Standard Materials and Finishes

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Description	Material	Finish
Contacts	Copper alloy	50 microinches gold over nickel
Socket contact hood	Stainless steel	Passivated
Shell	Aluminum alloy 6061	See table below
Insulators, PCB tray	High-grade rigid dielectric	None
Interfacial seal and grommet	Fluorosilicone blend elastomer	None
O-ring, non-conductive	Fluorosilicone blend elastomer	None
O-ring, conductive	Silver-plated aluminum-filled fluorosilicone	None
EMI spring	Beryllium copper	Nickel
Insert (grounded version)	Aluminum alloy 6061	Electroless nickel
Retention clips	Beryllium copper	None
Hardware	300 series stainless steel	Passivated
Potting compound	Epoxy	None
EMI cover, right angle PCB	Aluminum	See shell finish options

The United States Department of Defense (DoD) has issued a directive to minimize or eliminate the use of cadmium and hexavalent cadmium on DoD equipment. The DoD has approved nickel-PTFE and zinc-nickel shell platings as replacements for cadmium plating. European Union Directive 2002/95/EC on Restriction of the use of certain Hazardous Substances (RoHS) states that certain types of equipment (primarily consumer products such as personal computers) shall not contain lead, mercury, cadmium, hexavalent chromium, PBB's or PBDE's. The three standard shell finish options in this catalog comply with RoHS and DoD directives and are free from cadmium and hexavalent chromium.

Standard Connector Shell Finish Codes

Plating Code	Type	Salt Spray Hours	Application Notes
M	Electroless Nickel	48	Standard finish for Series 79 connectors. Approved for space programs. Excellent conductivity. Reflective. RoHS compliant, Cr^{6}-free. ***ASTM B733 Category SC2***
MT	Nickel-PTFE	500	Excellent corrosion resistance and durability. Excellent conductivity. Matte, light grey appearance. Solderable. RoHS compliant, Cr^{6}-free. ***SAE AMS2454***
ZR	Black Zinc-Nickel	500	DoD-approved alternative to olive-drab cadmium. Excellent corrosion resistance and good electrical conductivity. Non-reflective black. RoHS compliant, Cr^{6}-free. ***ASTM B841 Type D***

Additional Connector Shell Finish Codes

Plating Code	Type	Salt Spray Hours	Application Notes
Z2	Gold	48	RoHS compliant, Cr^{6}-free. ***MIL-DTL-45204***
J	Cadmium/ Gold Chromate	500	Not allowed in space applications. Excellent conductivity and corrosion resistance. Not RoHS compliant. ***SAE AMS-QQ-P-416***
NF	Cadmium, Olive Drab Chromate	500	Not allowed in space applications. Excellent conductivity and corrosion resistance. Not RoHS compliant. ***SAE AMS-QQ-P-416***
C	Black Anodize	336	Non-conductive, not suitable for EMI-protected equipment. Cadmium-free, Cr^{6}-free. RoHS compliant. ***MIL-A-8625***