
LIGHT AND ENVIRONMENT

PRODUCT ENVIRONMENTAL INFORMATION ON HIGH-PRESSURE SODIUM LAMPS (VIALOX®, NAV®)

- **Product description**

LEDVANCE distributes under “OSRAM®” brand high-pressure sodium lamps VIALOX®, NAV® for an operation in which the discharge takes place under pressure in an atmosphere of sodium mercury vapour. OSRAM® high-pressure sodium lamps are available in wattages from 50 watt to 1000 watt. High-pressure sodium lamps can be operated with integrated or external starters.

When the lamps are in a cold state (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.

Mercury content in OSRAM VIALOX® - NAV® lamps

Watt	Mercury [mg]
50-250	<20
400-750	<25
1000	38

- **Environmental Impact**

When used and disposed of as intended, high pressure sodium 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**

OSRAM® high pressure sodium 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 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. 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 against lamp breakages**

In case of destruction of the outer bulb, the 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, make sure to disconnect the power to avoid the risk of electric shock.
- The room should be ventilated thoroughly for at least 15 minutes.
- Leave the immediate vicinity to avoid inhaling mercury vapour.
- Remove all fragments carefully once the luminaire has cooled down and certainly before it is used again, all residual mercury must be thoroughly removed mechanically from the inside of the luminaire. To avoid contact with the skin, we recommend the use of disposable gloves.
- Dispose of the lamp parts according to national legislation for lamps

- **Legal requirements (EU)**

OSRAM NAV® High-pressure sodium lamps 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://www.ledvance.com/rohs>

Information on Regulation (“EC”) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (“REACH”) see <https://www.ledvance.com/reach>

- **Disposal of used high-pressure sodium lamps**

High-pressure sodium lamps are covered by the EU Directive 2002/96/EC and respectively the 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://ledvance.com/products/lamps/high-intensity-discharge-lamps/high-pressure-sodium-vapor-lamps-for-open-and-enclosed-luminaires/index.jsp>

- **LEDVANCE contact address**

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

Email: environment@ledvance.com