



Philips Lighting Company

MATERIAL SAFETY DATA SHEET

**PRODUCT: CERAMALUX™ HPS with ALTO™ LAMP TECHNOLOGY
1000 WATT Including Non-Cycling**

SECTION 1: MANUFACTUERER

Manufacturer's Name and Address: Philips Lighting Company
A Division of Philips Electronics
North America Corporation
200 Franklin Square Drive
P.O. Box 6800
Somerset, NJ 08875

Emergency Telephone Number: (800) 424-9300 CHEMTREC
(732) 563-3197 Safety and Compliance

Other Information Calls: (607) 776-3311 Ext. 300

SECTION 2: HAZARDOUS INGREDIENTS

	OSHA PEL	ACGIH	PERCENTAGE
Barium (7440-39-3)	8-hr TWA 0.5 mg/m3	.5mg/m3	<400 ppm
Sodium (7440-23-5)	8-hr TWA 2.0 mg/m3	ceiling 2 mg/m3	<10 ppm
Silver (7440-22-4)	8-hr TWA 0.01 mg/m3	TWA 0.1 mg/m3	<30 ppm
Mercury (7439-97-6)	.1 mg/m3	.025 mg/m3	.01%
Copper (7440-50-8) dusts and mists	8-hr TWA 1 mg/m3	1 mg/m3	<2%
Inert ingredients (Glass, Sintered Aluminum Oxide, Brass)			

SECTION 3: PHYSICAL CHEMICAL CHARACTERISTICS

This item is a light bulb with a brass base and a refractory alumina inner arc tube.
Chemical/physical data as in a standard MSDS are not applicable



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SECTION 4: FIRE AND EXPLOSION DATA

Fire and explosion data not applicable to the intact lamp. There is very little sodium in this lamp. Exposing the broken inner arc tube to water will not produce a fire. Under extreme heat, outer glass envelope might melt or crack. The inner arc tube is composed of polycrystalline alumina and is a refractory material.

SECTION 5: REACTIVITY DATA

Stability: The lamp is stable

Incompatibility: Glass envelope will react with hydrofluoric acid. Sodium reacts with water, but in this case the amount of sodium is small enough that the reaction will not be vigorous.

SECTION 6: HEALTH EFFECTS

Not applicable to the intact lamp. The inner envelope is composed of polycrystalline alumina. Breakage of this envelope may result in some exposure to elemental sodium and mercury. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, breakage should be avoided. Prolonged or frequent exposure to broken envelopes should be avoided through the use of adequate ventilation during disposal of large quantities of lamps.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

Normal precautions should be taken for the collection of broken glass.

Waste Disposal Method: At the end of rated life, when this lamp is removed from service, it will be subjected to the current Toxic Characteristic Leaching Procedure (TCLP) prescribed by the Environmental Protection Agency. This test is used to determine whether an item is a hazardous waste or a non-hazardous waste under current E. P. A. definition. Philips Lighting will provide the test data on request. This result will allow the generator to evaluate all of the disposal options, which may be available in the particular state in which the generator's facility is located. The generator should check with federal, state and local officials for their guidance. In most states ALTO lamps are considered non-hazardous subtitle D waste. Philips encourages recycling of its products by qualified recyclers.

SECTION 8: CONTROL MEASURES

Respiratory Protection: Appropriate dust mask should be used if large quantities of lamps are being broken for disposal. **NOTE:** the Universal Waste Rule issued for mercury containing lamps issued July 6, 1999 by the E.P.A. specifically discusses the requirement for a permit if a generator desires to crush lamps on site. Check with your local officials.

Ventilation: Avoid inhalation of any airborne dust. Provide carbon filtration of local exhaust if it is permitted when disposing of large quantities of lamps.

Hand and Eye protection: Appropriate hand and eye protection should be worn when disposing of large quantities of lamps or handling broken lamps.

SECTION 9: REGULATORY INFORMATION

As a product these mercury containing lamps being shipped in the manufacturer's original packaging are not regulated by air, truck or ocean shipment. As a waste, spent ALTO lamps maybe regulated in various states and local communities. This material safety data sheet does not constitute "knowledge of the waste", in certain jurisdictions. TCLP data will be furnished upon request.



