

Material Safety Data Sheet for Transportation of Dangerous Goods

Mercury contained in manufactured articles

OSRAM HQL[®] and HWL[®] High Pressure Mercury Vapour Lamps

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This document gives information about risks during shipment, it is not a safety instruction for the use!

The word “lamp” in this document means “OSRAM HQL[®] or HWL[®] high pressure mercury vapour lamps”.

Description of the dangerous goods

HQL[®] lamps are lamps from the OSRAM family of mercury vapour lamps in which the discharge takes place in an atmosphere of mercury vapour. Mercury vapour lamps are available in wattages from 50 W to 1000 W.

Mercury:

At room temperature (21 °C), the mercury is generally present in the form of small metallic droplets in the discharge vessel (bulb). 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.

Mercury fillers for the OSRAM HQL[®] lamp families

	[mg] Mercury
Wattage 50 - 400	max. 50
Wattage 500 -1000	max. 100

Risks of fire or explosion

Lamps do not contain combustible materials or substances.

Dangerous goods classification

DG classification of these lamp types depends on mode of transport and contained material as listed above.

Mode of transport	> Hg limits ¹⁾	Classification	Proper Shipping Name
Air only	No	UN2809	No DG declaration ²⁾
	Yes	UN2809	Mercury contained in manufactured articles

¹⁾ If one Hg-limit exceeded: “>100 mg per lamp” or “>1g per package”

²⁾ Air Waybill text acc. Special Provision A69: “Not restricted / A69”

Immediate hazards to health

Lamp is a manufactured article in safe package. There are no immediate hazards to health as long as lamps are undamaged in original packaging.

Inhaling mercury or mercury compounds in vapour or powder form in case of lamp breakage can lead to health problems. Mercury can also be absorbed through the skin.

Immediate precautions to be taken in the event of an accident or incident

Mercury may be released if the lamp breaks. Following procedure is recommended to avoid health risks:

- Ventilate the room with fresh air.

- Be careful not to cut yourself on shards of glass
- Carefully remove all the bits of the broken lamp by using disposable gloves to avoid contact with the skin.
- Use a mercury spill kit if available, in other cases disposable towel or sticky tape to remove small pieces or dust of mercury.
- Use a vacuum cleaner only if the surface leaves no alternative (carpet). Dispose of the vacuum bag containing the lamp fragments.
- Dispose of both cracked and non-functioning lamps correctly.
- Do not use copper or aluminium tools or equipment

Immediate methods for handling fire

Use extinguishing agent suitable for type of surrounding fire.

Initial methods for handling spills or leaks in the absence of a fire

None.

Lamp is a manufactured article in safe package.

No spills or leaks possible without the event of an accident or incident (see above).

Preliminary first aid measures

Mercury may be released if the lamp breaks and if package is destroyed. Following procedure is recommended to avoid health risks:

All persons should leave the surrounding area at once, in order that no mercury is inhaled.
The area should be ventilated thoroughly (at least 20 minutes).

- Persons in the area should be provided with fresh air.
- Give artificial respiration if person is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and packing materials.
- After skin contact: wash off with plenty of water.
- After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in ophthalmologist.
- Ensure that medical personnel are aware of the mercury and take precautions to protect themselves.

Disposal

Since the lamps contain hazardous substances they have to be disposed of in Europe as hazardous waste under EWC-Code 20 01 21: "Fluorescent tubes and other mercury-containing waste".

In the EU mercury containing lamps are within the scope of Directive 2002/96/EC - WEEE (Waste Electrical and Electronic Equipment) and can be disposed free of charge. More information under www.osram.com/WEEE and your national OSRAM partner.

In other countries the relevant national regulations must be obeyed.

Subject to change without notice!