

RoHS COMPLIANCE & POSITION STATEMENT

Bel is committed to the elimination of lead and other banned substances from our products. Our current efforts are directed towards compliance with European Directive 2002/95/EC. We also monitor other legislative requirements with potential impact to the use of banned substances in electronic products. Bel will continue to pursue the use of alternative (greener) manufacturing methods and materials for our products.

The directive provides an exemption through 2010 for Pb-based solders used in certain high-reliability electronics, such as for telecom network infrastructure, network server and storage products. Bel uses the de-facto industry standard term "RoHS-5" to denote products considered compliant solely due to the availability of this exemption.

Within our fuse product line, "RoHS-6" denotes products that are manufactured using Pb-free solder, and do not contain amounts of the 6 banned substances (lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (CrVI), polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)) above the allowed thresholds.

CHINA RoHS

In 2006, the Chinese Ministry of Information Industry Order #39 issued their own Legislation, "Management Methods for Controlling Pollution" and "Marking for the Control of Pollution SJ/T T11364-2006" Caused by Electronic Information Products Regulation" (referred to as "China RoHS"). China RoHS is similar to the EU RoHS in that it restricts certain hazardous substances in consumer products and in packaging materials.

Product Marking - Electronic end products sold in China after March 1, 2007 must have either of the following two logos.



Logo 1 is generally in green color (but can be any color, Bel chooses black) and it signifies a product with none of the six substances above the maximum concentration values (MCV). Currently the China RoHS legislation has no exemptions as offered by the EU RoHS directive, thus electronic products which contain levels of the substances in excess of China RoHS MCV can not use this logo. However, most fuse series made by Bel are "RoHS-6" compliant so type 1 Logo will be labeled on our packaging.



Logo 2 is normally orange (but can be any color, Bel chooses black), and is used on a product with one or more of the six substances above the MCV. The number inside the circle indicates the Environmental Protection Use Period (EPUP) as defined in Paragraph 3.5 of the Marking Standard SJ/T11364-2006. The EPUP is time in years for which hazardous/toxic substances will not, under normal operating conditions, leak out of the product, or the product will not change in such a way as to result in severe environmental pollution, injury to health, or great damage to property.

Note: This legislation is implemented in phases.

Phase I "Mark & Disclosure" started in March, 2007. An implementation date for Phase II is yet to be determined. Due to uncertainties regarding translation and interpretation of the law, Bel cautions its customers to obtain their own expert legal advice regarding the requirements of the China RoHS law.

Marking and label requirements are also subject to change without notice.

TIN WHISKERING FOR LEAD-FREE COMPONENTS POSITION STATEMENT

As part of our compliance with the RoHS Directive and to meet industry standards on Tin Whiskering, Bel incorporates a number of techniques to deter tin whisker growth. Depending on the product design and its specific application, prevention features may include employing any one or a combination of the following:

1. Tin free plating
2. Nickel underplate
3. Matte or low stress tin
4. Reflow tin
5. Annealed tin
6. Solderable terminations coated with Tin alloys such as Sn-Cu or Sn-Ag-Cu.

Tin whiskering criteria has been established with relevant material suppliers to ensure that plating process parameters are controlled to ensure repeatable, whisker-free conditions. Our products are subjected to tests based on the JESD22-A121, done by an independent laboratory. The product test coverage includes all combinations of plating and terminal materials that exist in Bel designs. Test results can be provided upon request.

HALOGEN-FREE POSITION STATEMENT

Halogen-Free is not currently well defined or mandated by legislation worldwide. However, as various industries trend toward Halogen-Free materials in electronic products, there is a need for standardization of accepted levels of halogens within electronic materials and systems. While fluorine, chlorine, bromine, iodine, and astatine are all considered halogens, Bel will use the term "halogen-free" to refer only to the amounts of bromine (Br) and chlorine (Cl) as defined by IEC-61249-2-21 and IPC-4101B:

- 900 ppm Br maximum
- 900 ppm Cl maximum
- 1,500 ppm Br + Cl maximum

Bel is committed to minimizing the generation of pollutants by prohibiting the use of PBBs, PDBEs and to phase out the use of brominated and chlorinated flame retardants in plastic parts. Molded packages will convert to halogen-free as equivalent plastic materials become available. Changes will be tracked by date code. Please contact your local sales representative for the latest information.