SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

SDS : 33622
Lamp Material Data Sheet code (LMDS) : Philips MHC-12000B

* Supplier : Signify North America Corporation
            200 Franklin Square Drive
            Somerset, NJ 08873-4186

Tradename : METAL HALIDE CERAMIC MHC LAMPS – All Wattages

Other means of identification : None.

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

General description : Metal Halide Ceramic Lamp
Recommended Use : Various
Uses advised against : No data available

Details of the supplier of the safety data sheet

Supplier safety data sheet : Philips Electronics Nederland B.V., Philips Environment & Safety, High Tech Campus 37, 5656 AE Eindhoven, Tel. +31 (0)40 27 41 645
Responsible department : hazcom@philips.com

Emergency telephone number

Emergency telephone number:
CHEMTREC : +1 (0)800-424-9300

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification in accordance with 29 CFR 1910.1200
Not classified.
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article and as such does not require an SDS per the OSHA hazard communication standard.

Label elements

Labelling in accordance with 29 CFR 1910.1200
Label: not applicable
Remarks on labelling: none

Other hazards

   none.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLAS</td>
<td>65997-17-3</td>
</tr>
<tr>
<td>SODIUM IODIDE</td>
<td>7681-82-5</td>
</tr>
<tr>
<td>CALCIUM IODIDE</td>
<td>10102-68-8</td>
</tr>
<tr>
<td>MERCURY</td>
<td>7439-97-6</td>
</tr>
</tbody>
</table>

Remark: The product contains: 1.63 - 151 mg Mercury

SECTION 4: First aid measures

Description of first aid measures

Skin: Not applicable.
Ingestion: Not applicable.
Inhalation: Not applicable.
Eyes: Not applicable.

Most important symptoms and effects, both acute and delayed

Skin
   local: Under normal circumstances not applicable.
   general: Under normal circumstances not applicable

Ingestion
   local: Under normal circumstances not applicable.
   general: Under normal circumstances not applicable

Inhalation
   local: Under normal circumstances not applicable.
   general: Under normal circumstances not applicable

Eyes
   local: Under normal circumstances not applicable

Remarks symptoms: None

Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

Extinguishing media

Suitable fire-extinguisher
determined by surrounding.

Unsuitable fire-extinguisher
not traceable.

Special hazards arising from the substance or mixture

Hazardous decomposition products in fire: Mercury oxides
Advice for firefighters

In the event of fire, wear protective clothing and use breathing apparatus that is independent of the ambient air.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

In case of broken articles, use protective equipment. Evacuate area.

For non-emergency personnel

Protective equipment

Wear protective gloves/protective clothing/eye protection/face protection.

Emergency procedure

Ventilate affected area.

For emergency responders

Use appropriate respiratory protection. Personal protection equipment

Methods and material for containment and cleaning up

For containment

Collect materials needed to clean up broken bulb: stiff paper or cardboard; sticky tape; damp paper towels or disposable wet wipes (for hard surfaces); and a glass jar with a metal lid or a sealable plastic bag. Be thorough in collecting broken glass.

For cleaning up

DO NOT VACUUM. Vacuuming is not recommended unless broken glass remains after all other cleanup steps have been taken. Vacuuming could spread mercury-containing powder or mercury vapor. Scoop up glass fragments using stiff paper or cardboard and sticky tape. Place cleanup materials in a sealable container.

Other information

No information available.

SECTION 7: Handling and storage

Precautions for safe handling

Local exhausting

: Under normal circumstances not applicable.

Conditions for safe storage, including any incompatibilities

Storage conditions

: No special precautions.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits:

applicable to: United States of America (25 °C; 1013 mbar)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Limit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA (8 hours)</td>
<td>mg/m³</td>
<td>0.025</td>
<td>S MERCURY- [according to ACGIH]</td>
</tr>
<tr>
<td>TWA (8 hours)</td>
<td>mg/m³</td>
<td>0.1</td>
<td>C MERCURY- [according to NIOSH]</td>
</tr>
<tr>
<td>TWA (8 hours)</td>
<td>mg/10m³</td>
<td>0.1</td>
<td>C MERCURY – [according to OSHA PEL]</td>
</tr>
</tbody>
</table>

C=Ceiling; S=Skin
Remarks exposure limits: none

Appropriate engineering controls: Under normal circumstances not applicable

Exposure controls
Advised personal protection:
- Hands: Under normal circumstances not applicable.
- Breakthrough time: Under normal circumstances not applicable.
- Eyes: Under normal circumstances not applicable.
- Inhalation: Under normal circumstances not applicable.
- Skin: Under normal circumstances not applicable.

