrated with the underlying aluminum for total bonding and unmatched adhesion.

Color Stability— Exterior anodic coatings provide good stability to ultraviolet rays, do not chip or peel, and are easily repeatable.

Ease of Maintenance— Scars and wear from the aluminum anodizing process, handling, installation, frequent surface cleaning, and usage are virtually non-existent. Rinsing, or mild soap and water cleaning usually will restore an anodized surface to its original appearance. Mild abrasive cleaners can be used for more difficult deposits.

Aesthetics— Anodizing offers a large and increasing number of gloss and color alternatives and minimizes or eliminates color variations. Unlike other finishes, anodizing allows the anodized aluminum to maintain its metallic appearance.

Cost— A lower initial finishing cost combines with lower maintenance costs for greater long-term value.

Health and Safety— Anodizing is a safe process that is not harmful to human health. An anodized aluminum finish is chemically stable, will not decompose; is nontoxic; and is heat resistant to the melting point of aluminum (1,221° F).

Since the aluminum anodizing process is a reinforcement of a naturally occurring oxide process, it is non-hazardous and produces no harmful or dangerous by-products.