

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/ UNDERTAKING

**1.1 Product name:** LIGHTTECH SPECIALITY SOFT GLASS GERMICIDAL/UV LAMPS

**1.2 Manufacturer's name:** LIGHTTECH Ltd.  
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**1.3 Emergency information:** Egészségügyi Toxikológiai Tájékoztató Szolgálat (ETTSZ)  
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### 2. HAZARDS IDENTIFICATION

*Not required*

**Explication of special hazards for human health and environment:** See section 9., 11. and 12.

### 3. COMPOSITION/INFORMATION OF INGREDIENTS

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSURE TO LAMPS THAT ARE INTACT AND NOT OPERATED. If the lamp is broken the following materials may be released:

Ingredients	CAS-number	EU-number	REACH-number	Quantity (%)	Hazard symbol	R - phrase
Glass (inert)	N/A	N/A	N/A	75-90	N/A	N/A
Mercury	7439-97-6	231-106-7	-	<0.1	Repr. Cat. 2 T+ T N	R61 R26 R48/23 R50/53
Lead Oxide	1317-36-8	215-267-0	-	0-<1	-	-
Argon	7440-37-1	231-147-0	-	0-<1	-	-

### 4. FIRST AID MEASURES

Not applicable to intact lamp.

### 5. FIRE FIGHTING MEASURES

**Non combustible**

**5.1 Suitable extinguishing agents:** Use extinguishing media suitable for surrounding fire: CO<sub>2</sub>, extinguishing powder, foam or water spray.

**5.2 For safety reasons unsuitable extinguishing agents:** None known.

- 5.3 **Protective equipment for fire-fighting:** Firefighters should be equipped with self-contained breathing apparatus and turn-out gear to prevent inhalation of dust and/or fumes that may be generated from broken lamps during firefighting activities.
- 5.4 **Hazards during fire-fighting:** When exposed to high temperature toxic fumes may be released from broken lamps.
- 5.5 **Further information:** Contaminated extinguishing water must be disposed of in accordance with official regulations.

## 6. ACCIDENTAL RELEASE MEASURES

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.

### 6.1 Personal precautions:

Keep unnecessary and unprotected personnel from handling the broken lamps. Use personal protective clothing. Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below. After handling broken lamps, wash thoroughly before eating, smoking, or using toilet facilities. Normal precautions should be taken for the collection of glass particles in the event a lamp is broken.

### 6.2 Environmental precautions:

Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

### 6.3 Methods for cleaning up/taking up:

If lamps are broken, ventilate area where breakage occurred. Clean up with mercury vacuum cleaner or other suitable means that avoid dust and mercury vapor generation. Take usual precautions for collection of broken glass. Clean up requires special care due to mercury droplet proliferation. Place materials in closed containers to avoid generating dust. The product and the packaging should be treated as dangerous waste.

## 7. HANDLING AND STORAGE

### 7.1 Handling:

**Information for safe handling:** Do not breathe gas/fumes/ vapor/spray of broken lamps. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. Wash soiled clothing immediately. Keep away from food, drink and animal feedingstuffs. When using do not eat or drink. Wash hands before breaks and at the end of workday.

### 7.2 Storage:

**Requirements for storage rooms and vessels:** Keep container tightly closed and labelled. Keep container in a cool, well-ventilated area. Keep away from direct sunlight and heat, sources of ignition, open flame.

**Incompatibility (materials to avoid):** None for intact lamps.

**Advice on storage compatibility:** No special restrictions on storage with other products.  
None for intact lamps.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Exposure limit values:

Based on Annex of 2000/39/EC :

**Mercury and inorganic components** (CAS number: 7439-97-6): Limit values: Eight hours: 0,08 mg/m<sup>3</sup>; Short term: 0,32 mg/m<sup>3</sup>.

**Lead and inorganic components** (CAS number: 7439-92-1): Limit values: Eight hours: 0,15\*\* mg/m<sup>3</sup>, 0,05 resp; Short term: 0,6 mg/m<sup>3</sup>, 0,2 resp.

### 8.2 Occupational exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

### 8.3 Engineering measures:

Use adequate general and local exhaust ventilation to maintain exposure levels below the PEL or TLV limits. If such ventilation is unavailable, use respirators as specified below. After handling broken lamps, wash thoroughly before eating, smoking, or using toilet facilities.

**8.4 Personal protective equipment:**

1. *Respiratory protection:* in case of normal use, not necessary. Use appropriate NIOSH approved respirator if airborne dust concentrations exceed the PEL or TLV limits.
2. *Skin protection:* wear appropriate antistatic protective clothes.
3. *Hand protection:* wear appropriate protective gloves.
4. *Eye protection:* OSHA specified safety glasses, goggles or face shield are recommended if lamps are being broken.

**8.5 Occupational exposure controls:**

No specific prescriptions.