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Revised 11/06

PRODUCT: CERAMALUX™ with ALTO™ LAMP TECHNOLOGY
Including Non-Cycling lamp types
50W, 70W, 100W, 150W, 200 W, 250W and 400W

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SECTION 2: HAZARDOUS INGREDIENTS

	OSHA PEL	ACGIH	PERCENTAGE
Barium (7440-39-3)	8-hr TWA 0.5 mg/m ³	.5 mg/m ³	<400 ppm
Sodium (7440-23-5)	8-hr TWA 2.0 mg/m ³	ceiling 2 mg/m ³	<30 ppm
Silver (7440-22-4)	8-hr TWA .01 mg/m ³	TWA 0.1 mg/m ³	< 20 ppm
Mercury (7439-97-6)	.1 mg/m ³	.025 mg/m ³	.02%
Inert ingredient (Glass, Quartz, Brass)			> 99%

SECTION 3: PHYSICAL CHEMICAL CHARACTERISTICS

This item is a glass bulb with a brass base and a refractory alumina inner arc tube.
Chemical / physical data as in a standard MSDS are not applicable.



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SECTION 4: FIRE AND EXPLOSION DATA

Fire and explosion data not applicable to the intact lamp. There is so little sodium in this lamp that exposing the broken inner arc tube to water will not produce fire. Under extreme heat outer glass envelope might melt or crack. The inner arc tube is composed of polycrystalline alumina and is refractory material.

SECTION 5: REACTIVITY DATA

Stability: The lamp is stable

Incompatibility: Glass envelope will react with hydrofluoric acid, sodium reacts with water but in this case the amount of sodium is extremely small and reaction will not be vigorous.

SECTION 6: HEALTH EFFECTS

Not applicable in the intact lamp. The inner envelope is composed of polycrystalline alumina. Breakage of this envelope may result in some exposure to elemental sodium and mercury. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, breakage should be avoided. Prolonged or frequent exposure to broken envelopes should be avoided through use of adequate ventilation during disposal of large quantities of lamps.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

Normal precautions should be taken for the collection of broken glass.

Waste Disposal Method: At the end of rated life, when this lamp is removed from service, it will be subjected to the current Toxic Characteristic Leaching Procedure (TCLP) prescribed by the Environmental Protection Agency. This test is used to determine whether an item is a hazardous waste or a non-hazardous waste under current E. P. A. definition. Philips Lighting will provide the test protocol on request. This result will allow the end user to evaluate all of the disposal options, which may be available in the particular state in which the generator facility is located. Disposal of this lamp is currently regulated in California, Minnesota, Vermont, Connecticut, Maine (mid 2002), and the incinerator counties of Florida. The generator should check with local and state officials for their guidance. In most states ALTO lamps are considered non-hazardous subtitle D waste. Philips encourages recycling of its products by qualified recyclers.

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Including Non-Cycling lamp types
50W, 70W, 100W, 150W, 250W and 400W

SECTION 8: CONTROL MEASURES

Respiratory Protection: Appropriate dust mask 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 large quantities of lamps or broken lamps.

SECTION 9: REGULATORY INFORMATION

As a product these mercury containing lamps being shipped in the manufacturers original packaging are not regulated by air, truck or ocean shipment. As a waste, this spent ALTO lamp would be regulated in California, Minnesota, Connecticut, Vermont, Maine (will regulate disposal as of Mid 2002), and certain communities of Florida. Disposal of ALTO lamps as non-hazardous in Tennessee requires a permit. Households are exempt in most States except Minnesota and Vermont. This material safety data sheet does not constitute "knowledge of the waste", in certain jurisdictions. TCLP data will be furnished upon request.

Ceramalux High Pressure Sodium Lamps

Warnings, Cautions and Operating Instructions

WARNING: These lamps must be operated in fixtures designed for use with High Pressure Sodium lamps. The fixture wattage rating must match the wattage indicated on the outer glass bulb. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the glass is struck. Operating the lamp improperly may result in **PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

1. If the outer glass bulb is broken, shut off power immediately and remove the lamp after it has cooled.
2. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
 - A. Operate lamp only within specified limits of operation.
 - B. For total supply load refer to ballast manufacturers electrical data.
3. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
4. Replace the lamp if the outer glass bulb has been scratched, cracked or damaged in any way.
5. If a lamp bulb support is used, be sure to insulate the support electrically so as to avoid possible decomposition of the bulb glass.
6. Do not use this lamp in a fixture which redirects a substantial portion of the energy toward the arc tube and its immediate vicinity, as this may lead to very early lamp failure.
7. Take care in handling and disposing of lamps. If arc tube is broken, avoid skin contact with any of the contents or fragments.
8. The arc tube of this lamp contains sodium and mercury. Dispose of in accordance with federal, state and local requirements.