

LINEAR FLUORESCENT T8 AND U-BEND

Material Safety Data Sheet (MSDS)

I. INFORMATION AND APPLICABILITY

The Material Safety Data Sheet (MSDS) Requirements of the Occupational Safety and Health Administration (OSHA) for chemicals are not applicable to manufactured articles such as Lamps. No material contained in a lamp is released during normal use and operation. The following information is provided as a courtesy to our customers. The following Lamp Material Information Sheet contains applicable Material Safety Data Sheet.

II. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME AND DESCRIPTION: P.Q.L., Inc., Fluorescent Lamps for General Lighting Application. Consists of lamp (ballast/adaptor as a unit) or lamp alone, (no ballast /adaptor).

MANUFACTURER: P.Q.L., Inc., 2285 Ward Avenue, Simi Valley, CA 93065

TEL: 800.323.8107

III. LAMP ASSEMBLY / COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	% by Wt.	Exposure Limits in Air (mg/M ³)	
			ACGIH (TLV)	OSHA (PEL)
Glass (soda-lime)	-----	75 - 95	10 ⁽²⁾	15 ⁽²⁾
Mercury ^(1,4)	7439-97-6	0.002 - 0.02	0.025	0.1 Ceiling
Lead Oxide(1,3,4)	1317-36-8	0.2 - 2.0	0.05	0.05
Aluminum Oxide	001-344-281	0 - 2.0	10 ⁽²⁾	15 ⁽²⁾
Fluorescent Phosphor and Cathodes may contain:				
• Fluoride (as F)	-----	0 - 0.1	2.5	2.5
• Manganese ⁽³⁾ (as dust)	7439-96-5	0 - 0.1	0.2	5.0 Ceiling
• Tin ⁽³⁾ (as dust)	7440-31-5	0 - 0.1	2.0	2.0
• Yttrium ⁽³⁾ (as dust)	7440-65-5	0 - 0.5	1.0	1.0
• Barium ⁽³⁾ (as dust)	7440-39-3	<0.1	0.5	0.5
• Tungsten ⁽³⁾ (as dust)	7440-33-7	<0.1	1	15 ⁽²⁾
• Strontium ⁽³⁾ (as dust)	7440-24-6	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Magnesium ⁽³⁾ (as dust)	7439-95-4	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Calcium ⁽³⁾ (as dust)	-----	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Antimony ⁽³⁾ (as dust)	7440-36-0	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Zinc ⁽³⁾ (as dust)	7440-66-6	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Cerium ⁽³⁾ (as dust)	7440-45-1	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Europium ⁽³⁾ (as dust)	7440-53-1	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Lanthanum ⁽³⁾ (as dust)	7439-91-0	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Terbium ⁽³⁾ (as dust)	7440-27-9	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
• Aluminum ⁽³⁾ (as dust)	7429-90-5	0 - 0.1	10 ⁽²⁾	15 ⁽²⁾
U-Bend Lamps contain a center support strap consisting of all, or a portion of the following:				
• Carbonic Acid, Polymer with 4,4'-(1-methylethylidene) bis (2,6-dibromophenol) and 4,4'-(1-methylethylidene) bis [phenol]	32844-27-2			
• Fiber Glass	1333-86-4			
• Titanium Dioxide	13463-677			
(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.		(3) These elements are contained in the material as part of its chemical structure; the material is not a mixture.		
(2) Limits as nuisance particulate.		(4) The mercury and lead in this product are substances known to the state of California to cause reproductive toxicity if ingested. [California Safe Drinking Water and Toxic Enforcement Act of 186 (Proposition 65).]		

IV. FIRE & EXPLOSIVE HAZARDS

FLAMMABILITY: Non-combustible.

FIRE EXTINGUISHING MATERIALS: Use extinguishing agents suitable for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When exposed to high temperature, toxic fumes may be released from broken lamps.

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.



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V. HEALTH CONCERNS

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.

AIRBORNE MERCURY EXPOSURE: The mercury in the air as a result of breaking one or a small number of fluorescent lamps should not result in significant exposures to an individual. However, when breaking a large number of lamps for disposal, appropriate industrial hygiene monitoring and controls should be implemented to minimize airborne levels or surface contamination. We recommend a well-ventilated area, and local exhaust ventilation or personal protective equipment.

