# TwistPin Connectors and RoHS Compliance

European Union Directive 2002/95/EC 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's or PBDE's. For the record, Glenair does not produce any OEM products of this type. Furthermore, our interconnect components are either free of the substances RoHS controls, or specifically intended for use in military-aerospace applications that are exempt. Makers of consumer products should refer to the following guidelines to insure Glenair interconnect components are correctly specified when used in in RoHS regulated electronic equipment.

### Are Micro-D Connectors RoHS compliant?

The products in this catalog can be ordered with various plating finishes. Some of these finishes such as cadmium and chem film, along with solder-dipping, do not comply with the RoHS directive.

### Why doesn’t Glenair eliminate non-RoHS products?

Glenair products are typically used in defense and aerospace equipment exempt from RoHS requirements. Glenair will continue to offer cadmium and chromate finishes in accordance with DoD and aerospace specifications. Our part numbers contain a broad range of plating finish ordering codes. Customers can easily specify RoHS compliant finishes if desired.

### Products that do not comply with RoHS regulations:

1. **Cadmium plating** is available on metal shell connectors in this catalog. Note that cadmium plating does not currently comply with RoHS rules.

2. **Chem film** is available on metal shell connectors. This coating contains hexavalent chromium which does not currently comply with RoHS rules.

3. **Tin-lead solder dipped printed circuit board tails.** Board mount M83513 Micro-D’s and other products are normally solder dipped in 63% tin 37% lead molten solder. RoHS compliance for consumer products requires elimination of solder coatings containing lead.

### RoHS compliance made easy

1. **Specify electroless nickel plating on the connector shell.** Or, choose stainless steel shells for maximum corrosion protection and RoHS compliance.

2. **Use Mod Code 513 on Micro-D board mount connectors.** Board mount Micro-D’s and other products are normally solder-dipped in 63% tin 37% lead molten solder. Any solder-dipped part can be supplied with RoHS compliant gold-plating instead simply by adding Mod Code 513 as a suffix to the standard part number.

### Micro-D ROHS Compliance Examples

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Problem Description</th>
<th>Solution Description</th>
<th>RoHS Compliant Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWDM1L-37PSB</td>
<td>Plating code 1 specifies cadmium plating.</td>
<td>Change to electroless nickel plating (code 2).</td>
<td>MWDM2L-37PSB</td>
</tr>
<tr>
<td>MWDM2L-25SC710</td>
<td>CBR style PCB connectors are solder-dipped in tin-lead.</td>
<td>Add Mod Code 513 to change the PC tail finish to gold plating.</td>
<td>MWDM2L-25SC710-110</td>
</tr>
<tr>
<td>MWDM6L-95-6K7-18L</td>
<td>Plating code 6 specifies chem film.</td>
<td>Change to electroless nickel plating (code 2).</td>
<td>MWDM2L-95-6K7-18L</td>
</tr>
<tr>
<td>M83513/03-E07C</td>
<td>Cadmium plated shell and solder-dipped contacts.</td>
<td>Change to nickel plating and gold contacts.</td>
<td>M83513/03-E05N</td>
</tr>
</tbody>
</table>
### Micro-D Connector Plating Codes: ROHS Compliance

| Micro-D Plating Code | Plating Type                                         | RoHS Compliance | Notes                                                                 
|----------------------|------------------------------------------------------|-----------------|----------------------------------------------------------------------
| 1, A                 | Cadmium with yellow chromate conversion coating over electroless nickel | No              | Electroless nickel is the preferred alternate.                      
| 2, B                 | Electroless nickel                                   | ![RoHS Compliance](https://example.com) | First choice for RoHS compliance. Good corrosion resistance, excellent conductivity, M83513 approved, always in stock. 
| 3, F                 | Stainless steel shell, passivated                    | ![RoHS Compliance](https://example.com) | Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order. 
| 4, D                 | Black anodize over aluminum                          | ![RoHS Compliance](https://example.com) | Economical, non-reflective, non-conductive. Build-to-order.          
| 5, E                 | Gold over aluminum                                   | ![RoHS Compliance](https://example.com) | Low volume, higher cost, excellent conductivity. Build-to-order.      
| 6, C                 | Chem film                                            | No              | Electroless nickel is the preferred alternate.                      
| 33, T                | Nickel-PTFE                                          | ![RoHS Compliance](https://example.com) | Glenair’s 500 Hour Grey™ meets the need for a cadmium replacement with excellent conductivity, wear resistance and corrosion protection, M83513 approved. 

### Micro-D Backshell Plating Codes: ROHS Compliance

| Plating Code | Plating Type                                         | RoHS Compliance | Notes                                                                 
|--------------|------------------------------------------------------|-----------------|----------------------------------------------------------------------
| J            | Cadmium with yellow chromate conversion coating over electroless nickel | No              | Electroless nickel is the preferred alternate.                      
| M            | Electroless nickel                                   | ![RoHS Compliance](https://example.com) | First choice for RoHS compliance. Good corrosion resistance, excellent conductivity, M83513 approved, always in stock. 
| C            | Black anodize                                        | ![RoHS Compliance](https://example.com) | Inexpensive, non-reflective, not suitable for EMI (poor conductivity), build-to-order. 
| Z2           | Gold                                                 | ![RoHS Compliance](https://example.com) | Low volume, higher cost, excellent conductivity, build-to-order.      
| E            | Chem film                                            | No              | Electroless nickel is the preferred alternate.                      
| MT           | Nickel-PTFE                                          | ![RoHS Compliance](https://example.com) | Glenair’s 1000 Hour Grey™ meets the need for a cadmium replacement with excellent conductivity, wear resistance and corrosion protection, M83513 approved. 
| NF           | Cadmium with olive drab chromate conversion coating over electroless nickel | No              | Electroless nickel is the preferred alternate.                      

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RoHS Compliance Information

Micro-D Backshell Plating Codes: ROHS Compliance


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