The primary goal of this study is to make, characterize and evaluate cerium conversion coatings on aluminum alloys. EIS and d-c techniques are fundamental in understanding the passivation time. Comparisons with the corrosion behavior of chromate conversion coated aluminum alloys suggest that cerium conversion coatings provide excellent corrosion protection.

Investigations in this laboratory have shown that immersion of Al 6061-T6 and Al 7075-T6 in 1000 ppm CeCl₃ produces very uniform deposits. The length of exposure time and type of surface preparation have been investigated in more detail using electrochemical impedance spectroscopy (EIS) and d-c techniques. This involves a step by step process that results in an excellent base for organic finishes and a hard-wearing, corrosion-free surface.

The non chromate conversion coatings for aluminum form an integral step in the overall manufacturing process, especially prior to painting. Coating can be performed using spray, or immersion techniques. The process provides an excellent base for the bonding of adhesives and organic finishes enabling you to ensure an excellent result and a hard-wearing, corrosion-free surface.

Pioneer’s Non-Chrome Conversion Coat process treats aluminum substrates to provide a clean suitable surface for aluminum or composite bonding and as a pure paint treatment. Pioneer’s process allows for high degrees of bonding strength in critical aerospace bonding applications.

Chromate conversion coating is a chromium free product and provides an excellent base for organic finishes and a hard-wearing, corrosion-free surface. This involves a step by step process that results in an excellent base for organic finishes and a hard-wearing, corrosion-free surface.

This practical handbook provides an introduction to all aspects of decorative, protective and engineering finishes applicable to aluminum. Descriptions of the processes concerned, including properties and methods of application, their benefits and limitations, are given, making this manual a useful asset to managers, technologists and students.

Evaluates the usefulness of the current standards on exfoliation and corrosion testing of aluminum alloys and their coating systems. The results include data and a discussion of the factors influencing exfoliation and corrosion testing of aluminum alloys. The report is intended to help both the research worker and the practicing engineer understand these corrosion phenomena.

The Anodising Company Ltd - About Conversion Coatings

Chromate conversion coating for aluminum and other types of metal is a chemical immersion process that is used to passivate and convert the surface properties of the substrate. The resulting chromium conversion coating process provides outstanding corrosion resistance and conductivity without any measurable build-up.

What are the most common types of conversion coatings?

Chemical conversion coating can go through either electro-chemical or chemical processes, which may include any of the following: chromic acid, sulfuric acid, or phosphoric acid. These processes are usually carried out at room temperature, but high temperatures are sometimes used. The main advantage of chemical conversion coatings is their low cost, and the resulting coating is usually not as durable as a physical coating. Chemical conversion coatings are often used as a base coat for electroplating or spray painting.

Chromium conversion coating is a chemical process that produces a protective layer on the aluminum surface. It is achieved using chromic acid, sulfuric acid, or phosphoric acid at room temperature. The resulting coating is usually not as durable as a physical coating, but it is often used as a base coat for electroplating or spray painting.

Chromate conversion coating - Wikipedia

Chemical conversion and anodizing processes are surface treatment methods used to enhance the oxidation process especially for aluminum. Anodizing increases the thickness of the oxide layer on the surface, which can improve the corrosion resistance and electrical conductivity of the metal. Chemical conversion and anodizing can be used together for additional benefits.

Chromate conversion coating - Wikipedia

Chemical conversion coating processes are typically used in the manufacturing of aluminum and other metal products. The coating process involves immersing the metal in a solution of chromic acid, which forms a thin layer of chromium oxide on the surface. This coating provides excellent corrosion resistance and electrical conductivity, and is often used as a base coat for electroplating or spray painting.

DIY Chrome Kit