

### Lamp Material Data Sheet (LMDS)

LMDS #: TL5-09100

### Product: Philips T5 Fluorescent Lamps – All Types

Date: 08/10/2009

All ALTO and non-ALTO, Standard, HE, HO, and Circular

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### Section 1. Manufacturer and Contact Information

**Philips Lighting Company** Division of Philips Electronics North America Corporation  
 200 Franklin Square Drive  
 P.O. Box 6800  
 Somerset, NJ 08875-6800

24 HR Emergency Phone Number: (800) 424-9300 CHEMTREC  
 Other Information Calls: (800) 555-0050 Philips Lighting Technical Information

### Section 2. Hazardous Ingredients/Identity Information

These lamps contain the following materials:

Material	(CAS #)	Exposure Limits		PERCENTAGE by weight
		OSHA PEL mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>	
Glass (sodalime 081)	-----	15	10	~93.0%
Phosphor Powder				
Nuisance dust		15	10	~2.5%
Yttrium Oxide: Europium	(68585-82-0)	1	1	~0.8%
Barium Carbonate	(0513-77-9)	0.5	0.5	~0.3%
Manganese Carbonate	(598-62-9)	5	5	~0.3%
Aluminum Oxide	(1344-28-1)	15	10	~0.3%
Cerium & Gadolinium Oxides				~0.2%
Terbium Oxide	(12036-41-8)			~0.2%
Magnesium Oxide	(1309-48-4)	15	10	~0.2%
Boric Oxide	(1303-86-2)	10	10	~0.2%
Barium	(7440-39-3)	0.5	0.5	~0.001-0.003%
Mercury	(7439-97-6)	0.1	0.025	~0.01%

Except for mercury, these materials are ceramic phosphors. The ceramics are Barium Aluminate, Yttrium Oxide, and a Cerium Terbium Borate mixture. The PELs and TLV are given where available for the base materials. There is no data for the ceramics as mixtures.

### Section 3. Physical Properties

Not applicable to an intact lamp. These items are light bulbs 5/8 inch in diameter and range from 6 to 58 inches in length.

### Section 4. Fire and Explosion Hazards

Not applicable to an intact lamp. If subjected to extreme heat, the glass, and plastic (if present), components of the lamp may crack or melt and the lamp may emit toxic fumes.

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## Section 5. Reactivity

Not applicable to an intact lamp.

## Section 6. Health Hazards

Not applicable to an intact lamp. Breakage of the lamp may result in some exposure to the phosphor powder and to elemental mercury. No adverse effects are expected from occasional exposure to broken lamps, but as a matter of good practice, prolonged exposure should be avoided through the use of adequate ventilation during the disposal of large quantities of lamps.

Emergency and First Aid Procedures: Apply normal first aid for glass cuts if such should occur through lamp breakage.

## Section 7. Lamp Disposal Procedures

Normal precautions should be taken for the collection of glass particles in the event a lamp is broken.

Waste Disposal Method: All fluorescent lamps contain some amount of mercury. When a fluorescent lamp is to be disposed, it is subject to the current EPA Toxicity Characteristic Leaching Procedure (TCLP) disposal criteria. This test is used to determine if an item can be managed as hazardous or non-hazardous waste.

Philips low-mercury ALTO fluorescent lamps are identifiable by their characteristic green end caps. Philips ALTO lamps are TCLP compliant and can be managed as non-hazardous waste. Philips will provide TCLP test data upon request.

Philips non-ALTO lamps (with silver end caps) are not TCLP compliant and should be managed as a hazardous waste under the EPA Universal Waste Rules for fluorescent lamps.

All disposal options should be evaluated with respect to federal, state, and local requirements. Before disposing of waste lamps, check with federal, state, and/or local officials for current guidelines and regulations. Philips encourages recycling of its products through qualified recycling facilities.

## Section 8. Control Measures

Respiratory Protection: None. NIOSH-approved respirator should be used if large quantities of lamps are being broken for disposal.

Ventilation: Avoid inhalation of any airborne dust. Provide local exhaust when disposing of large quantities of lamps.

Hand and Eye Protection: Appropriate hand and eye protection should be worn when disposing of lamps and/or handling broken glass.

## Section 9. Regulatory Information

As a product, these mercury-containing lamps, when shipped in the manufacturer's original packaging, are not regulated by air, truck, or ocean shipment. As a waste, these lamps may be regulated in various states and local communities. This safety data sheet does not constitute "knowledge of the waste" in certain jurisdictions.

This document supercedes previous documents: S06-99001 prepared 1998 and last revised 08/2002  
and: S06-99004 prepared 2003 and last revised 07/2004

Occupational Health and Safety Administration (OSHA) Material Safety Data Sheet (MSDS) requirements for materials are not applicable to manufactured articles in which individuals would not be subjected to materials contained in the article during its normally intended use. The information in this document is provided as a courtesy and is intended to provide relevant information in the event the articles it covers are encountered during unintended, or abnormal, circumstances.

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