

Safety data sheet according to regulation (EU) 2015/830

HORTURION MH lamps

Version: 1.0

Edited on: 11.09.2020

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Replaced version: –

1. Identification of the substance/mixture and of the company

1.1 Product identifier

The safety data sheet is valid for HORTURION MH lamps with a mercury filling and additional doping.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: The HORTURION MH lamps are used for the generation of light in specialized environments, e.g. greenhouses.

1.3 Details of the supplier of the safety sheet

BLV Licht- und Vakuumtechnik GmbH

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85643 Steinhoering

Germany

Tel +49 (0)8094 906-0

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E-Mail tbaum@blv-licht.de

1.4 Emergency telephone number

Germany: +49 89 / 19 24 0 (poison emergency hotline, Munich)

Austria: +43 1406 43 43 (poison emergency hotline, Austria, 24 h)

USA: 1-800-222-1222 (United States National Poison Hotline, 24/7)

2. Hazards identification

2.1 Classification of the substance or mixture

H290: Met. Corr. 1; H314: Skin Corr. 1B; H315: Skin Irrit. 2; H317: Skin Sens. 1; H319: Eye Irrit. 2; H331: Acute Tox. 3; H334: Resp. Sens. 1; H335: STOT SE 3; H350i: Carc. 1B; H360: Repr. 1B; H373: STOT RE 2; H300+H310+H330: Acute Tox. 2; H301+H311+H331: Acute Tox. 3; H302+H332: Acute Tox. 4; H410: Aquatic Chronic 1; EUH033

For further information, see also section 16.3.

2.2 Label elements

Hazard pictograms and signal word of the product:



Signal word: danger

Hazard components for labelling (product identifier): Mercury (Hg)

Hazard statements:

H290: May be corrosive to metals.
 H314: Causes severe skin burns and eye damage.
 H315: Causes skin irritation.
 H317: May cause an allergic skin reaction.
 H319: Causes serious eye irritation.
 H331: Toxic if inhaled.
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335: May cause respiratory irritation.
 H350i: May cause cancer if inhaled.
 H360: May damage fertility or the unborn child.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H300+H310+H330: Fatal if swallowed, in contact with skin or inhaled.
 H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled.
 H302+H332: Harmful if swallowed or if inhaled.
 H410: Very toxic to aquatic life with long lasting effects.
 EUH033: Danger of cumulative effects.

Precautionary statements:

P102: Keep out of reach of children.
 P202: Do not handle until all safety precautions have been read and understood.
 P260: Do not breathe dust/fume/gas/mist/vapours/spray.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P314: Get medical advice/attention if you feel unwell.
 P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P301+P330+P331: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
 P302+P352: IF ON SKIN: Wash with plenty of water.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338: IF IN EYES: Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P311: IF exposed or concerned: Call a POISON CENTER/doctor.
 P402: Store in a dry place.
 P403: Store in a well-ventilated place.

2.3 Other hazards

Due to the hazard component the mixture meets the criteria for PBT. The criteria for vPvB are not met.

3. Composition/information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

HORTURION MH lamp with mercury filling.

3.2.1 Composition/Details on ingredients

Substance name	CAS no.	EC no.	Share per lamp	Classification acc. to regulation (EC) 1272/2008
Mercury	7439-97-6	231-106-7 (EINECS)	≤0.025 % (weight of the substance in comparison to the weight of the lamp)	H360D: Repr. 1B; H330: Acute Tox. 2; H372: STOT RE 1; H400: Aquatic Acute 1; H410: Aquatic Chronic 1

3.2.2 Substances with threshold values of the European Union regarding the exposition at the workplace

Not contained in the mixture.

The full text of the hazard statements can be found in section 16.3.

Substances that are part of the „Candidate List of Substances of Very High Concern (SVHC) for authorization“ of the European Chemicals Agency (ECHA) are not deliberately part of this product. It is not to expect that those substances are part of the product in a share $\geq 0,1\%$.

4. First aid measures

4.1 Description of first aid measures

General information: Call a doctor in case of excessive exposure of skin or eyes to radiation or serious cuts due to glass splinters in case of a broken lamp. In case of disturbances of health, call a doctor.

Following inhalation: Supply fresh air. In case of irritation of the respiratory system due to the product: Call a doctor.

Following skin contact: Wash with plenty of water and soap and rinse off.

Following eye contact: Remove contact lenses, if applicable. Immediately rinse eyes with open lid gap for at least 15 minutes with a lot of water. If necessary, call an ophthalmologist.

