

Room Alert[®]

Mobile UV System Safety Data Sheet

1. Product And Company Identification

Product identifier:	Low Pressure High Output Amalgam UV Lamp
Product Application:	Germicidal Ultraviolet (GUV) Room UV Sterilizer Mobile UV System
Recommended restrictions:	None known
Company Information:	AVTECH Software, Inc. 16 Cutler Street, Warren RI 02885 USA

2. Composition / Information On Ingredients

Components/ Percent:	Indium / <0.1 Mercury / <0.1 Quartz (Fused Silica) / 90 Aluminium Oxide / 9 (approx) Tungsten Wire / 1 (approx)
Lamp Composition:	Lamp consisting of quartz glass containing mercury amalgamated with metal(s).

3. Handling And Storage

Precautions for handling:	Handle carefully to avoid breakage. Ensure adequate ventilation. Use good hygiene practices in handling this material.
Conditions for safe storage:	Keep out of reach of children. Keep in properly labelled containers.

4. Hazards Identification

Intact Lamps

Physical Hazards:	Not applicable to intact lamps.
Health Hazards:	Not applicable to intact lamps.
Environmental Hazards:	Not applicable to intact lamps.

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4. Hazards Identification (cont.)

Broken Lamps

Hazards:	Lamp breakage could result in exposure to mercury.
Route(s) of Entry:	Inhalation? Yes: Skin? Yes: Ingestion? Yes
Health Hazards:	Mercury-Acute: High concentration pneumonitis and chest pain.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA regulated? N/A
Signs of exposure:	Mercury - Shortness of breath, coughing
Medical Condition:	Respiratory problems

5. First Aid Measures

Intact Lamps

Route of Entry:

Inhalation: Not applicable.

Skin Contact: Not applicable.

Eye Contact: Not applicable.

Ingestion: Not applicable.

General Information: Burns can be caused by overexposure to energized lamp.

Ensure that medical personnel are aware of the material(s) involved.

If you feel unwell, seek medical advice.

Show this safety data sheet to the doctor in attendance.

Protect Eyes and Skin from UV rays during operation.

Keep out of reach of children.

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5. First Aid Measures (cont.)

Broken Lamps

Lamp breakage could result in exposure to Mercury. No adverse effects would be expected from occasional exposure to broken lamps.

Route of Entry:

Inhalation: Yes

Skin Contact: Yes

Eye Contact: Yes

Ingestion: Yes

Health Hazards: Mercury-Acute: High concentration pneumonitis and chest pain.

Carcinogenicity:

NTP?: No

IARC Monographs? No

OSHA Regulated? No

Signs of exposure: Mercury - Shortness of breath, coughing

Medical Conditions: Respiratory problems

First Aid Procedures: Mercury - Flush with water 15 minutes, wash with soap and water. Remove to fresh air and/or restore or support breathing.

6. Fire Fighting Measures

Fire Hazard: The lamp is not a fire hazard.

Flashpoint : N/A

Flammable Limits: N/A

LEL: N/A

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6. Fire Fighting Measures (cont.)

UEL:	N/A
Extinguishing Media:	Use extinguishing agents suitable for surrounding fire.
Special Fire Fighting Procedure:	Use a self-contained breathing apparatus to prevent inhalation of dust and or fumes that might be generated during fire fighting.
Unusual fire and explosion hazards:	When exposed to high temperature Mercury vaporizes to form toxic fumes.

7. Accidental Release Measures

Precautions, protective equipment & emergency procedures:	<p>Keep unnecessary personnel away.</p> <p>Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.</p>
Methods & materials for containment:	<p>In the event of a lamp breakage, appropriate action should be taken to contain the amalgam mercury (https://www.mass.gov/info-details/mercury-spill-clean-up-procedure)</p> <p>In a dry scenario where the lamp is not operating, solid amalgam mercury can be easily captured.</p> <p>With shatter-proof protection, a lamp breakage inside an intact sleeve can be easily captured.</p>
Methods for clean-up:	<p>If lamps are broken, ventilate the area where the breakage occurred.</p> <p>Take the usual precautions for collecting broken glass.</p> <p>Clean up with a mercury vacuum cleaner or with other suitable means that avoids dust and mercury vapor generation.</p> <p>Place collected materials in a closed container to avoid generating dust.</p>
Preventing bulb breakage:	<p>Store and transport unit with cover installed and secured to protect bulbs.</p> <p>If further protection is required, install shatterproof bulbs that are encased in plastic to prevent exposure in the event of an accidental bulb breakage.</p>

