

# Environmental information on mercury vapor lamps

## Product description and operating information

**Mercury vapor lamps** are lamps in which the discharge takes place in an atmosphere of mercury vapour. The light colour is determined by the phosphor coating on the bulb. Mercury vapour lamps are available in wattages from 50 W to 1000 W.

When the lamps are in a cold state, in other words at room temperature (21 °C), the mercury is generally present in the form of small metallic droplets in the discharge vessel. When the lamp is started, a small discharge occurs between the ignition electrode and the main electrode, which provides charge carriers for the main arc to strike. The discharge in the argon filling causes the mercury to heat up, and within a few minutes it vaporizes completely.

When thermal equilibrium is reached, the pressure in the discharge vessel is between 1 and 10 bar, depending on the rated wattage. The lamps must not be exposed to spray water and must be operated on control gear (but without an igniter!).

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 breaks. Measures must be taken to ensure that the lamp cannot be switched on again in this state. The wires 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 discharge vessel breaks:

- Carefully ventilate the room for 20 or 30 minutes
- Remove all the lamp and glass fragments, dispose them of as hazardous waste according to national legislation
- Once the luminaire has cooled down and certainly before it is used again, all residual mercury must be thoroughly removed from the inside of the luminaire. To avoid contact with the skin, the use of disposable gloves is recommended.

## Health risks

Inhaling mercury in vapour or powder form can lead to health problems. Mercury can also be absorbed through the skin. Phosphors released to the atmosphere may cause skin irritation. The lamp may only be operated with its outer bulb intact as otherwise the intense UV radiation escaping from the lamp may damage eyes (even if viewed indirectly) and cause skin irritation. UV radiation is INVISIBLE to the human eye. Irritation may not occur until hours after exposure.

## Disposal of used mercury vapor lamps

Since mercury vapour lamps 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 – Mercury vapour 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. More information can be found under [www.elcfed.org](http://www.elcfed.org) and your national ELC member partner.

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