

Environmental information on compact fluorescent lamps

Product description and operating information

Compact fluorescent lamps are low-pressure discharge lamps that operate on the following principle: after ignition radiation from the mercury vapour in the glass tube is converted by the phosphors on the inside of the glass tube into visible light, in a light colour that depends on the phosphors used. Control gear ensures the correct luminous flux is emitted. On integrated compact fluorescent lamps and circular lamps the control gear is integrated in the lamp casing, whereas external control gear is needed for non-integrated CFLs.

The phosphors used are fully annealed inert substances that pose no risk to health even if they are released as a result of a lamp breakage.

When the lamps are in a cold state, the mercury is present in the form of small mercury droplets or as a solid amalgam or mercury/iron pellet in the discharge vessel (bulb). When the lamp is switched on, the mercury vaporizes as the temperature of the bulb rises, and the mercury vapour needed for the discharge fills the entire bulb.

Lamps put on the EU market are in compliance with Directive 2002/95/EC RoHS.

Handling information for broken lamps

The lamp must be switched off immediately when the bulb ruptures. Measures must be taken to ensure that the lamp cannot be switched on again in this state. The metal parts in the lamp are live. Before removing the remains of the lamp, make sure that power is disconnected (risk of fatal electric shock).

To avoid health risks, the following procedure is recommended if a lamp breaks,

- Carefully ventilate the room for 20 to 30 minutes
- Remove all the lamp and glass fragments, dispose them of as hazardous waste according to national legislation
- Remove all broken lamp components from the luminaire before reusing it. To avoid contact with the skin, the use of disposable gloves is recommended.

Health risks

Mercury is released if the lamp breaks. Inhaling mercury or mercury compounds in vapour or powder form can lead to health problems. Mercury can also be absorbed through the skin.

Disposal of used compact fluorescent lamps

Since compact fluorescent lamps contain noxious substances (mercury), they have to be disposed of in Europe as hazardous waste under EWC Code 20 01 21* "Fluorescent tubes and other mercury-containing waste".

Being in the scope of EU Directive 2002/96/EC - WEEE – compact fluorescent lamps at end of life shall not be disposed of together with household waste. Within the EU they are taken back free of charge at certain national collection facilities if coming from private households or in comparable quantities also from other sources. More information can be found under www.elcfed.org and your national ELC member partner.

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