

OUR GLOBAL COMMITMENT TO THE ENVIRONMENT



Helping To Make
The World
A Cleaner Place
To Live



Environmental Management Practices

As part of our concerted effort to reduce and eliminate negative environmental impacts of our operations, Littelfuse has devised comprehensive environmental management practices.

Through regular communication of our objectives, action plans and achievements, all Littelfuse associates are kept informed of these practices. Each member of the Littelfuse family is fully committed to implementing the relevant aspects of our system as part of their everyday tasks.

Littelfuse is committed to minimizing the environmental impacts of our operations through various continual improvement programs. It is our practice to:

- Comply with all applicable laws and regulations worldwide.
- Reduce and eliminate the use of hazardous materials in our products.
- Reduce the amount of raw materials used in operations, reuse materials whenever possible and promote recycling and the use of recycled materials.
- Prevent pollution by reducing and eliminating emissions into the environment.
- Work closely with our customers and suppliers to minimize their overall impact on the environment.
- Communicate environmental issues with all Littelfuse associates through training programs and meetings.
- Monitor our environmental performance on a regular basis and communicate our progress to all interested parties.

Our Primary Focus for Environmental Improvement

Littelfuse is focused on a variety of environmental issues. A key area of concern is the reduction or elimination of specific toxic materials in the manufacturing of our products. This includes raw materials and processed materials purchased from our suppliers. Currently, we are focusing on the reduction and elimination of:

- Lead
- Cadmium
- Hexavalent Chromium
- Mercury
- Brominated Flame-Retardants
PBB and PBDE

Littelfuse is committed to ensuring that the use of these substances is ultimately eliminated from our products in order to comply with all applicable laws and regulations. Eliminating the use of these substances will reduce the negative impact on the ecosystem, and contribute to the preservation of our global environment. This includes all products that are designed, manufactured, sold, and distributed by Littelfuse.

Global/Regional Drivers

Littelfuse has been monitoring and responding to the international efforts to reduce or eliminate the use of Lead and other hazardous substances in electronic assemblies. Our commitment is to ensure that our products meet or exceed the standards by which our industry is measured around the world.

Primary drivers for the reduction and elimination of Lead and other heavy metals (as well as PBBs and PBDEs) are the European Union RoHS, ELV and WEEE Directives. These mandates address the overuse of hazardous substances, and the rapidly increasing waste stream of electrical and electronic equipment.

European Union Directive 2002/95/EC Restriction of the use of Hazardous Substances (RoHS)

RoHS prohibits the use of Lead, Mercury, Hexavalent Chromium, Cadmium and certain Polybrominated Ethers (PBB and PBDE). However, the use of Lead in high melting point type solders (solders which use more than 85% Pb) are exempt under RoHS. Article 4.1 states:

"Member States shall ensure that, from 1 July 2006, new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)..."



European Union Directive 2000/53/EC End-of Life Vehicles (ELV)

In an attempt to encourage manufacturers and suppliers of automotive equipment to reduce the use of hazardous substances, and increase the use of recycled materials, the EU has created a policy focused on preventing waste from end-of life vehicles (vehicles categorized as waste). Article 4.2(a) states:

"Member States shall ensure that materials and components of vehicles put on the market after 1 July 2003 do not contain lead, mercury, cadmium or hexavalent chromium other than in cases listed in Annex II under the conditions specified therein;"

European Union Directive 2002/96/EC Waste Electrical and Electronic Equipment (WEEE)

In order to address the rapidly growing amount of waste generated by electrical and electronic equipment, the EU has enacted a policy to encourage manufacturers to design products that can be reused or recycled. Article 4 states:

"Member States shall encourage the design and production of electrical and electronic equipment which take into account and facilitate dismantling and recovery, in particular the reuse and recycling of WEEE, their components and materials."

Green Initiatives in North America

Although in its infancy, efforts in North America to reduce the use of hazardous substances in electrical and electronic components are accelerating due to a combination of environmental and competitive pressures in the industry. The European Union and multi-national companies from Asia are leading the effort. As changes take affect, we will continue to keep our customers up-to-date with the latest available information.

Our Strategy for the Design of Eco-friendly Products

Littelfuse has established a focused program committed to developing high-performance eco-friendly products along with a comprehensive set of processing/reliability data and technical process expertise. This includes processes for eliminating, detecting and documenting the presence of hazardous materials such as Lead, Cadmium, Hexavalent Chromium, Mercury and brominated flame-retardants PBB and PBDE.

The Littelfuse strategy for eco-friendly products is specifically designed to help support our worldwide customers in their transition to lead-free processing.

ISO 14001

ISO 14001 is the world's most recognized framework for the creation of an Environmental Management System (EMS). It is a structured approach to addressing bottom line issues related to the environment and is recognized around the globe. ISO 14001 helps organizations better manage the impact of activities on the environment and demonstrate sound environmental management.

Littelfuse has embraced the ISO 14001 framework as its first-line strategy for building an infrastructure to achieve compliance with both the EU directives and market needs. The following Littelfuse facilities are currently ISO 14001 Certified:

- Des Plaines
- Ireland
- Piedras Negras, Mexico
- Suzhou, China
- Switzerland
- Japan

Partner Green Initiatives

Littelfuse is working with a variety of partners to support corporate "green" initiatives, which outline their commitments to lead-free processing and the phase out of certain hazardous materials. Some key manufacturers are; Sony, Nokia, Phillips, Samsung, Matsushita (Panasonic), Ericsson.

Littelfuse has achieved recognition as a Certified Green Partner of Sony Corp.



What is Lead-Free?

Littelfuse defines lead-free as: products which contain less than or equal to 1000ppm (0.1%) Lead, measured by weight of the entire product.

Littelfuse currently markets several product families which are lead-free. Other Littelfuse products are scheduled to be both lead-free and RoHS compliant by March 2005.

Information Disclosure and Analysis of Data

Littelfuse has implemented a comprehensive procedure for the disclosure of environmental analysis data. This includes data provided by our suppliers and data we provide to our customers. Contact Littelfuse Technical Support for more information on product certificates and third party test results.

As members of the global community,
we at **Littelfuse** have always
strived to understand the **impact**
of what we do, and of what we create,
on the **world around us.**

We continually work to balance our
business objectives with the need
to protect and improve the local and global
environment.

**Where You Need Us,
When You Need Us.**

Littelfuse has consistently expanded its global customer base by directing our development and manufacturing efforts toward the entire circuit protection market, resulting in the industry's widest range of overvoltage and overcurrent solutions.

With manufacturing, development, sales and distribution centers around the globe, we can serve you where and when you need us.

To get additional technical information or samples, visit us at www.littelfuse.com/lead-free or contact your local Littelfuse representative or sales office.

www.littelfuse.com/lead-free



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- Lipa City, Philippines
- Matamoros, Mexico
- Piedras Negras, Mexico
- Suzhou, China
- Swindon, England