

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking**

**1.1 Product Identifier:**

**Trade name: Low Pressure Mercury Vapour Lamps**

**Product name/Description/Range:**

A-3450-UVL Sievers Replacement UV lamp - Model 400ES, 420 & 2244OL  
 A-3550-UVL Sievers Replacement UV Lamp - Model 500 & Checkpoint  
 A-2100-UVL Sievers Replacement UV Lamp - Model 900  
 A-2101-UVL Sievers Replacement UV Lamp - Model 800  
 A-4090-UVL Anatel Replacement UV Lamp - A643a  
 A-4790-UVL Anatel Replacement UV Lamp - PAT700  
 A-4895-UVL Anatel Replacement UV Lamp – Anatel A-1000  
 A-4995-UVL Anatel Replacement UV Lamp - Anatel A-1000 (with heating board)

**Synonyms:** Ultraviolet Lamp; UV Lamp

**1.2 Relevant identified uses of the substance or mixture and uses advised against:**

**Product category:** PC21 Laboratory chemicals

**Application of the substance / the mixture:** Laboratory chemicals

**1.3 Details of the supplier of the safety data sheet:**

**Manufacturer / Importer / Supplier:**

Altus Science Limited  
 Park House  
 Manor Park Avenue  
 Manor Park  
 Runcorn, Cheshire, WA7 1TL  
 United Kingdom  
 Telephone: +44 (0) 1928 238 000  
 Email address: info@altusscience.com

**Further information obtainable from:** Product safety department.

**1.4 Emergency telephone number:**

Tel. +44(0) 1928 238 000 This telephone number can be reached during office hours.

**SECTION 2: Hazards Identification**

**2.1 Classification of the substance or mixture:**

**Classification according to Regulation (EC) No 1272/2008:**

The substance is not classified according to the CLP regulation.

**2.2 Label elements:**

**Labelling according to Regulation (EC) No 1272/2008:** Void

**Hazard pictograms:** Void

**Signal word:** Void

**Hazard statements:** Void

**Additional information:** These materials become hazardous only in the event of a broken lamp.

**2.3 Other hazards:**

**Results of PBT and vPvB assessment:**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**SECTION 3: Composition/Information on Ingredients**

**3.2 Chemical characterisation: Mixtures:**

**Description:** Low Pressure Mercury Vapour Lamp

Components:		
CAS: 60676-86-0 EINECS: 262-373-8	Silica, fused	<80%
CAS: 7439-97-6 EINECS: 231-106-7 Index number: 080-001-00-0	Mercury ☠ Acute Tox. 2, H330; ☠ Repr. 1B, H360D; STOT RE 1, H372; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	>0.05%

**Additional information:** For the wording of the listed hazard phrases See section 16.

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 1)

**SECTION 4: First Aid Measures**

**4.1 Description of first aid measures:**

**General information:**

Make aware – No known health hazards from exposure to lamp materials that are intact.

Glass Cuts: Perform normal First Aid procedures. Seek medical attention as required

In the event of a broken lamp – follow these measures.

**After inhalation:**

of Mercury: If discomfort, irritation or symptoms of pulmonary involvement develop, remove from exposure, give oxygen if difficulty breathing and seek medical attention.

of Quartz: If inhaled, remove from exposure to fresh air. Seek medical attention if respiratory irritation occurs.

**After skin contact:**

to UV: Perform First Aid Procedures for skin burn places.

to Mercury: Remove contaminated clothing and thoroughly wash affected area with mild soap and prevent further contact. Seek medical attention.

to Quartz: Wash with soap and water

**After eye contact:**

to UV: Apply cool pack over closed eye. Seek medical attention if required.

To Quartz or Mercury:

Rinse opened eye for several minutes under running water.

If symptoms persist, consult Doctor.

**After ingestion:**

Of Mercury:

Do not induce vomiting.

Seek immediate medical advice.

of Quartz: No adverse effects anticipated since material is insoluble and non-toxic. No emergency care required

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute symptoms and effects only occur if lamp breaks and prolonged contact occurs-

Inhalation: Inhalation of a high concentration of mercury vapour can cause almost immediate Dyspnea, cough, fever, nausea and vomiting, diarrhoea, Stomatitis, salivation and metallic taste. Symptoms may resolve or progress to Necrotizing Bronchiolitis, Pneumonitis, Pulmonary Oedema, and Pneumothorax

Ingestion: When ingested, necrosis begins immediately in the mouth, throat, oesophagus, and stomach.

