Light and the environment

Status as of October 2010

Environmental information on compact fluorescent lamps

• Product description

Compact fluorescent lamps are low-pressure discharge lamps that operate on the following principle: After ignition, mercury vapour in the glass tube emits UV radiation. This radiation 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. With DULUX CFLi and CIRCOLUX EL lamps the control gear is integrated in the lamp casing, whereas external control gear is needed for DULUX D, T/E, S, L, LSP and F lamps.
When the lamp is in the cold state the mercury is present in the form of a small mercury/iron compact in the discharge vessel (bulb). When the lamp is switched on the mercury vaporises as the temperature of the bulb rises, and the mercury vapour needed for the discharge fills the entire bulb.

Mercury content of OSRAM compact fluorescent lamps

Type	Mercury
DULUX CFLi all types	1.9 - 3 mg
DULUX D, T/E, S, L, LSP, F	1.4 - 2.6 mg
CIRCOLUX EL	4.4 mg

Detailed information on each individual lamp can be found under: http://catalogx.myosram.com

Environmental Impact

When used and disposed of as intended, lamps do not present any risk to health or the environment. The only time you as a consumer may be exposed to mercury is if the glass of the lamp is cracked or broken. If this happens, the released quantity of mercury is very small and does not pose an acute risk to health, but the broken lamp should still be cleaned up as described below. For more information see: www.osram.com/mercury

Legal requirements (EU)

In the EU and several other countries, compact fluorescent lamps have to fulfil the requirements of EU Directiv 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment – RoHS. According to this directive, 5mg of mercury are allowed in compact fluorescent lamps.

Health risks

Inhaling mercury or mercury compounds in vapour or powder form can lead to health problems. The resorption of mercury in oral or dermal form is negligible. 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.

Protection against lamp breakages

To avoid health risks we recommend the following procedure in the event of a lamp breaking:

- If the lamp was broken in a luminaire, make sure to disconnect the power to avoid the risk of electric shock
- Be careful not to cut yourself on shards of glass
- Gather up the fragments of the lamp, sweeping them up if possible.
- Use a disposable towel or sticky tape to remove small pieces or dust.
- Use a vacuum cleaner only if the surface leaves no alternative (carpet). Dispose of the vacuum bag containing the lamp fragments.
- Remove the fragments of the lamp from the inside of your home, i.e. by placing them in a bag and carrying them outside.
- Ventilate the room.
- Dispose of both cracked and non-functioning lamps correctly.

Disposal of used compact fluorescent lamps

As compact fluorescent lamps contain noxious substances (mercury) they have to be disposed of in Europe as special waste under

EWC Code 20 01 21* “Fluorescent tubes and other mercury-containing waste”

Compact fluorescent lamps are affected in EU by the scope of WEEE and can be disposed free of charge from private households and small consumers at all communal disposal facilities. More information under www.osram.com/weee and your national OSRAM partner.
In other countries the relevant national regulations must be followed.

• **OSRAM contact address**

If you need further information please contact your OSRAM sales partner or the Environment, Health and Safety-Sustainability in Munich:

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