



# Meeting Mil-Spec Performance Labeling Requirements with Anodized Aluminum Labels

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The Department of Defense instituted Mil-Specs many years ago. The reason is that the military may be anywhere in the world and they need to have total interchangeability in parts and equipment. In order to have this interchangeability, different departments of the military, Navy, Army, Air Force and others defined specifications for products and equipment. Over the years, multiple specifications were developed for the same products. The cost associated with many versions, led them to reevaluate and consolidate the specifications into one document, which provides direction on requirements for products and equipment.

One key concern was the establishment of labeling systems that would retain their legibility and adhesion to parts and equipment all over the world and in some of the worst possible environments. In order for parts and equipment to be replaceable, they had to be identifiable. In order to do this, aluminum labels were the product of choice for years and remain the preferred label for the military. In referencing the Mil-Spec for aluminum foil labels, Mil-P-19834B, you will find that this specification is over 60 years old. It has been updated numerous times, but remains the preferred method of labeling.

This Mil-Spec defines performance of the label and its components. Abrasive resistance, edge adhesion, cyclic exposure, accelerated oxygen aging, accelerated light and weather resistance, salt spray resistance, fuel resistance, cleaning resistance and temperature ranges are all defined and tests are specified. It is no wonder why so many electronic and industrial product manufacturers still utilize aluminum as their preferred labeling material.

Aluminum labels are well defined under the Mil-Spec system from the raw materials, adhesives, to release liners. There have been some improvements in adhesives and liners but the anodic process still remains the same as it has for decades.

Aluminum can be debossed mechanically and filled so that serial numbers and other identifying numbers can be read even when the anodizing has worn off through years of abuse. This is another key advantage in the use of anodized aluminum in identification labeling.