
LIGHT AND ENVIRONMENT

PRODUCT ENVIRONMENTAL INFORMATION ON COMPACT FLUORESCENT LAMPS (CFL)

- **Product description**

Like all fluorescent lamps, compact fluorescent lamps of “OSRAM®” brand produce light with a low-pressure gas discharge in a glass tube. Electrical current is passed through a tube which is filled with partially ionized gas via the two filament electrodes. The electrons excite mercury atoms to emit short-wave ultra-violet light, which is then converted into visible light in the phosphor layer on the inside of the tube. Different light colours are produced depending on the phosphor mix.

An electronic control gear ensures the correct luminous flux is emitted. LEDVANCE distributes under Brand “OSRAM®” different product- /lamps families of compact fluorescent lamps. With „DULUX INTELLIGENT®“, „DULUX PRO®“, „DULUX SUPERSTAR®“, „DULUXSTAR®“ and „CIRCOLUX®“ lamps the control gear is integrated in the lamp casing (CFLi), whereas an external ballast is needed for DULUX D, T, S, L, and F lamps (CFLni).

The necessary amount of mercury (chemical symbol: Hg) is brought into the lamp discharge vessel (tube/bulb) in the form of a mercury iron pill or an amalgam pill using a precise and safe dosing technology.

- **Environmental impact**

When used and disposed of as intended, lamps do not pose a risk to health or the environment. In case of a lamp breakage a very small quantity of mercury will be released. The environmental impact is accordingly very low.

- **Health risks**

CFL contain only a very small amount of mercury. The quantity of mercury released to the air in case of a lamp breakage is so low, that in general there is no substantial health risk. If a breakage occurs indoors it is possible that for a short period of time a certain load of mercury can be present in the inside air. This depends on different factors, e.g. air exchange rate, lamp type, breakage of a hot or a cold lamp or lamp age. For more information see: www.ledvance.com/mercury

- **Protection measures in case of a lamp breakage**

The only time a consumer may be exposed to mercury is if the glass of the lamp is cracked or broken. If this happens, the following rules help to minimize the exposure (see also: www.ledvance.com/brokenlamp):

- If the lamp was broken in a luminaire, to disconnect the power to avoid the risk of electric shock
- Since mercury distributes at ground level, children should leave the room.
- Ventilate the room (short intense airing, 10-15 minutes)
- To protect yourself from cuts with glass shards, gloves should be used whenever available.
- Collect smaller glass pieces, for example with a stiff cardboard.
- Use a moist disposable towel to remove small pieces or dust.

Mercury content in OSRAM Compact Fluorescent Lamps*

Lamp type	Mercury [mg]
CFLi (integrated ballast)	1.3 - 2.5
CFLni (non integrated ballast)	1.3 - 4.5
CIRCOLUX EL	4,5

* The mercury amounts above apply to most product types. Binding values for a specific lamp type is available online

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- Use a vacuum cleaner only if the surface leaves no alternative (e.g. carpet). Dispose of the dust 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.
 - Dispose of the lamp parts according to the national legislation for lamps

- **Legal requirements (EU)**

OSRAM compact fluorescent lamps are covered by the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("RoHS"). According to this directive, the mercury content is limited depending on the lamp type with thresholds between 2.5 mg and 7 mg. For instance the maximum amount of mercury allowed in CFL < 30 Watt is 2.5 mg. You can find more information at <https://ledvance.com/rohs>

For more information on the Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") see <https://ledvance.com/reach>

- **Disposal of used fluorescent lamps**

Compact fluorescent lamps are covered by the EU Directive 2002/96/EC and respectively EU Directive 2012/19/EU (Recast) on waste electrical and electronic Equipment ("WEEE"), implemented in the EU by national legislation. Lamps from private households and small commercial consumers can be disposed of free of charge at designated collection facilities in common household amounts. You can find more information under: www.ledvance.com/weee or contact your national LEDVANCE sales partner.

In other countries the relevant national regulations must be followed.

The European Waste Catalogue (EWC) classifies waste fluorescent lamps as:

EWC Code 20 01 21* (hazardous waste): "Fluorescent tubes and other mercury-containing waste"

- **Technical Information**

Specific technical information including mercury content data can be found in the internet in LEDVANCE product data sheets:

<https://www.ledvance.com/products/lamps/compact-fluorescent-lamps-with-integrated-control-gear/index.jsp>

and

<https://www.ledvance.com/products/lamps/compact-fluorescent-lamps-without-integrated-control-gear/index.jsp>

- **LEDVANCE contact address**

If you need further information, please contact your LEDVANCE sales partner or directly our department of Security, Environment, Health and Safety (SEHS):

Email: environment@ledvance.com