LIGHT AND ENVIRONMENT

PRODUCT ENVIRONMENTAL INFORMATION ON MERCURY VAPOR LAMPS

HQL® AND HWL®

With the second step of the EU directive 245/2009 (ErP), 347/2010 (ErP) as well as the terms of the EU directive 2011/65 (RoHS 2) which came into force on 13th April 2015, all mercury vapor lamps (HQL®) and mercury hybrid lamps (HWL®) are no longer permitted to be placed on the market in the European Union.

Mercury content in the OSRAM HQL® lamp families

Watt	Mercury [mg]
50	12
80	15
125	22
250	39
400	63
1000	100

- **Product description and operating information**

LEDVANCE distributes under "OSRAM®" brand high pressure mercury vapour lamps (HPMV) of HQL® lamps family, 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 watt to 1000 watt.

When the high-wattage lamps are in cold state (21°C/71°F) mercury is generally present in form of small metallic droplets in the discharge vessel ("burner"). When the lamp is started the mercury vaporises as the temperature in the discharge vessel rises due to the argon discharge between the ignition electrode and the main electrode and thereby provides charge carriers for the arc. Within the first few minutes the mercury heats up in the arc between the electrodes and vaporises 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!).

- **Environmental Impact**

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

- **Health risks**

Mercury is hazardous for the environment and health. OSRAM® mercury vapour lamps contain a relatively low 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 such a breakage occurs indoor 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. the air exchange rate, the lamp type or the breakage of a hot or a cold lamp.

For more information see: www.ledvance.com/mercury

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

In case of destruction of the outer bulb lamp must be switched off.

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, disconnect the power to avoid the risk of electric shock.
- Leave the immediate vicinity room to avoid inhaling mercury vapour.

- The room should be carefully ventilated not less than 15 minutes.
- Remove all fragments carefully once the luminaire has cooled down and certainly before it is used again, all residual mercury must be thoroughly mechanically removed from the inside of the luminaire. To avoid contact with the skin, we recommend the use of disposable gloves.
- Liquid mercury can be removed also with commercially available adsorbents (activated charcoal).
- Dispose of the lamp parts according national legislation for lamps

- **Legal requirements (EU)**

HQL® family come under the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment *("RoHS")*. See https://ledvance.com/rohs

Information on Regulation *("EC")* No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals *("REACh")* can be found in https://ledvance.com/reach .

- **Disposal of used fluorescent lamps**

High pressure mercury vapour lamps come under 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 metal-halide lamps as:
EWC Code 20 01 21* (hazardous waste): "Fluorescent tubes and other mercury-containing waste".

- **Technical Information**

Specific technical information as well as mercury content data can be found in the internet in LEDVANCE product data sheets: https://www.ledvance.com/products/lamps/compact-fluorescent-lamps-without-integrated-control-gear/osram-endura/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) in Munich:

Email: environment@ledvance.com

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