

PRODUCT SAFETY DATA SHEET
PSDS No. 1.5.3
DE TUBULAR HID LAMPS



Sylvania brand, unjacketed, Tubular HID Lamps, manufactured by OSRAM SYLVANIA Inc., are exempted from the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) because they are "articles." The following information is provided by OSRAM SYLVANIA as a courtesy to its customers.

I. PRODUCT IDENTIFICATION

Trade Name (as labeled): Sylvania Double-Ended Tubular HID Lamps

Manufacturer: OSRAM de Mexico S.A. de C.V.
A.J. Bermudes, C.P. 32470
Cd. Juarez, Chihuahua, Mexico

II. HAZARDOUS INGREDIENTS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT. If the lamp is broken, the following materials may be released:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>% by wt.</u> | <u>Exposure Limits in Air (mg/cubic m)</u> | |
|--|-------------------|-----------------|--|-------------------|
| | | | <u>ACGIH (TLV)</u> | <u>OSHA (PEL)</u> |
| (1, 2) Mercury | 7439-97-6 | 0.05-<0.6 | 0.025 | 0.1 Ceiling |
| (1) Antimony Trioxide | 1309-64-4 | 0-<0.1 | 0.5 | 0.5 |
| Boron Oxide | 1303-86-2 | 0-<0.4 | --- | 15 |
| Glass (Aluminosilicate) | 142844-00-6 | 0 - <25 | 1.0 fiber/cc | 1.0 fiber/cc |
| Quartz, Fused | 60676-86-0 | 85-95 | 0.1 Resp. Dust | 0.1 |
| Platinum | 7440-06-4 | <0.05 | 1 | --- |
| (1) These chemicals are subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. | | | | |
| (2) The mercury in this product is one of the substances known to the state of California to cause reproductive toxicity if ingested. [California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).] | | | | |

III. PHYSICAL PROPERTIES

Not Applicable to intact lamp.

IV. FIRE & EXPLOSION HAZARDS

Flammability: Non-combustible

Fire Extinguishing Materials: Use extinguishing agents suitable for surrounding fire.

Special Firefighting Procedure: Use a self-contained breathing apparatus to prevent inhalation of dust and/or fumes that may be generated from broken lamps during firefighting activities.

Unusual Fire and Explosion Hazards: When exposed to high temperature, toxic fumes may be released from broken lamps.

V. HEALTH HAZARDS

A. OPERATING LAMPS

Consult the OSRAM SYLVANIA Product Catalog or relevant technical data sheets for complete warnings, operating and installation guides for specific lamp types.

WARNING:

- **High intensity discharge (HID) arc-tubes operate at high pressure and high temperature and may unexpectedly rupture.**
- **Shortwave ultraviolet radiation which may cause skin and eye irritation with prolonged exposure is emitted during operation.**
- **These HID lamps must be operated only in suitably designed, enclosed fixtures.**

B. LAMP MATERIALS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. The major hazard from broken lamps is the possibility of sustaining glass cuts.

NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards and/or NIOSH Pocket Guide to Chemical Hazards lists the following effects of overexposure to the chemicals/materials tabulated below when they are inhaled, ingested, or contacted with skin or eye:

Mercury - Exposure to high concentrations of vapors for brief periods can cause acute symptoms such as pneumonitis, chest pains, shortness of breath, coughing, gingivitis, salivation and possibly stomatitis. May cause redness and irritation as a result of contact with skin and/or eyes.

Antimony - Exposure to antimony may cause electrocardiogram alterations, dermatitis, pneumoconiosis, and mucous membrane irritation.

Platinum - Exposure to complex platinum salts has been shown to cause symptoms of intoxication such as wheezing, coughing, running of the nose, tightness in the chest, shortness of breath and cyanosis, whereas exposure to dust of pure metallic platinum causes no intoxication.

Quartz, Fused - Fibrosis of the lungs causing shortness of breath and coughing has been associated with silica exposure.

EMERGENCY AND FIRST AID PROCEDURES:

Glass Cuts: Normal first aid procedures. Seek medical attention as required.

Inhalation: If discomfort, irritation or symptoms of pulmonary involvement develop, remove from exposure and seek medical attention.

Ingestion: Seek medical attention.

Contact, Skin: Thoroughly wash affected area with mild soap or detergent and water and prevent further contact. Seek medical attention if irritation occurs.

