

RoHS Compliant Plating Options for MIL-DTL-38999 Type Connectors and Accessories



The 30 May 2008 MIL-DTL-38999 Rev L specification provides guidance on the use of alternative parts with less hazardous or nonhazardous materials. In this regard, the specification provides for a number of alternative plating materials. Users are directed to select the least hazardous plating material that meets the form, fit and function requirements of their application.

Glenair would like to draw our customer's attention to two finish materials that conform to this guidance from our extensive list of commercial-equivalent (non-QPL) plating options:

AL – Pure electrodeposit aluminum IAW MIL-DTL-83488 (1,000-Hour Salt Spray) and MIL-38999 Rev L.

MT – Environment resisting Nickel fluorocarbon polymer. Conductive Nickel with fluorocarbon polymer additives over a suitable underplate to withstand 500 hours of dynamic salt spray testing.

Like the AL finish, the Glenair commercial MT plating solution is both cadmium and hexavalent chromium free, which allows it to be defined as RoHS compliant. Here are some additional details on this surface finish:

Temperature Resistance: Class MT - Nickel fluorocarbon polymer (Ni-PTFE **1,000 Hour Grey™** finish) is rated from -65°C to +175°C.

Plating adhesion: When tested as specified in 4.5.5, there shall be no blistering, peeling, flaking or separation of plating or other damage detrimental to the operation of the connector.

Dissimilar metals and compatible couples: The **1,000-Hour Grey™** finish satisfies prohibitions against dissimilar metal coupling as specified in MIL-STD-889.

Shell-to-shell conductivity (millivolts): The "MT" finish is rated at 2.5 millivolt drop potential.



Glenair Nickel-PTFE 1,000 Hour Grey™ RoHS Compliant Plating is Now Available. This commercial-equivalent plating option is designed IAW MIL-DTL-38999 Rev L.

Sulfur Dioxide Resistance: The Glenair MT finish passes the requisite 336 hours resistance to Sulfur Dioxide.

Glenair is pleased to make these environmentally-friendly plating finishes available to our connector and accessory customers. Both surface finishes provide outstanding mechanical, electrical and environmental performance. **1,000-Hour Grey™** may be applied to both aluminum alloy, stainless steel as well as composite thermoplastic versions of our products, including connectors and accessories. Glenair is a leader in the advancement of alternative plating solutions and offers as broad a selection as any manufacturer in our industry.