

PRODUCT SAFETY DATA SHEET  
PSDS No. 1.6  
LOW PRESSURE SODIUM LAMPS



Sylvania brand Low Pressure Sodium Lamps 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 Low Pressure Sodium "SOX" Lamps

Imported by: 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 the lamp is broken, the following materials may be released:

Chemical Name	CAS Number	% by wt.	Exposure Limits in Air (mg/cubic m)	
			ACGIH (TLV)	OSHA (PEL)
Glass (Soda-Lime)	---	45 - 60	10 (3)	15 (3)
Glass (Alumino Borosilicate)	---	23 - 37	10 (3)	15 (3)
Sodium	7440-23-5	1 - 15	---	---
(1, 2) Lead Solder (as Pb)	7439-92-1	0.1 - 0.8	0.05	0.05
Barium Compounds (as Ba)	7440-39-3	0.01 - 0.1	0.5	0.5
(1) Nickel	7440-02-0	0.05 - 0.3	0.05	1.0

- (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 lead 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).]
- (3) Limits as nuisance particulate.

III. PHYSICAL PROPERTIES

Not applicable to intact lamp.

IV. FIRE & EXPLOSION HAZARDS

**Flammability:** Broken lamps: Combustion may occur from exposure of sodium to moisture. Intact lamps: Non-combustible.

**Fire Extinguishing Materials:** Broken lamps: **DO NOT USE WATER, CARBON DIOXIDE OR HALOGENATED HYDROCARBONS.**

Use dry graphite, dry soda ash, dry powdered sodium chloride or class "D" fire extinguisher.

Intact lamps: Use extinguishing agents suitable for surrounding fire.

**Special Firefighting Procedure:** Use NIOSH-approved, 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 lamps are broken, spontaneous combustion may occur from exposure of sodium to moisture. When exposed to high temperature, toxic fumes may be released from broken lamps.

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## V. HEALTH HAZARDS

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**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 hazards from broken lamps are the possibility of sustaining cuts from the glass and skin burns from coming in contact with the sodium.

*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:

Lead - Ingestion and inhalation of lead dust or fume must be avoided. Irritation of the eyes and respiratory tract may occur. Excessive lead absorption is toxic and may include symptoms such as anemia, weakness, abdominal pain, and kidney disease.

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.

Nickel - Skin contact may cause an allergic rash. Inhaled dust of nickel and its compounds have been reported to cause cancer of the lungs and sinuses. Nickel itself is not very toxic if swallowed, but its soluble salts are quite toxic and, if swallowed, may cause giddiness and nausea.

### 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):

Nickel has been identified as a known or suspected carcinogen by NTP and/or IARC.

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## VI. REACTIVITY DATA

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Stability: Stable

Conditions to avoid: Broken lamps: Exposure to (moist) air or water, heat. Intact lamps: None.

Incompatibility (materials to avoid): Broken lamps: Water, acids, halogenated hydrocarbons, halogens, oxidants, metal oxides, sulfur, carbon tetrachloride.  
Intact lamps: None.

Hazardous Decomposition Products (including combustion products): Broken lamps: Hydrogen, sodium hydroxide, heat.  
Intact lamps: None.

Hazardous Polymerization Products: Will not occur.

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**VII. PROCEDURES FOR DISPOSAL OF LAMPS**

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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. (Do not exceed the half way point of the container.)
- Break lamp(s) into small pieces in a dry atmosphere and in a well ventilated area.
- From a safe distance, carefully 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.

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**VIII. SPECIAL HANDLING INFORMATION - FOR BROKEN LAMPS**

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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.

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In case of questions, please call:

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