

ABSTRACT OF THE DISCLOSURE

The present invention relates to a compound, non-chromium conversion coating for a part formed from an aluminum alloy. The coating is formed by providing a first solution containing an anodic inhibitor species, providing a second solution containing a cathodic corrosion inhibitor species, and immersing the part to be coated in a first one of the first and second solutions and thereafter in a second one of the first and second solutions. Suitable anodic inhibitor species include tungstates, permanganates, vanadates, molybdates, and mixtures thereof. Suitable cathodic corrosion inhibitors include cobalt, cerium, other lanthanide elements, and mixtures thereof. In one embodiment, the conversion coating is formed using a cerium containing solution and a tungstate containing solution.