

MATERIAL SAFETY DATA SHEET

According EC 91/155

1. Identification of the substance/preparation

Supplier : P+L Systems Ltd
General description : Blacklight Linear Fluorescent Lamp
Publicationdate : Jan 20, 2010

2. Composition/information on ingredients

| Component | CAS-no | EC-no | Catalogue-no | Percentage(%) | EC-label |
|----------------------------------|----------------------|-----------|--------------|---------------|--------------------------------------|
| GLASS | | | | | |
| STRONTIUM BORATE, EUROPIUM-DOPED | 102110-29-2310-028-8 | | | | |
| * FILLING GAS (KR/AR) | | | | | R: 99 |
| MERCURY | 7439-97-6 | 231-106-7 | 080-001-00-0 | | T,N;R: 61 23 33 50/53 Repr.Cat. 2 |
| * TUNGSTEN | 7440-33-7 | 231-143-9 | | | |
| * METALS | | | | | |
| * CAPPING CEMENT | | | | | |

3. Hazard identification

4. First-aid measures

Skin : Not applicable.
Ingestion : Not applicable.
Inhalation : Not applicable.
Eyes : Not applicable.
Remarks first aid : none

5. Fire fighting measures

Fire-extinguisher : determined by surrounding
*** Hazardous decomposition products in fire** : silicon dioxide, aluminium oxides, mercury oxides, strontium oxide, boric oxides, europium oxides, metal oxide, tungsten oxides

6. Accidental release measures

Spillage procedure : Not applicable if lamp is in original state. If lamp is broken: clear up using special mercury vacuum cleaner or other appropriate agent for preventing vaporisation. Take standard measures for clearing up broken glass and deposit in a lockable container.
Emergency procedure : not applicable

7. Handling and storage

Local exhausting : Under normal circumstances not applicable.
Storage conditions : No special precautions.
Storage code (on behalf of PGS 15) : C9

8. Exposure controls/personal protection

Exposure limits :

applicable to: Netherlands (20 °C; 1013 mbar)

No MAC(STEL) has been laid down.
No MAC(STEL) has been laid down.
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TLV: 0.05 mg/m³
STEL: 0.5 mg/m³
No MAC(STEL) has been laid down.
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GLASS
STRONTIUM BORATE, EUROPIUM-DOPED
FILLING GAS (KR/AR)
MERCURY(Women in the fertile age: consult the industrial safety officer.)
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TUNGSTEN
METALS
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applicable to: Belgium (20 °C; 1013 mbar)

TLV: 0.025 mg/m³ S
TLV: 5 mg/m³

MERCURY(Women in the fertile age: consult the industrial safety officer.)
TUNGSTEN

STEL: 10 mg/m3

TUNGSTEN

applicable to: Germany (20 °C; 1013 mbar)

TLV: 0.1 mg/m3

S

MERCURY(Women in the fertile age: consult the industrial safety officer.)

TLV: 5 mg/m3

TUNGSTEN(as inhalable dust)

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

No MAC(STEL) has been laid down.

FILLING GAS (KR/AR)

TLV: 0.025 mg/m3

S

MERCURY(Women in the fertile age: consult the industrial safety officer.)

TLV: 5 mg/m3

TUNGSTEN

STEL: 10 mg/m3

TUNGSTEN

C=Ceiling; S=Skin

Remarks exposure limits :

none

Odour threshold (20°C; 1013 mbar) :

not traceable

Advised personal protection :

skin : not applicable

eyes : not applicabel

inhalation : not applicable

9. Physical and chemical properties

| | |
|---------------------------------|------------------|
| Physical state | : article |
| Colour | : type dependent |
| Odour | : odourless |
| Vapor rate/range | : not applicable |
| Boiling point/range | : not traceable |
| Melting point/range | : >480 °C |
| Flash point/range | : not applicable |
| Explosive limits | : not applicable |
| Dust explosions possible in air | : not applicable |
| Density | : not traceable |
| Vapour pressure | : not applicable |
| Solubility in water | : not applicable |
| Solubility in fat | : not applicable |
| pH | : not applicable |
| Viscosity | : not applicable |
| Autoignition temperature | : not applicable |
| Decomposition temperature | : not traceable |
| Electrostatic chargement | : not traceable |

10. Stability and reactivity

| | |
|---|--------|
| Conditions to avoid | : none |
| Reactions with water | : no |
| Hazardous reactions with | : none |
| Hazardous decomposition products at heating | : none |

11. Toxicological information

Symptoms

| | | |
|------------------|---------|-------------------|
| Skin | local | : Not applicable. |
| | general | : Not applicable. |
| Ingestion | local | : Not applicable. |
| | general | : Not applicable. |
| Inhalation | local | : Not applicable. |
| | general | : Not applicable. |
| Eyes | local | : Not applicable. |
| Remarks symptoms | | : None |

Toxicity :

not traceable

Ames test : not traceable

12. Ecotoxicological information

| | | |
|---|-----------------|------------------------|
| Biological oxygen demand (5) | : not traceable | |
| Chemical oxygen demand | : not traceable | |
| Biological/chemical oxygen demand ratio | : not traceable | |
| Degradability | : not traceable | |
| Biochemical factor | : >2500 MERCURY | Source : Supplier |
| Log Po/w | : 4.5 MERCURY | Source : Chemicalcards |
| Henry Constant | : not traceable | |

Ecotoxicity :

LC-50: 0.004 mg/l/96H (Fish), MERCURY
EC-50: 0.0052 mg/l/48H (Daphnia), MERCURY
IC-50: 0.3 mg/l/72H (Algae), MERCURY

Source : Easi View
Source : ChemDat (Merck)
Source : Easi View

Remarks on ecotoxicity : none

13. Disposal considerations

Remainder material or uncleaned empty packagings have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

14. Transport information

| | | |
|-----------|--------------------------|--|
| ADR/RID | UN-number | : 2809 MERCURY IN MANUFACTURING ARTICLES |
| | Class | : 8 |
| | Packinggroup | : III |
| | Transport emergency card | : 80GC9-III |
| IMO | UN-number | : 2809 MERCURY IN MANUFACTURING ARTICLES |
| | Class | : 8 |
| | Packinggroup | : III |
| | Marine pollutant | : no |
| IATA/ICAO | UN-number | : 2809 MERCURY IN MANUFACTURING ARTICLES |
| | Class | : 8 |
| | Packinggroup | : III |

15. Regulatory information

EC-Label : not applicable
Remarks on EC-labeling : none

16. Other information

* Remarks on MSDS : Working of this product may release toxic dust.
Toxic mercury vapours can be released if the lamp is broken.
These lamps emit Ultraviolet Radiation (UV-A). Avoid prolonged exposure.
For transport exemption consult applicable regulations.
The product contains <= 13 mg mercury.

Inner company references : none

Overview relevant R-sentences from all components in section 2 :

| | |
|-------|--|
| 23 | Toxic by inhalation. |
| 33 | Danger of cumulative effects. |
| 50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| 61 | May cause harm to the unborn child. |
| 99 | Suffocating in high concentrations. |