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

(a) Product identifier

<table>
<thead>
<tr>
<th>SDS</th>
<th>Lamp Material Data Sheet code (LMDS)</th>
<th>Supplier</th>
<th>Tradename</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PHILIPS LIGHTING, NORTH AMERICA</td>
<td>PHILIPS T8 FLUORESCENT LAMPS - ALL TYPES</td>
</tr>
</tbody>
</table>

(b) Other means of identification

All ALTO, non-ALTO, Standard, HO, Circular, U-Bent and TuffGuard All lengths, coatings, wattages

(c) Relevant identified uses of the substance or mixture and uses advised against

General description: Fluorescent Lamp
Use: Various
Uses advised against: No data available

(d) 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: dangerous.goods@philips.com

(e) Emergency telephone number

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

SECTION 2: Hazards identification

(a) 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.

(b) Label elements

Labelling in accordance with 29 CFR 1910.1200

Label: not applicable.
Remarks on labelling: none

(c) Other hazards

none.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLASS</td>
<td>65997-17-3</td>
</tr>
<tr>
<td>FLUORESCENT POWDER</td>
<td>-</td>
</tr>
<tr>
<td>MERCURY</td>
<td>7439-97-6</td>
</tr>
<tr>
<td>POLY(ETHYLENE TEREPHTHALATE)</td>
<td>25038-59-9</td>
</tr>
</tbody>
</table>

Remark: The product contains: 1.7 - 3.5 mg Mercury

SECTION 4: First aid measures

(a) Description of first aid measures

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

(b) 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

(c) Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

(a) Extinguishing media

Suitable fire-extinguisher

determined by surrounding.

Unsuitable fire-extinguisher

not traceable.

(b) Special hazards arising from the substance or mixture

Hazardous decomposition products in fire: Silicon dioxide, Mercury oxides, metal oxide

(c) 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

(a) 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

(b) 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

(a) Precautions for safe handling

Local exhausting : Under normal circumstances not applicable.

(b) Conditions for safe storage, including any incompatibilities

Storage conditions : No special precautions.

SECTION 8: Exposure controls/personal protection

(a) Control parameters

Exposure limits :
applicable to: United States of America (25 ºC; 1013 mbar)

TWA(8 hours): 0.025 mg/m3 S MERCURY- [according to ACGIH]
TWA (8 hours): 0.1 mg/m3 C MERCURY- [according to NIOSH]
TWA (8 hours) 0.1 mg/10m³ C MERCURY – [according to OSHA PEL]

C=Ceiling; S=Skin

Remarks exposure limits : none

(b) Appropriate engineering controls: Under normal circumstances not applicable

(c) 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

Physical state : article
Color : type dependent
### Odor
- Odor: odorless
- Odor threshold (20°C; 1013 mbar): not traceable

### pH
- pH: not applicable

### Melting point/freezing point
- Melting point/freezing point: not traceable

### Boiling point/range
- Boiling point/range: not traceable

### Flash point/range
- Flash point/range: not applicable

### Evaporation rate/range
- Evaporation rate/range: not applicable

### Vapor rate/range
- Vapor rate/range: not applicable

### Flammability (solid, gas)
- Flammability (solid, gas): data not available

### Upper/lower flammability or explosive limit
- Upper/lower flammability or explosive limit: not applicable

### Vapor pressure
- Vapor pressure: not applicable

### Vapor density
- Vapor density: not applicable

### Density
- Density: not traceable

### Solubility in water
- Solubility in water: not applicable

### Log Po/w:
- MERCURY: 4.5
- POLY(ETHYLENE TEREPTHALATE): 0.54

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Chemicalcards</td>
</tr>
<tr>
<td></td>
<td>Easi View</td>
</tr>
</tbody>
</table>

### Auto-ignition temperature
- Auto-ignition temperature: not applicable

### Decomposition temperature
- Decomposition temperature: not traceable

### Viscosity
- Viscosity: not applicable

### Dust explosions possible in air
- Dust explosions possible in air: not applicable

### Oxidizing properties
- Oxidizing properties: no

### SECTION 10: Stability and reactivity

(a) Reactivity
- Not applicable.

(b) Chemical stability
- The substance or mixture is stable under normal conditions.

(c) Possibility of hazardous reactions
- Reactions with water: no
- Other hazardous conditions: Data not available.

(d) Conditions to avoid
- Data not available.

(e) Incompatible materials
- Hazardous reactions with: none

(f) Hazardous decomposition products
Hazardous decomposition products at heating: none

SECTION 11: Toxicological information

11.1. 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>Syndrome</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>
</tbody>
</table>
SECTION 12: Ecological information

(a) Toxicity

Ecotoxicity
LC$_{50}$: 0.004 mg/l/96H (Fish)     MERCURY     
EC$_{50}$: 0.0205 mg/l/48H (Daphnia)  MERCURY     
IC$_{50}$: 0.3 mg/l/72H (Algae)     MERCURY     

(b) Persistence and degradability

Biological oxygen demand: not applicable
Chemical oxygen demand: not applicable
Degradability: not applicable

(c) Bioaccumulative potential

Bioconcentration factor (BCF): $>2500$     MERCURY

(d) Mobility in soil

Henry Constant: $1.46 \times 10^{-1}$ atm m$^3$/mol     POLY(ETHYLENE TEREPHTHALATE)     

Source: Easi View

(e) 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

(a) UN number

DOT/49CFR: none
IMDG/IMO: none
IATA/ICAO: 3506
Remarks IATA/ICAO: For transport exemptions consult IATA special provisions A48, A69 and A191.
(b) **UN proper shipping name**

DOT/49CFR : none
IMDG/IMO : none
IATA/ICAO : MERCURY CONTAINED IN MANUFACTURED ARTICLES

(c) **Transport hazard class(es)**

DOT/49CFR : none
IMDG/IMO : none
IATA/ICAO : 8 (6.1)

(d) **Packing group**

DOT/49CFR : none
IMDG/IMO : none
IATA/ICAO : none

(e) **Environmental hazards**

Marine pollutant : no

(f) **Special precautions for user**

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

(g) **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)

SECTION 16: Other information

**Remarks on SDS** : Working on this product may release toxic dust.
Toxic mercury vapors can be released if the lamp is broken.
For transport exemptions consult applicable regulations.
A key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>TGG = TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>LEL</td>
<td>Lower Explosive Limit</td>
</tr>
<tr>
<td>UEL</td>
<td>Upper Explosive Limit</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>KHC</td>
<td>Known Human Carcinogen</td>
</tr>
<tr>
<td>RAHC</td>
<td>Reasonably Anticipated Human Carcinogen</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>DOT</td>
<td>US Department of Transportation</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport international ferroviaire des marchandises dangereuses</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organization</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
</tbody>
</table>

* Point to alterations with regard to the previous version.

The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Philips Electronics Nederland B.V. makes no warranty as to its contents, nor as to its fitness for any particular purpose or use.