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 ingested, inhaled, or contacted with skin or eye:

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. Perform normal first aid procedures. Seek medical attention as required.

PHOSPHOR: There have been no significant adverse effects on humans by ingestion, inhalation, skin contact or eye contact. Antimony, manganese, yttrium and tin compounds are characterized by OSHA as hazardous chemicals. However, due to their insolubility, relatively low toxicity and the small amounts present in the phosphor and lamp, these materials do not present a significant hazard in the event of lamp breakage.

TIN: Contact, ingestion or inhalation may cause one or more of the following symptoms: eye irritation, skin irritation and respiratory system irritation.

MANGANESE: Contact, ingestion or inhalation may cause one or more of the following symptoms: Parkinson's, asthenia, insomnia, mental confusion, metal fume fever, dry throat, cough, chest-tightness, dyspnea, rales, flu-like fever, low-back pain, vomiting, malaise fatigue and kidney damage.

YTTRIUM: Contact, ingestion or inhalation may cause one or more of the following symptoms: eye irritation, pulmonary irritation and possible liver damage.

ANTIMONY: Contact, ingestion or inhalation may cause one or more of the following symptoms: eye irritation, skin irritation, nose irritation, mouth irritation, throat irritation, cough dizziness, headache, nausea, vomiting, diarrhea, stomach cramps, insomnia, anorexia and unable to smell properly.

FLUORIDE: Dust containing Fluoride may cause irritation of the eyes and respiratory tract. Swallowing fluoride may cause a salty or soapy taste, vomiting, abdominal pain, diarrhea, shortness of breath, difficulty in speaking, thirst and weakness of the pulse.

MERCURY: Contact, inhalation, or ingestion may cause one or more of the following symptoms: skin irritation, eye irritation, cough, chest pain, dyspnea, bronchitis, pneumonitis, tremor, insomnia, indecision, irritability, fatigue, headache, weakness, stomatitis, salivation, GI tract disturbance, anorexia, weight loss and proteinuria.

LEAD: Contact, ingestion, or inhalation may cause one or more of the following symptoms: weakness, lassitude, insomnia, facial palor, pal eye, anorexia, weight loss, malnutrition, constipation, abdominal pain, colic, anemia, gingival lead lime, tremor, wrist paralysis, ankle paralysis, encephalopathy, kidney disease, eye irritation and hypotension.

ALUMINUM OXIDE: Alumina is a non-toxic material. Sharp-edged particles can irritate the eyes, skin and respiratory system.

BARIUM: (Soluble Compounds) 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 hypokalemis.

TUNGSTEN: Contact, ingestion, or inhalation may cause one or more of the following symptoms: eye irritation, respiratory system irritation, diffuse pulmonary fibrosis, loss of appetite, nausea, cough and blood changes.

VI. PROCEDURES FOR DISPOSAL OF LAMPS

Take usual precautions for collection of broken glass. Place materials in closed containers to avoid generating dust. A Toxicity Characteristic Leaching Procedure (TCLP) was conducted on these products showing a result of mercury content that is not considered hazardous waste. For field disposal the lead in the soldering is considered hazardous waste and must be disposed of by following applicable federal, state and local regulations.

Detailed instructions for broken lamp clean-up and disposal are available by visiting www.epa.gov.

VII. EMERGENCY & FIRST AID ACTIONS

GLASS CUTS: Perform normal first aid procedures. Seek medical attention as required.

INGESTION: In the unlikely event of ingestion of a large quantity of material, seek medical attention.

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

SKIN CONTACT: Thoroughly wash affected area with mild soap or detergent and water for 15 minutes and prevent further contact. Seek medical attention if irritation occurs.

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

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.

PROTECTIVE CLOTHING: OSHA specified cut and puncture resistant gloves are recommended for dealing with broken lamps.

EYE PROTECTION: OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken.

HYGIENIC PRACTICES: After handling broken lamps, wash hands and face thoroughly before eating, smoking or handling tobacco products, applying cosmetics or using toilet facilities.

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