

### Series 791 Plating Options and RoHS Finishes



European Union Directive 2011/65/EU, with amendment 2015/83, on Restriction of the use of certain Hazardous Substances (“RoHS”) states that certain types of equipment (primarily consumer electronic products such as personal computers) shall not contain lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP, or DIBP.

The United States Department of Defense has issued a directive to minimize or eliminate the use of cadmium and hexavalent cadmium on DoD equipment. This directive has led to the adoption of nickel-PTFE and zinc-nickel shell platings as the preferred alternatives to traditional cadmium plating. Glenair has tested and approved these finishes for MIL-DTL-38999 and SAE AS85049.

The connectors in this catalog are available with three shell plating finishes: electroless nickel, nickel-PTFE and zinc-nickel. All three standard finishes are RoHS-compliant. Electroless nickel is the best choice for most applications. Nickel-PTFE has the conductivity of electroless nickel combined with superior corrosion resistance. Black zinc-nickel is a cadmium-free, corrosion-resistant finish typically used in tactical military equipment. Hermetic connectors feature stainless steel shells, passivated or nickel-plated. Please contact the factory to verify all components meet RoHS compliance regulations.

**Table 1** lists the standard finishes in this catalog.

**Table 2** lists additional shell plating options available on any Series 791 connector. To specify a Series 791 connector with one of these finishes, replace the catalog plating code with the alternate code shown below.

Table 1: RoHS-Compliant Standard Series 791 Shell Plating Options			
Plating Code	Description	Salt Spray Hours	Application Notes
<b>M</b>	Electroless Nickel	48	Standard finish for Series 791 connectors. Suitable for space programs. <i>ASTM B733 Category SC2</i>
<b>MT</b>	Nickel-PTFE	500	Higher corrosion resistance compared to electroless nickel. <i>SAE AMS2454</i>
<b>ZR</b>	Black Zinc-Nickel	500	DoD-approved alternative to olive-drab cadmium. Less conductive than M or MT. <i>ASTM B841 Type D</i>
<b>Z1</b>	Stainless Steel Shell, Passivated	1000	Used on 791-044 hermetic connectors.
<b>ZL</b>	Stainless Steel Shell, Nickel Plated	1000	Used on 791-044 hermetic connectors. Higher conductivity than Z1. <i>SAE AMS-QQ-N-290</i>

Table 2: Alternate Series 791 Plating Options

Plating Code	Description	Salt Spray Hours	RoHS Compliance	Application Notes
<b>Z2</b>	Gold	48		Alternative to electroless nickel for space programs. <i>MIL-DTL-45204</i>
<b>J</b>	Yellow Chromate over Cadmium	500	No	Widely used legacy finish for D Subminiature and rack-and-panel connectors. <i>SAE AMS-QQ-P-416</i>
<b>NF</b>	Olive Drab Chromate over Cadmium	500	No	Standard mil spec circular connector finish. <i>SAE AMS-QQ-P-416</i>
<b>C</b>	Black Anodize	336		Non-conductive, not suitable for EMI-protected equipment. <i>MIL-A-8625</i>