

Environmental information on high-pressure sodium lamps

Product description and operating information

High-pressure sodium lamps are lamps for ac operation in which the discharge takes place under pressure in an atmosphere of sodium mercury vapour. High-pressure sodium lamps are available in wattages from 35W to 1000W. High-pressure sodium lamps can be operated with integrated or external starters.

When the lamps are in a cold state, in other words at room temperature (21°C), the mercury and metallic sodium are present in solid form as a sodium amalgam. When the lamp is started, mercury and sodium vaporize as the temperature in the discharge vessel heats up in the arc between the electrodes. The temperature of the outer bulb is between 100 and 500°C (max.) depending on the wattage. Once thermal equilibrium is reached, the mercury exerts a pressure of up to 2 bar on the discharge vessel walls; the actual pressure varies depending on the type of lamp.

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 discharge vessel 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
- 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 or mercury compounds in vapour or powder form can lead to health problems. Mercury can also be absorbed through the skin.

Disposal of used high-pressure sodium lamps

Since high-pressure sodium lamps contain noxious substances (including 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 - high-pressure sodium 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 and your national ELC member partner.

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