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## MATERIAL SAFETY DATA SHEET

**Product: High Pressure Sodium Lamps**

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### **SECTION 1: MANUFACTURER**

Manufacturer's Name and Address: Halco Lighting Technologies  
2940 Pacific Drive  
Norcross, GA 30071  
Telephone: 770-242-3609  
Fax: 770-242-3615

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### **SECTION 2: HAZARDOUS INGREDIENTS**

#### **Lamp Content**

High Pressure Sodium lamps consist of an inner, high purity alumina ceramic tube enclosed in an outer envelope of heat-resistant glass that contains a small quantity of lead. This lead does not affect TCLP testing results. The lamps are either clear or coated with a diffusing material, which is a specially prepared aluminum oxide.

The ceramic tube contains a very small amount of sodium/mercury amalgam, which increases with lamp wattage. The fill gas used in the ceramic tube is a high purity xenon gas, considered to be inert. The electrodes are composed of tungsten and are coated with an emitter paste of barium calcium tungstate. Neither of these materials presents a significant exposure risk due to their physical form and insolubility. The support structure of the lamp uses nickel-plated iron or stainless steel wires.

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### **SECTION 3: PHYSICAL CHEMICAL CHARACTERISTICS**

Not applicable. This item is a light bulb.

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### **SECTION 4: FIRE AND EXPLOSION DATA**

Fire and explosion data: Not applicable

Under extreme heat outer glass envelope might melt or crack. Inner arc tube is composed of polycrystalline alumina and is refractory material.

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**SECTION 5: REACTIVITY DATA**

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| Chemical Stability:                  | Lamp is stable                                   |
| Incompatibility to other substances: | Glass envelope will react with hydrofluoric acid |
| Hazardous Polymerization:            | Not applicable                                   |

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**SECTION 6: HEALTH HAZARD DATA**

Not applicable to 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 infrequent exposure to broken envelopes should be avoided through use of adequate ventilation during disposal of large quantities of lamps.

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**EMERGENCY FIRST AID:** NORMAL FIRST AID PROCEDURE FOR GLASS CUTS IF SUCH OCCUR THROUGH LAMP BREAKAGE.

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**SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE**

Normal precautions should be taken for 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 Characteristics Leaching Procedure (TCLP) prescribed by the Environmental Protection Agency (EPA). This test is used to determine whether an item is a hazardous waste or non-hazardous waste under current EPA definition. These lamps would fail the TCLP test and would be considered hazardous under the Universal Waste Rules. Generators should 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. Halco Lighting Technologies encourages recycling of its products by qualified recyclers.

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**SECTION 8: PROTECTIVE MEASURES**

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| Respiratory protection:  | NIOSH-approved respirator might be used if large volumes of lamps are being broken for disposal. |
| Ventilation:             | Avoid inhalation of any airborne dust.   |
| Hand and eye protection: | Appropriate hand and eye protection should be worn when handling broken glass.                   |

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**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, these spent fluorescent lamps would be regulated in various states and local communities. This material safety data sheet does not constitute "knowledge of the waste", in certain jurisdictions.