Following ingestion: Call a doctor. Rinse mouth, but do not induce vomiting.

4.2 Indication of any immediate medical attention and special treatment needed

In case of unconsciousness: Call an emergency doctor.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: HORTURION MH lamps are not flammable. The extinguishing media and measures to be taken need to be adapted to the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Avoid release into the environment and especially into waterbodies.

5.3 Advice for fire-fighters

No special measures necessary.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid skin contact.

6.2 Environmental precautions

Avoid release into the sewers, surface water or the ground water.

6.3 Methods and material for containment and cleaning up

Danger of cuts due to glass splinters in case of a broken lamp.

In case of a broken lamp, mercury can leak out. In that case take care of a suitable ventilation of the working area and avoid contact with the substance.

Take the mercury balls up with standard mercury tongs and put them into a plastic container that closes tightly. For mercury balls that cannot be taken up with the tongs and contaminated surfaces use zinc dust or a special absorption medium to bind the mercury.

Clean the decontaminated surfaces with a damp cloth. Collect the used cloths in a plastic container that closes tightly and dispose the container accordingly.

6.4 Reference to other sections

Observe the protective measures in sections 7.1, 8.2 and 13.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Do not expose the lamp to mechanical pressure or tensioning (danger of breaking).

Fire and explosion prevention: No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels: Always store in the delivered packaging. Store in a dry and well ventilated place.

7.3 Specific end uses

For additional information, see operating manual.

8. Exposure controls/personal protection

8.1 Control parameters

Mercury: 0,02 mg/m³ (TRGS 900 (2018))

8.2 Exposure controls/personal protection

See the following sections.

8.2.1 Respiratory protection

In case that mercury is leaking out and that the working area cannot be ventilated enough, a combination filter with filter effect Hg-P3 is necessary.

8.2.2 Hand protection

In case of broken glass wear cut resistant protective gloves.

8.2.3 Eye protection

In case of broken glass wear protective glasses.

8.2.4 Environmental exposure controls

Immediately wash contaminated skin areas with soap and lots of water. Immediately change clothing that has been contaminated with mercury and dispose of it properly, see section 13.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

9.1.1 Appearance of the hazard component

Physical state: liquid at room temperature

Colour: silver

Odour: odourless

9.1.2 Safety-relevant data

Max. operating temperature HORTURION MH lamp: 950 °C

Flammability: no

Auto-ignition: no

Dissolubility in water: insoluble

10. Stability and reactivity

10.1 Chemical stability

The product is chemically stable under normal ambient conditions (room temperature).

10.2 Possibility of hazardous reactions

If used as intended, no hazardous reactions are to be expected.

10.3 Conditions to avoid

Mechanical pressure and tensioning can lead to breaking of the glass. Danger of glass splinters, leaking mercury and contact with the electrode.

10.4 Incompatible materials

Not known.

10.5 Hazardous decomposition products

No hazardous decomposition products known.

11. Toxicological information

11.1 Information on toxicological effects

Skin corrosion/irritation: The mixture causes skin irritation. The assessment has been made on the basis of substance-specific concentration limits.

Eye damage/irritation: The mixture causes serious eye damage. The assessment has been made on the basis of substance-specific concentration limits.

Sensitisation to the respiratory tract/skin: The mixture may irritate the respiratory tract. The assessment has been made on the basis of substance-specific concentration limits.

Germ cell mutagenicity: The mixture may damage the embryo in the womb. The assessment has been made on the basis of substance-specific concentration limits.

Carcinogenicity: The mixture is not classified. The mixture does not contain substances that are classified as carcinogenic.

Reproductive toxicity: The mixture is not classified. The mixture does not contain substances that are classified as toxic to the reproductive system.

Specific target organ toxicity (repeated exposure): Inhalation of mercury fumes ($>0,1\text{mg}/\text{m}^3$) over a prolonged period of time can lead to damage to the central nervous system. Symptoms: Amyostasia, degeneration of muscles, emotional instability, lack of concentration, impaired vision.

Specific target organ toxicity (single exposure): May irritate the respiratory system.

Aspiration hazard: The mixture is not classified. The mixture does not contain hydrocarbons.

12. Ecological information

12.1 Toxicity

The mixture is very toxic to aquatic life with long lasting effects on waterbodies.

12.2 Results of PBT and vPvB assessment

Due to the hazard component the mixture meets the criteria for PBT. The criteria for vPvB are not met.

