PRODUCT SAFETY DATA SHEET PSDS No. 1.1.7





Sylvania brand ICETRON[®] Lamps, manufactured by OSRAM SYLVANIA, 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 ICETRON® Fluorescent Lamps

Inductively Coupled Electrodeless System

Manufacturer: OSRAM SYLVANIA

100 Endicott Street Danvers, MA 01923 (978) 777-1900

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>	CAS Number	% by wt.	Exposure Limits in Air (mg/cubic m)	
			ACGIH (TLV)	OSHA (PEL)
Glass (Low-Expansion Borosilicate)		99	10.0 (2)	15.0 (2)
Mercury (1, 4)	7439-97-6	< 0.01	0.025	0.1 Ceiling
Fluorescent Phosphor may contain:		0.60-0.65	10.0 (2)	15.0 (2)
Aluminum (3) (as dust)	7429-90-5	< 0.4	10.0 (2)	15.0 (2)
Barium (3) (as dust)	7440-39-3	< 0.1	0.5	0.5
Cerium (3) (as dust)	7440-45-1	< 0.3	10.0 (2)	15.0 (2)
Europium (3) (as dust)	7440-53-1	< 0.6	10.0 (2)	15.0 (2)
Magnesium (3) (as dust)	7439-95-4	< 0.4	10.0 (2)	15.0 (2)
Terbium (3) (as dust)	7440-27-9	< 0.3	10.0 (2)	15.0 (2)
Yttrium (3) (as dust)	7440-65-5	< 0.5	1.0	1.0

- (1) This chemical is 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) Limits as nuisance particulate.
- (3) This element is contained in the material as part of its chemical structure; the material is not a mixture.
- (4) The mercury in this product is a substance 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.

Page 1 of 3 07092008

IV. FIRE & EXPLOSION HAZARDS

Flammability: Non-combustible.

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

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

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

V. HEALTH HAZARDS

A. OPERATING LAMP SYSTEMS

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

WARNING:

- THESE LAMPS GENERATE ELECTRIC AND MAGNETIC FIELDS DURING OPERATION.
- Special care should be taken by individuals using devices that are sensitive to electric and/or magnetic fields (e.g.: implanted cardiac pacemakers, computers, etc.)

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:

<u>Mercury</u> - 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.

<u>Glass</u> - 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.

<u>Phosphor</u> - Phosphor 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.

<u>Barium (soluble compounds)</u> - Contact, ingestion, or inhalation may cause one or more of the following symptoms: eye irritation, skin irritation, upper respiratory system irritation, skin burns, gastroenteritis, muscle spasm, slow pulse, extrasystole, and hypokalemia.

<u>Yttrium</u> - Contact, ingestion, or inhalation may cause one or more of the following symptoms: eye irritation, pulmonary irritation, and possible liver damage.

EMERGENCY AND FIRST AID PROCEDURES

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

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

<u>Ingestion:</u> In the unlikely event of ingestion of a large quantity of material, seek medical attention.

EMERGENCY AND FIRST AID PROCEDURES (Continued)

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

<u>Contact, Eye:</u> 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 avoid 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.

The constituents of the ferrite core windings that are an integral part of this product are: teflon-insulated copper wire wound over an iron oxide core doped with manganese oxide and zinc oxide, all encased in an aluminum cover with a stainless steel spring (to hold it closed).

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.

Some states have specific disposal requirements for lamps containing mercury.

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VIII. SPECIAL HANDLING INFORMATION - FOR BROKEN LAMPS

<u>Ventilation:</u> 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.

<u>Respiratory Protection:</u> 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.

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

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

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Issue Date: August 16, 2012 Rev D Supersedes: July 9, 2008, rev C

In case of questions, please call:

Product Safety Engineer OSRAM SYLVANIA (978) 777-1900