

PRODUCT SAFETY DATA SHEET
PSDS No. 1.3.2
HIGH PRESSURE SODIUM LAMPS
MERCURY FREE LUMALUX®/ECO®



Sylvania brand High Pressure Sodium Lamps, manufactured by OSRAM SYLVANIA Products 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 Mercury Free Lumalux®/ECO® Lamps
(High Pressure Sodium Lamps for General Lighting)

Manufacturer: OSRAM SYLVANIA Products Inc.
655 South Willow Street
Manchester, NH 03103-5705
(603) 669-5350

II. HAZARDOUS INGREDIENTS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT.

If a 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>
Barium Compounds (as Ba)	7440-39-3	0.02-<0.1	0.5	0.5
Sodium	7440-23-5	0.003-<0.01	---	---
Glass (Tungsten-Sealing Borosilicate)	---	50-75	10 (1)	15 (1)
Aluminum Oxide	1344-28-1	<15	10 (1)	15 (1)

(1) Limits as nuisance particulate.

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

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:**

Barium Compounds - Alkaline barium compounds, such as the hydroxide and carbonate, may cause local irritation to the eyes, nose, throat, and skin.

Sodium - Skin contact can cause thermal and/or alkali burns. Fumes from burning sodium are highly irritating to skin, eyes and mucous membranes.

Glass - Glass dust is considered to be physiologically inert and as such, has an OSHA exposure limit of 15 mg/cubic meter for total dust and 5 mg/cubic meter for respirable dust. The ACGIH TLVs for particulates not otherwise classified are 10 mg/cubic meter for total dust and 3 mg/cubic meter for respirable dust.

Aluminum Oxide (Alumina) - Alumina is a non-toxic material which is very low in free-silica content. Sharp-edged particles can irritate the eyes, perhaps the skin, and definitely the mucous membranes of the respiratory tract.

EMERGENCY AND FIRST AID PROCEDURES

Glass Cuts: Perform 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

If lamps are broken, ventilate area where breakage occurred. Clean-up with vacuum cleaner or other suitable means that avoids dust generation. Take usual precautions for collection of broken glass. Clean-up requires special care due to the fact that sodium reacts with the moisture on the skin and in the air. Materials from broken lamps should be treated as for spent lamps. To avoid the risk of sodium reaction when disposing of spent lamps, the following procedure should be followed:

- Before commencing, operator must be outfitted with appropriate OSHA approved face mask, gloves and apron.
- Place lamp(s) in a dry, high container and break lamp(s) into small pieces in a dry atmosphere and in a well ventilated area.
- From a safe distance, pour enough tap water into container to cover all materials.
- After a few minutes, the reaction of the sodium with the large quantity of water will produce a mild sodium hydroxide solution which may be disposed of in accordance with applicable federal, state and local regulations.

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.

Lamps which pass the EPA's TCLP test are considered non-hazardous waste in most states. Always review your local and state regulations which can vary. Based upon the NEMA* Standard LL 3 (*Procedures for High Intensity Discharge Lamp Sample Preparation and the TCLP*) testing protocol, these Mercury-Free LUMALUX/ECO lamps pass the TCLP test.

*NEMA (National Electrical Manufacturers Association) standard may be obtained from NEMA, 1300 North 17th Street, Suite 1847, Rosslyn, VA 22209.

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.

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.

Although OSRAM SYLVANIA Products Inc. attempts to provide current and accurate information herein, it makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage or injury of any kind which may result from, or arise out of, the use of/ or reliance on the information by any person.

Issue Date: June 8, 2005 rev B

Supersedes: July 11, 2001

In case of questions, please call:

OSRAM SYLVANIA Products Inc.
Environmental/Safety Engineer
(603) 669-5350