13. Disposal considerations

13.1 Waste treatment methods

Waste code: EAK No. 200121 Fluorescent tubes and other mercury-containing waste.

13.1.1 Non-cleaned packaging

Broken glass that has been contaminated with mercury has to be disposed of in accordance with the waste disposal contractor.

13.1.2 Cleaned packaging

Dispose of the packaging correctly sorted according to the valid local waste disposal regulations.

14. Transport information

14.1 UN number

UN no.: 3506

14.2 Proper UN shipping name

Mercury contained in manufactured articles

14.3 Transport hazard classes

Class: 8 / Corrosive

14.4 Special precautions for user

No dangerous goods according to IATA for HORTURION HPS lamps that contain maximum 1 g of mercury individually and that are packaged so that there are maximum 30 g of mercury per package. Special provision 1.2.11.1 (A69)

For customers in the USA: Ground shipment is limited to a maximum of 1 lb. (0.454 kg) of mercury per package.

14.5 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Sale and delivery only in legally permitted and suitable packaging.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 EU regulations

Regulation (EC) no. 1005/2009 (substances that deplete the ozone layer): not applicable

Regulation (EC) no. 850/2004 (persistent organic pollutants): not applicable

Regulation (EC) no. 649/2012 (export and import of hazardous chemicals): not applicable

Regulation (EC) no. 648/2004 (detergents): not applicable

Accreditation according to subsection VII of the regulation (EC) no. 1907/2006: None

Restrictions according to subsection VIII of the regulation (EC) no. 1907/2006: Observe the restrictions according to appendix XVI entry 3.

15.1.2 National regulations

In Germany, see the technical rules for dangerous goods (TRGS):

Observe the safety measures according to TRGS 900

For customers in the USA:

Prop 65: This product can expose you to chemicals including mercury which is known to the state of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

15.2 Chemical safety assessment

This substance has not undergone a chemical safety assessment.

16. Other information

16.1 Indication of changes

This is the first published version.

16.2 Key literature references and sources for data

Regulations:

REACH regulation (EC) no. 1907/2006, last changed with the commission regulation (EU) 2015/830

CLP regulation (EC) no. 1272/2008, last changed with the commission regulation (EU) 2015/491

16.3 Hazard statements referenced in sections 2 and 3

According to regulation (EC) no. 1272/2008:

Met. Corr. 1; H290 – May be corrosive to metals.

Skin Corr. 1B; H314 – Causes severe skin burns and eye damage.

Skin Irrit. 2; H315 – Causes skin irritation.

Skin Sens. 1; H317 – May cause an allergic skin reaction.

Eye Irrit. 2; H319 – Causes serious eye irritation.

Acute Tox. 3; H331 – Toxic if inhaled.

Resp. Sens. 1; H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.

STOT SE 3; H335 – May cause respiratory irritation.

Carc. 1B; H350i – May cause cancer if inhaled.

Repr. 1B; H360 – May damage fertility or the unborn child.

STOT RE 2; H373 – May cause damage to organs through prolonged or repeated exposure.

Acute Tox. 2; H300+H310+H330 – Fatal if swallowed, in contact with skin or inhaled.

Acute Tox. 3; H301+H311+H331 – Toxic if swallowed, in contact with skin or if inhaled.

Acute Tox. 4; H302+H332 – Harmful if swallowed or if inhaled.

Aquatic Chronic 1; H410 – Very toxic to aquatic life with long lasting effects.

EUH033 – Danger of cumulative effects.

16.3.1 Used evaluation methods according to section 9 of the regulation (EC) no. 1272/2008

Physical dangers: Assessment of test data (burning point)

Dangers to the health and the environment: calculation methods

16.4 Abbreviations and acronyms

CAS	Chemical Abstracts Service
DIN	Standard of the German Standards Institute (Deutsches Institut für Normung)
EAK	European list of wastes (Europäischer Abfallarten-Katalog)
ECHA	European chemicals agency
EC	European community
EINECS	European Inventory of Existing Commercial Chemical Substances
EN	European standard
HPS	High-pressure sodium lamps
IATA	International Air Transport Association
IBC code	International code for the construction and equipment of ships carrying dangerous chemicals in bulk
ISO	Standard of the International Standards Organization
MARPOL	Maritime Pollution Convention
MH	Metal Halide
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, bioaccumulative, toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC	Substances of very high concern
TRGS	Technical rules for dangerous goods
UN	United Nations
vPvB	Very persistent and very bioaccumulative