

MIL-DTL-38999 Series I, II and III Environmental Class Connectors Material Specifications



TABLE I: MATERIALS

Shell, Barrel, and Coupling Nut	Aluminum alloy 6061 per ASTM-B211
Front and Rear Insulators	Glass-filled LCP in accordance with MIL-M-24519, Type GLP-30F
Contact Retention Clip	Beryllium copper, heat-treated, unplated
Grommet, Peripheral Seal and Interfacial Seal	Blended elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988
Pin / Socket Contacts (Environmental)	Copper Alloy / Gold Plate
Socket Contact (Hermetic)	Copper Alloy, Gold Plated IAW ASTM B488, Type 3, Code C
Adhesives	Silicone and epoxy
Potting Compound: PCB and Solder Cup	High-strength epoxy, Hysol EE4215.

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TABLE II: POPULAR ENVIRONMENTAL CLASS CONNECTOR FINISHES

Plating Code	Material	Finish	Specification
M	Aluminum	Electroless Nickel	AMS-C-26074
B	Aluminum	Cad Plate, Olive Drab	AMS-QQ-P-416, Type II, Class 3
NF	Aluminum	Cadmium Plate Olive Drab over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074 (1000 Hour Salt Spray)
ZN	Aluminum	Olive Drab Zinc-Nickel	Zinc alloy per ASTM B841-91, Class 1 Type E Grade 3 over Electroless nickel per ASTM B733-90 SC2, Type 1 Class 5
MT	Aluminum	Ni-PTFE 1,000 Hour Grey™ (Nickel Fluorocarbon Polymer)	MIL-DTL-38999L (500 Hour Salt Spray)
XM	Composite	Electroless Nickel	AMS-C-26074
XMT	Composite	Ni-PTFE 1,000 Hour Grey™ (Nickel Fluorocarbon Polymer)	MIL-DTL-38999L (2000 Hour Salt Spray)
XW	Composite	Cadmium Olive Drab over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074 (1000 Hour Salt Spray)
Z1	Stainless Steel	Passivate	AMS-QQ-P-35
ZL	Stainless Steel	Electrodeposited Nickel	SAE-AMS-QQ-N-290, Class 2