Violent pain, profuse vomiting and severe purging may occur. Patient may die within minutes from fluid/electrolyte losses and peripheral vascular collapse.

Skin: May cause redness and irritation, Substance may be absorbed through skin, causing Anuria.

Eye: Contact may cause irritation. Solutions are corrosive and may cause corneal injury or burns.

**4.3 Indication of any immediate medical attention and special treatment needed:** Seek medical attention.

**SECTION 5: Firefighting Measures**

**5.1 Extinguishing media:**

**Suitable extinguishing agents:**

All extinguishing media are possible.

Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture:**

Formation of toxic gases is possible during heating or in case of fire.

**5.3 Advice for firefighters:**

**Protective equipment:** Wear self-contained respiratory protective device.

**Additional information:** Cool endangered tanks with water spray.

**SECTION 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**

For non-emergency personnel: Ventilate area well where breakage has occurred, clean up requires special care due to mercury droplet proliferation. Do not touch spilled material. Isolate hazardous area and do not allow access to unnecessary personnel.

For emergency responders: Use personal protection recommended in Section 8 of the MSDS

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Ventilate area where breakage has occurred.

(Contd. on page 3)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 2)

Sweep up broken glass, place in proper container and dispose of in accordance with applicable regulations.  
For small spills, take up with sand or other absorbent material in the workplace and place into containers for later disposal following applicable regulations. If possible clean up with mercury suction pump or other suitable means to avoid dust and mercury vapour generation.

**6.4 Reference to other sections:**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and Storage**

**7.1 Precautions for safe handling:** No special measures required.

**Information about fire and explosion protection:** No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store in closed unbreakable containers, in a cool, dry, well ventilated area away from sources of heat. Protect containers from physical damage.

**Storage:**

**Requirements to be met by storerooms and tanks:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

**7.3 Specific end use(s):** For professional and industrial users only

**7.4 Further information:**

Mercury evaporates very slowly. Spilled mercury forms many tiny globules which evaporate fast and can develop a significant concentration of vapours in an unventilated area. Heated mercury evolves high levels of toxic vapours. Provide periodic medical exams for those regularly exposed to mercury.

**SECTION 8: Exposure Controls/Personal Protection**

**Additional information about design of technical facilities:** No further data; see section 7.

**8.1 Control parameters:**

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Personnel protective clothing and gloves should be worn to protect skin from broken lamps.

**Respiratory protection:** Not required for intact lamp. If lamp is broken, wear self-contained breathing apparatus

**Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**Material of gloves:** Not applicable.

**Penetration time of glove material:** Not applicable.

**Eye protection:**

Safety glasses are recommended for UV protection when lamp is lit. This is also recommended for handling broken lamps.

**Body protection:** Protective work clothing

**Limitation and supervision of exposure into the environment:** Prevent spills from reaching surface waters or soil.

**SECTION 9: Physical and Chemical Properties**

**9.1 Information on basic physical and chemical properties:**

**General Information:**

**Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	Not determined.

(Contd. on page 4)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 3)

<b>Odour:</b>	Odourless.
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	-38.87 °C (Mercury)
<b>Boiling point/Boiling range:</b>	356.9 °C (Mercury)
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
<b>Self-igniting:</b>	Product is not self-igniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure at 20 °C:</b>	0.0024 hPa
<b>Density:</b>	Not determined.
<b>Relative density at 25 °C:</b>	2.6 g/ml (Quartz)
<b>Vapour density at 20 °C:</b>	7 g/cm <sup>3</sup> (Mercury)
<b>Evaporation rate at 20 °C:</b>	1.8 µm (Mercury)
<b>Solubility in / Miscibility with:</b>	
<b>Water:</b>	Insoluble.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Oxidizing properties:</b>	Does not contain oxidizing properties.
<b>9.2 Other information:</b>	No further relevant information available.

