MATERIAL SAFETY DATA SHEET **LIGHT SOURCES, INC.**
FLUORESCENT - LAMPS

Fluorescent lamps manufactured by LIGHT SOURCES, 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 LIGHT SOURCES, INC. as a courtesy to its customers.

I. PRODUCT IDENTIFICATION

Product Name: LIGHT SOURCES - Fluorescent Lamps

Manufacturer: LIGHT SOURCES, INC.
37 Robinson Blvd.
Orange, CT 06477
(203)-799-7877

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 weight	Exposure Limits In Air (mg/cubic meter)	
			ACGIH (TLV)	OSHA (PEL)
Lead Glass	1317-36-8	75-90	10 ***	6.0 ***
Mercury *	7439-97-6	<0.1	0.025	0.1(ceiling)
Argon	7440-37-1	0-<1	**	none
Neon	7440-01-9	0-<1	**	none
Xenon	7440-63-3	0-<1	**	none
Phosphors				
Lanthanum Phosphate: Ce,Tb	95823-34-0	0-<1	Not established	none
Strontium Calcium Barium Chloro-Phosphate: Europium	109037-74-3	0-<1	0.5	none
Yttrium Oxide: Europium	68585-82-0	0-<1	1.0	none
Barium Magnesium Aluminate: Eu	102110-17-8	0-<1	2.0	none
Cerium Magnesium Aluminate: Ce	102110-19-0	0-<1	2.0	none
Barium Mesosilicate:Pb	12650-28-1	0-<1	0.15	0.05
Lanthanum Phosphate:Ce	95823-34-0	0-<1	Not established	none
Strontium Pyrophosphate: Eu	68784-61-2	0-<1	Not established	none

* 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.

** The TLV for a simple asphyxiant is a minimal atmospheric oxygen content of 18% by volume, at 1 atmospheric pressure.

*** See section VI. HEALTH HAZARDS under Lead and Amorphous Silica/Glass

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III. PHYSICAL PROPERTIES

Not applicable to intact lamp.

IV. FIRE AND EXPLOSION HAZARDS

Flammability: Non- combustible
Fire Extinguishing Materials: Use extinguishing media suitable for surrounding fire.
Special Firefighting Procedures: 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. REACTIVITY DATA

Stability: Stable
Conditions to avoid: None for intact lamps.
Incompatibility (materials to avoid): None for intact lamps.
Hazardous Decomposition Products: None for intact lamps
Hazardous Polymerization Products: Will not occur.

VI. HEALTH HAZARDS

THERE ARE NO KNOWN HEALTH HAZARDS FROM 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.

EFFECTS OF OVEREXPOSURE TO BROKEN LAMPS BY INHALATION, INGESTION, OR CONTACT 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. Chronic exposure may cause tremors and neuropsychiatric problems. May cause redness and irritation as a result of contact with skin and/or eyes.

Lead - Exposure to lead compounds is known to have adverse effects on a number of organ systems. The chief effects of lead poisoning in the industrial setting are anemia, nervous system effects(psychic and neurological disorders) and kidney injury. However, the chemical inertness and insolubility of this material is expected to reduce the potential for systemic lead toxicity.

Amorphous Silica/Glass -
Glass cuts are the primary potential hazard of this product. The process by which this product is manufactured changes the physical structure of the silica ingredient from a crystalline to an amorphous form. The dusts produced in cutting or grinding the glass when in excess of TLV's or PEL's, may result in respiratory irritation and possible lung disease (silicosis): symptoms include coughing, wheezing, and respiratory distress.

Phosphor - Inhalation - None expected. However as a matter of good practice, exposure to high concentrations of the dust should be avoided.
Ingestion - Unknown, but probably none for any kind of accidental ingention likely to occur in an industrial environment.
Skin or Eye Contact - None Expected

Inert gases - Inert gases such as Argon, Neon, and Xenon can cause asphyxia by displacing the ambient oxygen. Some symptoms of asphyxia are headache and dizziness.

VII. PROCEDURES FOR DISPOSAL OF LAMPS

If lamps are broken, ventilate area where breakage occured. Clean up with mercury 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.

It is the responsibility of the generator to ensure proper classification of waste products. To that end, TCLP tests should be conducted on all waste products to determine the ultimate disposition in accordance with all 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 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.

Hygienic Practices - After handling broken lamps, wash thoroughly before eating, smoking, or using toilet facilities.

ISSUED: 4/22/2003

FOR QUESTIONS CALL: LIGHT SOURCES, INC. (203)-799-7877
