MATERIAL SAFETY DATA SHEET

PRODUCT: Hortilux Ultra Ace High Pressure Sodium Lamps designated as: NH150CE/EN; NH220CE/EN; NH360HTL/EN; NH940B/HTL/EN; NHT940B/HTL/EN

SECTION 1: MANUFACTURER

Manufacturer's Name and Address: Eye Lighting International of North America, Inc. 9150 Hendricks Road Mentor, Ohio 44060

24-Hour Emergency Telephone:

(440) 392-3612 Environmental, Health, and Safety

SECTION 2: HAZARDOUS INGREDIENTS

	AIRBORNE EXPOSURE LIMITS			
	OSHA PEL	ACGIH TLV	ACGIH STEL/	PERCENTAGE
	<u>(TWA)</u>	<u>(TWA)</u>	CEILING	
Sodium (7440-23-5)	2.0 mg/m ³ *		2.0mg/m ³	Less than 0.01%
Mercury (7439-97-6)			0.025 mg/m3	Less than 0.03%
Inert Ingredients (Glas	ss, alumina,metal)			

*The sodium will react with water in air to form sodium hydroxide. The exposure limits shown above are those for sodium hydroxide.

SECTION 3: PHYSICAL / CHEMICAL CHARACTERISTICS

This item is a high pressure sodium (HPS), high intensity discharge (HID) lamp; chemical characteristics are not applicable.

SECTION 4: FIRE AND EXPLOSION DATA

Fire and explosion charateristics are not applicable. Under extreme heat, outer glass envelope might melt or crack. Inner arc tube is composed of alumina which is a refractory material.

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SECTION 5: REACTIVITY DATA

Stability:Lamp is stable.Incompatibility:Glass envelope will react with hydrofluoric acid.Polymerization:Will not occur.

SECTION 6: HEALTH HAZARD DATA

Not applicable to intact lamp. The inner envelope (arc tube) is composed of polycrystalline alumina. Breakage of this envelope may result in some exposure to very small quantities of elemental sodium hydroxide, and mercury. No adverse effects are expected from occassional exposure to broken lamps or broken inner envelopes. However, 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, in which breaking of the lamps including the inner envelopes, occurs.

Emergency and First Aid Procedure:

Normal first aid procedures should be used for glass cuts occurring from lamp breakage.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

Normal precautions should be taken for collection of broken glass and/or alumina.

Waste Disposal Method:

The arc tube (inner envelope) of a high pressure sodium lamp contains somewhat less mercury than that of a mercury vapor lamp, together with a small quantity of sodium. While sodium can produce heat when placed in contact with water, the amount of sodium is so small that there is generally no hazard. Under the Toxicity Characteristic Leachate Procedure (TCLP) promulgated by the U.S. Environmental Protection Agency (USEPA), tests id used or spent lamps must be made prior to thir disposal, to determine if such lamps are hazardous waste. TCLP tests od used or spent fluorescent, incadescent, and HID lamps indicate that some types of these lamps must be classified as characteristic hazardous waste. Notably, the NH150CE/EN et.al. product line has undergone independent lab tests at EPA certified labs, and have been determined to meet EPA TCLP guidelines for non-hazardous waste, for mercury, lead, barium and cadmium. This should be used as a guide line only, when determining proper disposal of these lamps. Always consult with local authorities as to disposal requirements in your area. EYE Lighting International supports the proper use and disposal of all HID products, which may include recycling of used HID lamps. In any case, waste lamps should be disposed in accordance with applicable Federal, State, and Local requirements.

SECTION 9: CONTROL MEASURES

Eye Lighting International of North America, Inc. 9150 Hendricks Road, Mentor, Ohio 44060 Phone: (440) 350-7000 Fax: (440) 350-7001

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Respiratory Protection:

Appropriate dust mask should be used if large volumes of lamps are being broken for disposal.

Ventilation:

Avoid inhalation os any airborne dust. Provide local exhaust when breaking large quantities of lamps for disposal.

Hand and Eye Protection:

Appropriate hand and eye protection (e.g. gloves and safety glasses) should be worn when disposing of lamps or handling broken glass.