Contact, Eye: Wash eyes, including under eyelids, immediately with copious amounts of water for 15 minutes. Seek medical attention.

CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONOGRAPHS, OTHER): None

VI. REACTIVITY DATA

Stability: Stable

Conditions to avoid: None for intact lamps.

Incompatibility (materials to avoid): None for intact lamps.

Hazardous Decomposition Products (including combustion products): None for intact lamps.

Hazardous Polymerization Products: Will not occur.

VII. PROCEDURES FOR DISPOSAL OF LAMPS

OSRAM SYLVANIA recommends that all mercury-containing lamps be recycled. For a list of lamp recyclers and to obtain state regulatory disposal information, log onto www.lamprecycle.org.

If lamps are broken, ventilate area where breakage occurred. Clean-up with a special mercury vacuum cleaner (not a standard vacuum cleaner) or other suitable means that avoids dust and mercury vapor generation. Take usual precautions for collection of broken glass. Clean-up requires special care due to mercury droplet proliferation. Place materials in closed containers to avoid generating dust and mercury vapor. Some states have specific disposal requirements for lamps containing mercury.

It is the responsibility of the waste generator to ensure proper classification and disposal of waste products. To that end, TCLP tests should be conducted on all waste products, including this one, to determine the ultimate disposition in accordance with applicable federal, state and local regulations.

VIII. SPECIAL HANDLING INFORMATION - FOR BROKEN LAMPS

Ventilation: Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below.

Respiratory Protection: Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the pertinent PEL or TLV limits. All appropriate requirements set forth in 29 CFR 1910.134 should be met.

Eye Protection: OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken. To avoid exposure to ultraviolet radiation, use only in enclosed equipment designed for this lamp type.

Protective Clothing: OSHA specified cut and puncture-resistant gloves are recommended for dealing with broken lamps.

Hygienic Practices: After handling broken lamps, wash thoroughly before eating, smoking or handling tobacco products, applying cosmetics, or using toilet facilities.

IV. ENVIRONMENTAL

RoHS:

All SYLVANIA and OSRAM lamps listed above meet the EC directive Restriction of Hazardous Substances (RoHS II) Directive 2011/65/EU for mercury and lead.

REACH:

Safety Datasheets are required by article 33 of REACH (Registration, Evaluation, Authorization and Restriction of Chemicals). Safety Datasheets are similar to OSHA Material/Product Safety Data Sheets and are meant to instruct the end-user (customer) on safe handling of the product, if there are any SVHC's (Substances of Very High Concern). For lamps, if any SVHC exists, the amount will be small and encapsulated in the component. Exposure to the SVHC would require grinding the component up.

OSRAM SYLVANIA Inc. HID lamps listed above contain no SVHC as of 11/22/13. See <http://echa.europa.eu/web/guest/candidate-list-table>

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In case of questions please call:

OSRAM SYLVANIA Inc.
Product Safety Manager
(978) 750 2581

XIV. TRANSPORT INFORMATION

Domestic (Land, D.O.T.):

CLASS: Radioactive Material (7)*

PRODUCT LABEL: OSRAM/OSRAM SYLVANIA Metal Halide Lamp

UN NUMBER: 2911

PACKING GROUP: n/a

PROPER SHIPPING NAME: Radioactive material, excepted package - Articles

SUPPLEMENTAL HAZARD: NA

International (Water, IMO)

CLASS: Radioactive Material (7)*

PRODUCT LABEL: OSRAM/OSRAM SYLVANIA Metal Halide Lamp

UN NUMBER: 2911

PACKING GROUP: n/a

PROPER SHIPPING NAME: Radioactive material, excepted package - Articles.

International (Air, IATA & ICAO)

CLASS: Corrosive (8)**

PRODUCT LABEL: OSRAM/OSRAM SYLVANIA Metal Halide Lamp

UN NUMBER: 3506

PACKING GROUP: III

PROPER SHIPPING NAME: Mercury Contained in manufactured articles, radioactive material,
excepted package – Articles

* For consignments containing over 10,000 Bq

* * For Mercury over 1G per article or 30 G per package, and consignments containing over 10,000 Bq

Emergency Telephone number: INTERNATIONAL: + 49 1784337434 FROM USA: + 011 49
1784337434

CONSULTANK LUTZ HARDER GMBH/ Contract number OSRAM 002