SECTION 9: Physical and chemical properties
Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>type dependent</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor threshold (20°C; 1013 mbar)</td>
<td>not traceable</td>
</tr>
<tr>
<td>pH</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not traceable</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>not traceable</td>
</tr>
<tr>
<td>Flash point/range</td>
<td>not applicable</td>
</tr>
<tr>
<td>Evaporation rate/range</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor rate/range</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>data not available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>not traceable</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Log Po/w: 4.5  MERCURY  Source: Chemicalcards

SECTION 10: Stability and reactivity
Reactivity
Not applicable.

Chemical stability
The substance or mixture is stable under normal conditions.

Possibility of hazardous reactions

Reactions with water: no
Other hazardous conditions: Data not available.

Conditions to avoid
Data not available.
Incompatible materials

- Hazardous reactions with: none

Hazardous decomposition products

- Hazardous decomposition products at heating: none

### SECTION 11: Toxicological information

**Information on toxicological effects**

**Acute oral toxicity**
No data available.

**Acute dermal toxicity**
No data available.

**Acute inhalation toxicity**
No data available.

**Skin corrosion/irritation**
The substance or mixture is not classified for skin corrosion/irritation.

**Serious eye damage/irritation**
The substance or mixture is not classified for serious eye damage/irritation.

**Respiratory or skin sensitization**
The substance or mixture is not classified for respiratory or skin sensitization.

**Germ cell mutagenicity**
The substance or mixture is not classified for germ cell mutagenicity.

**Carcinogenicity**
- IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Mercury)
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**
The substance or mixture is not classified for reproductive toxicity.

**Specific target organ toxicity-single exposure**
The substance or mixture is not classified for specific target organ toxicity-single exposure.

**Specific target organ toxicity-repeated exposure**
The substance or mixture is not classified for specific target organ toxicity-repeated exposure.

**Aspiration hazard**
The substance or mixture is not classified for aspiration hazard.

**Symptoms**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Local</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
Remarks symptoms : None

SECTION 12: Ecological information

Toxicity

Ecotoxicity
LC-50: 0.004 mg/l/96H (Fish) MERCURY Source : Easi View
EC-50: 0.0205 mg/l/48H (Daphnia) MERCURY Source : IFA- Gestis
IC-50: 0.3 mg/l/72H (Algae) MERCURY Source : Easi View

Persistence and degradability
Biological oxygen demand: not applicable
Chemical oxygen demand: not applicable
Degradability: not applicable

Bioaccumulative potential
Bioconcentration factor (BCF) : >2500 MERCURY

Mobility in soil
Henry Constant : Not applicable

Other adverse effects
Remarks on eco-toxicity: none

SECTION 13: Disposal considerations

Waste treatment methods
Remainder material or uncleaned empty packaging’s have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

SECTION 14: Transport information

UN number
ADR/RID : none
IMDG/IMO : none
IATA/ICAO : 3506
Remarks IATA/ICAO : For transport exemptions consult IATA special provisions A48, A69 and A191.

UN proper shipping name
ADR/RID : none
IMDG/IMO : none
IATA/ICAO : MERCURY CONTAINED IN MANUFACTURED ARTICLES

Transport hazard class(es)
ADR/RID : none IMDG/IMO : none IATA/ICAO : 8 (6.1)

Packing group
ADR/RID : none IMDG/IMO : none IATA/ICAO : none
Environmental hazards

Marine pollutant : no

Special precautions for user

Hazard identification number (ADR/RID) : none
EmS (IMDG/IMO) : none

Transport in bulk according to Annex II of Marpol and the IBC Code

Data not available.

SECTION 15: Regulatory information

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

US Federal regulations

SARA 313: Mercury
SARA 311/312: not applicable.
HMIS Classification: not applicable.
U.S. Clean Water Act Section 307 – Toxic Pollutants: Mercury

National inventories

Articles are exempted from the Toxic Substances Control Act Inventory (TSCA-USA).

International inventories

DSL/NDSL:
This substance is on the DSL (Mercury, Sodium iodide)
This substance is on the NDSL (Calcium iodide)

SECTION 16: Other information

Remarks on SDS : Toxic mercury vapors can be released if the lamp is broken.
For transport exemptions consult applicable regulations.

Exemption values krypton-85: 1.E4 Bq, 1.E5 Bq/g.
The product contains 0 – 34 kBq krypton-85.
Activity concentration krypton-85: 0 – 6.660 kBq/g.

A key or legend to abbreviations and acronyms used in the safety data sheet

GHS Globally Harmonized System of Classification and Labelling of Chemicals
CAS Chemical Abstracts Service
TGG = TWA Time Weighted Average
LEL Lower Explosive Limit
UEL Upper Explosive Limit
NTP National Toxicology Program
KHC Known Human Carcinogen
RAHC Reasonably Anticipated Human Carcinogen
IARC International Agency for Research on Cancer
OSHA Occupational Safety & Health Administration
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route
RID Règlement concernant le transport international ferroviaire des marchandises dangereuses
* Point to alterations with regard to the previous version.

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