**The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.**

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Not applicable to intact lamp.

**10. STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable under normal conditions.
<b>Materials to avoid:</b>	None for intact lamps.
<b>Hazardous decomposition products:</b>	None for intact lamps
<b>Hazardous Polymerization Products:</b>	Will not occur.

**11. TOXICOLOGICAL INFORMATION**

THERE ARE NO KNOWN HEALTH HAZARDS FROM LAMPS THAT ARE INTACT AND NOT OPERATED. No adverse effects are expected from occasional exposure to broken lamps. As a matter of good practice, avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation. The major hazard from broken lamps is the possibility of sustaining glass cuts.

**EFFECTS OF OVEREXPOSURE TO BROKEN LAMPS BY INHALATION, INGESTION, OR CONTACT WITH SKIN OR EYE.**

Mercury - Exposure to high concentrations of vapors for brief periods can cause acute symptoms such as pneumonitis, chest pains, shortness of breath, coughing, gingivitis, salivation, and possibly stomatitis. Chronic exposure may cause tremors and neuropsychiatric problems. May cause redness and irritation as a result of contact with skin and/or eyes.

Inert gases - Inert gases such as Argon, Neon, and Xenon can cause asphyxia by displacing the ambient oxygen. Some symptoms of asphyxia are headache and dizziness.

Lead - Ingestion or inhalation of dust or fumes must be avoided. Lead is toxic and cumulative, affecting the kidneys, reproductive system, and nervous system. Symptoms of chronic overexposure include anemia, insomnia, weakness, irritability, constipation and stomach pains. Tin is not regarded as toxic but excessive exposure can cause fever, nausea, stomach cramps or diarrhea.

**12. ECOLOGICAL INFORMATION**

Do not release to sewer, surface water or ground water.

<b>Ecotoxicity:</b>	no data available
<b>Mobility:</b>	no data available
<b>Persistence and biodegradation:</b>	no data available
<b>Other adverse effects:</b>	no data available

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**13. DISPOSAL CONSIDERATIONS**

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.

**Waste disposal of substance:** Must be dumped or incinerated in accordance with local regulations. Do not release to sewer, surface water or ground water. Provide adequate ventilation. The product and the packaging

- should be treated as dangerous waste. For more details please contact to manufacturer company.
- Waste disposal number of used products:** It is the responsibility of the generator to ensure proper classification of waste products. To that end, tests should be conducted on all waste products to determine the ultimate disposition in accordance with all applicable federal, state, and local regulations. 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.
- Contaminated disposal:** Empty containers should be taken for local recycling, recovery or waste disposal.

#### 14. TRANSPORT 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.

- 14.1 Land transport:**
1. ADR/RID class: -
  2. UN number: -
  3. Labelling: -
  4. Classification code: -
- 14.2 Sea transport:**
1. ADR/RID class: -
  2. UN number: -
  3. Labelling: -
  4. Marine pollutant: -
- 14.3 Air transport:**
1. ICAO/IATA class: -
  2. UN number: -
  3. Labelling: -

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#### 15. REGULATORY INFORMATION

**15.1 Labelling:** None required.

**15.2 Authorisations and/or restrictions on use:** -

**15.3 EU regulations:**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 29 May 2007 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending

The RoHS regulation (Directive 2002/95/EC)

Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC Commission Directive 2001/58/EC of 27 July 2001 amending for the second time Directive 91/155/EEC defining and laying down the detailed arrangements for the system of specific information relating to dangerous preparations in implementation of Article 14 of European Parliament and Council Directive 1999/45/EC and relating to dangerous substances in implementation of Article 27 of Council Directive 67/548/EEC (safety data sheets)

Commission Directive 2004/73/EC of 29 April 2004 adapting to technical progress for the twenty-ninth time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances Commission Directive 2001/60/EC of 7 August 2001 adapting to technical progress Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

#### 16. OTHER INFORMATION

Relevant R-Phrases (number and full text) of Section 2 and 3:

**R 26** - Very toxic by inhalation.

**R 48/23** - Toxic: danger of serious damage to health by prolonged exposure through inhalation.

**R 50/53** - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R 61** - May cause harm to the unborn child.

This safety data sheet had been prepared on the basis of information provided by the manufacturer.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Since the conditions of the handling, the storage and the disposal of this product are beyond the control of the manufacturer, the distributor or the preparer of this SDS, no warranty, expressed or implied, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. No responsibility is assumed regarding the accuracy, completeness or suitability of all or any of the information contained herein or the results to be obtained from the use thereof at the time of use. In no way shall the manufacturer, the distributor or the preparer of the be liable for any claims, losses or damages of third parties, personal injury, property damage, lost profits or any special, direct, indirect, incidental, consequential or exemplary damages resulting from the use of or reliance upon such information. Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.