**SECTION 10: Stability and Reactivity**

**10.1 Reactivity:** No further relevant information available.

**10.2 Chemical stability:**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions:** No dangerous reactions known.

**10.4 Conditions to avoid:** To avoid thermal decomposition do not overheat.

**10.5 Incompatible materials:**

Quartz: Hydrofluoric acid

Mercury: Violent reaction: acetylenic compounds, ammonia, boron, diiodophosphide, ethylene oxidants (bromine, peroxyformic acid, chlorine dioxide, nitric acid, tetracarbonylnickel, nitromethane, silver perchlorate).

**10.6 Hazardous decomposition products:**

Toxic mercury vapours and mercury oxides

No dangerous decomposition products known.

**SECTION 11: Toxicological Information**

**11.1 Information on toxicological effects:**

**Acute toxicity:** Based on available data, the classification criteria are not met.

(Contd. on page 5)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 4)

<b>LD/LC50 values relevant for classification:</b>		
<b>7439-97-6 Mercury</b>		
Inhalative	LC50/4 h	0.5 mg/l (ATE)

**Primary irritant effect:**

**Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation:** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitization:** Based on available data, the classification criteria are not met.

**CMR effects (carcinogenic, mutagenic and reprotoxic):**

**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

**Carcinogenicity:** Based on available data, the classification criteria are not met.

**Reprotoxicity:** Mercury: Presumed human reproductive toxicant

**STOT-single exposure:** Based on available data, the classification criteria are not met.

**STOT-repeated exposure:** Based on available data, the classification criteria are not met.

**Aspiration hazard:** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological Information**

**12.1 Toxicity:**

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** No further relevant information available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**12.4 Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**12.5 Results of PBT and vPvB assessment:**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects:** No further relevant information available.

**SECTION 13: Disposal Considerations**

**13.1 Waste treatment methods:**

**Recommendation:** Disposal must be made in accordance with Hazardous waste regulations.

**European waste catalogue:**

19 12 Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) Not otherwise specified

19 12 11 Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances

15 01 02

15 Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified

15 01 Packaging (including separately collected municipal packaging waste)

15 01 02 Plastic packaging

**Contaminated packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport Information**

<b>14.1 UN-Number:</b> ADR,RID,ADN, IMDG, IATA	Void
<b>14.2 UN proper shipping name:</b> ADR,RID,ADN, IMDG, IATA	Void

(Contd. on page 6)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 5)

<b>14.3 Transport hazard class(es):</b>	
<b>ADR,RID,ADN, IMDG, IATA</b>	
<b>Class:</b>	Void
<b>14.4 Packing group:</b>	
<b>ADR,RID,ADN, IMDG, IATA</b>	Void
<b>14.5 Environmental hazards:</b>	
<b>Marine pollutant:</b>	No
<b>14.6 Special precautions for user:</b>	Not applicable.
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b>	Not applicable.
<b>UN "Model Regulation":</b>	Void

**SECTION 15: Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**Directive 2012/18/EU:**

**Named dangerous substances - ANNEX I:** None of the ingredients is listed.

**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 18a, 30

**National regulations:** Not applicable

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other Information**

**Relevant phrases:**

H330 Fatal if inhaled.

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Training hints:** Provide training on safe handling considering the type of application and exposure scenarios.

**Department issuing SDS:** Environment protection department.

**Abbreviations and acronyms:**

ADN: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation intérieure (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (Division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

EC50: Effective Concentration, 50 percent

IOELVS: Indicative Occupational Exposure Limit Values

mPa.s: milliPascal per second

Acute Tox. 2: Acute toxicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**References:**

This information is based on the current available data (suppliers of raw materials, chemistry maps, Annex VI)

See also the internet site: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

(Contd. on page 7)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 5

Revision: 03.09.2020

**Trade name: Low Pressure Mercury Vapour Lamps**

(Contd. of page 6)

**Revisions were made in sections marked with \*.****Disclaimer:**

The information believed to be accurate within this document and is intended only as a guide to the appropriate precautionary handling of this substance by a properly trained person using this product. The information relates only to the specific material designated and does not relate to its use in combination with other materials. The user is responsible for determining whether Altus Science products are fit for a particular purpose and suitable to the users method of use or application.

Updated versions will be made available when significant information becomes available. The user shall ensure that they work with the most up to date revision.

GB