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8. Exposure Controls / Personal Protection

US.ACGIH Threshold Limit Values Components:		Type:		Value:
Indium		TWA		0.1 mg/m ³
Mercury		TWA		0.025 mg/m ³

US. OSHA Table Z-2 (29 CFR 1910.1000) Components		Type:		Value:
Indium		TWA		0.1 mg/m ³

Exposure Limits: Exposure to mercury is only possible due to lamp breakage, refer to Section 7.

Biological Limit Values: No biological exposure limits noted for the ingredient(s).

Individual Protection Measures: Avoid contact with eyes. Wear appropriate safety glasses with side shields (or goggles).

In operation, the UV lamps emit non-ionizing radiation in the 240 - 440nm wavelength region of the electromagnetic spectrum. The UV light intensity greatly exceeds levels found in nature.

Exposure can result in temporary or permanent eye injury, skin burns or other serious effects.

Individuals present where UV lamps are in operation are at risk for UV exposure if the appropriate shielding and Personal Protective Equipment (PPE) are not used. People, animals and living plants should not be present where UV lamps are in operation.

Refer to product manuals and product warning labels for safe operating procedures and Personal Protective Equipment.

Skin protection: Avoid contact with the skin. Wear impervious gloves. Confirm from a reputable supplier first. If glass is broken, use cut resistance gloves to prevent injury.

Other: Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the mercury liquid is possible.

Wash hands immediately if mercury leakage occurs.

Contaminated clothes must be changed immediately and discarded appropriately.

Respiratory Protection: Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

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8. Exposure Controls / Personal Protection (cont.)

Thermal Hazards: Not applicable

General safety and Hygiene: Ultraviolet radiation is emitted from the lamps. Use approved eye and skin protection to block UV radiation. Handle in accordance with good industrial hygiene and safety practice.

9. Emergency Overview - The Lamp

The lamp, which is made with quartz glass, is not dangerous under regular conditions. This item is a manufactured article. The mercury within the lamp is only available if the lamp is broken. Please follow standard health and safety guidelines for the use of this product.

The following statements are applicable only in case of accidental breakage of the lamp:

Routes of Exposure: Eye, Skin contact, Skin absorption, Inhalation, Ingestion.

Information on Exposure: Eyes - May cause irritation.

Skin - May cause irritation.

US ACGIH Threshold Limit Values: Skin designation

Mercury / Hg Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards: Mercury/ VAP Hg Can be absorbed through the skin.

Inhalation: May cause respiratory tract irritation.

Ingestion: May cause stomach distress, nausea or vomiting.

Dermal: May cause irritation.

Chronic Effects: Long-term occupational exposure to moderate to high levels of mercury (0.035 to 0.1mg/m³) has resulted in both nervous system and kidney effects. Significant toxicity has been observed in animals exposed to low concentrations.

Signs and symptoms: Some symptoms of over-exposure may be headache, dizziness, tiredness, nausea and vomiting.

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10. Physical & Chemical Products

Color:	Colorless
Form:	Quartz tube containing amalgam mercury and other metals.
Odor:	Odorless
Physical State:	Solid
Vapor Pressure:	In case of breakage, mercury vapor pressure: <0.01 mm Hg at room temperature.

11. Stability & Reactivity

Reactivity:	Amalgam mercury is contained in a glass tube and therefore is not able to react with chemicals within the surrounding environment.
Chemical Stability:	Stable under recommended storage conditions.
Hazardous Decomposition:	None identified for intact lamps. In case of breakage: May include and are not limited to: Mercury, metallic oxides.
Conditions to Avoid:	Elevated temperature / Open flame

12. Toxicological Information

N/A

13. Ecological Information

See: <https://www.lamprecycle.org/broken-bulbs/> Dispose of as Hazardous Waste.

14. Transport Information

N/A

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15. Regulatory Information

Not Regulated.

NFPA Code: Health: 1
 Fire: 0
 Instability: 0
 Specific Hazard: None

LEGEND:



16. Other Information

Disclaimer: The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the test.

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