

TECHNICAL PAPER

Product Update on Lead-free Connectors

*KYOCERA AVX Components Corporation
Interconnect Division*





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Product Update on Lead-free connectors

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Dear Customer,

As you probably aware, the European Union published the following three new directives to avoid any use of hazardous substances.

- Directive 2002/95/EC on the restriction of hazardous substances in electrical and electronic equipment (ROHS)
- Directive 2000/53/EC on the restriction of hazardous substances on end-of life vehicles and the annex II with the decree 2002/525/EC
- Directive 2002/96/EC on waste and electronic equipment (WEEE)

These Instructions will restrict the use of Lead, Mercury, Hexivalent Chromium (Cr6+), Cadmium, PBB and Polybrominated diphenyl ether (PBDE). Due to the environmental Philosophy of AVX we intend to eliminate these substances so far as they have been used.

Therefore we are pleased to inform you about the procedure to change over to environmental friendly products.

Elco Europe doesn't use Mercury, Cadmium, PBB and PBDE and is using Cr6+ only in very few customized products in a composition with a Cr6+ proportion below 0,1%. A written confirmation that your product is Cr6+ free is available upon request. From the technical point of view we are now able to start the production of lead-free products.

In June 2004 we will begin the process of changing over to lead-free plating for all 2mm hard metric, IEC603-2 (formerly DIN41612) and other standard Elco GmbH produced connectors as follows.

1. Tin-lead plating will be replaced by a lead-free plating
2. The part number for lead-free connectors will remain the same.
3. Products with lead content will be assigned special part numbers (starts with 59)
4. Every lead free connector will be printed with the lead free logo to recognize the plating.



5. The lead-free logo will also be printed on every label
6. At the packaging the lead-free product can be also recognized
7. The changeover will be in a fluent process. First in – first out (FIFO) will be used to run down the leaded stock level
8. During the short period it can be possible that both, lead-free and leaded products are available
9. If only lead free products are required, a special part number will be used during the transition period to guarantee lead free products
10. The changeover will be finished before the EC directive becomes effective.

The 95/5 Tin/Lead composition will be replaced by lead free 100% pure Tin, which is an equivalent replacement to Tin-Lead, alloys. To eliminate tin whisker growing, a dull coating as well as a Nickel undercoating is used. It is guaranteed that all the electrical and mechanical parameters and performance remain the same. Existing tools and procedures can be kept during assembly. Pure tin coating is totally backwards compatible to tin-lead compositions and fully compatible with all standard SnPb solders and all considered lead-free solders with no change in quality of solder joints. Detailed technical reports will be available upon request soon.

SnPb plated parts will be available on an exceptional basis for specific customer needs (for example MIL). Please note that the part number will change if you require tin-lead plated products.

All Automotive connectors will be handled separately in agreement with our customers

Should you require more detailed information please contact your local AVX Sales Representative.

With the best regards
Elco Europe GmbH

Karsten Müller
Product Marketing Manager
Phone +49 2741 299 282
Fax +49 2741 299 122
e-mail Muellerk@avx-elco.com



NORTH AMERICA
Tel: +1 864-967-2150

ASIA
Tel: +65 6286-7555

CENTRAL AMERICA
Tel: +55 11-46881960

EUROPE
Tel: +44 1276-697000

JAPAN
Tel: +81 740-321250

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