

## Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**UV-lamps with mercury-rate over 1 g Hg**

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture:

UV-lamps

#### 1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

uv-technik meyer GmbH

Glauburgstraße 34

63683 Ortenberg (Bleichenbach)

Germany

E-mail: axel.steuernagel@uv-technik.com

E-mail (competent person): axel.steuernagel@uv-technik.com

#### 1.4. Emergency telephone number

Axel Steuernagel, +49 (0) 6041 - 96 28 12 (Only available during office hours.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (inhalative) ( <i>Acute Tox. 2</i> )	H330: Fatal if inhaled.	
Reproductive toxicity ( <i>Repr. 1B</i> )	H360: May damage fertility or the unborn child.	
STOT-repeated exposure ( <i>STOT RE 1</i> )	H372: Causes damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment ( <i>Aquatic Acute 1</i> )	H400: Very toxic to aquatic life.	

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



**GHS06**

Skull and crossbones



**GHS08**

Health hazard



**GHS09**

Environment

Signal word: Danger

hazard statements for health hazards	
H330	Fatal if inhaled.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
hazard statements for environmental hazards	
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Supplemental Hazard information (EU): -

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**Precautionary statements**

P102	Keep out of reach of children.
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**Precautionary statements Prevention**

P201	Obtain special instructions before use.
P273	Avoid release to the environment.

**Precautionary statements Response**

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P309 + P310	IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

**Precautionary statements Disposal**

P501	Dispose of contents/container to according to official regulations of waste disposal.
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**2.3. Other hazards**

**Adverse human health effects and symptoms:**

Exposure to high concentrations of vapours 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.

**SECTION 3: Composition / information on ingredients**

**3.1. Substances**


**Description:**

content of Hg per lamp:> 1 g

**Additional information:**

200,59 g/mol

**Hazardous ingredients / Hazardous impurities / Stabilisers:**

Product identifiers	Substance name Classification according to 67/548/EEC Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concentration
CAS No.: 7439-97-6 EC No.: 231-106-7	<b>mercury</b> Repr. 1B, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1  <b>Danger</b> H330-H360D-H372-H410 Repr. Cat. Fruchtb. 2; R61 – T+; R26 – T; R48/23 – N; R50-R53	> 100

Full text of R-, H- and EUH-phrases: see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information:**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Following inhalation:**

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician in any case!

**In case of skin contact:**

Wash immediately with: Water Take off contaminated clothing and wash it before reuse.

**After eye contact:**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion:**

Rinse mouth. Let water be drunken in little sips (dilution effect). Call a physician in any case! Following oral intake of metallic Hg, in general only apply charcoal (20 - 40 g in 10%-slurry) and laxatives in a rather lot of water.

**Self-protection of the first aider:**

First aider: Pay attention to self-protection!

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

Metallic mercury is - acute - especially dangerous as steam, less than finely divided liquid and harmless as a compact liquid drops. The greatest risk is concentrated inhalation Vapours, in particular of the heated liquid with poor ventilation. Then there is a danger to life.

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### 4.3. Indication of any immediate medical attention and special treatment needed

The substance / product and specify the measures that will be doctor. As an antidote to mercury poisoning, according to recent literature are DMPS (mainly in Europe) or dimercaptosuccinic acid (Succimer, DMSA, preferably in USA).

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

### 5.2. Special hazards arising from the substance or mixture

Vapours are heavier than air. In case of fire may be liberated: components containing mercury

#### Hazardous combustion products:

In case of fire: Gases/vapours, toxic

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

### 5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

##### Personal precautions:

Remove persons to safety. Provide adequate ventilation. Avoid: Inhalation of vapours or spray/mists  
Avoid contact with skin, eyes and clothes.

##### Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

#### 6.1.2. For emergency responders

##### Personal protection equipment:

Personal protection equipment: see section 8

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

### 6.3. Methods and material for containment and cleaning up

#### For containment:

Take up mechanically.

#### For cleaning up:

Collect spillage. Treat the recovered material as prescribed in the section on waste disposal.

### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### 6.5. Additional information

Use appropriate container to avoid environmental contamination.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Protective measures

##### Advices on safe handling:

Preventive industrial medical examinations are to be offered. Wear personal protection equipment (refer to section 8).

##### Fire prevent measures:

No special fire protection measures are necessary.

##### Environmental precautions:

See section 8.

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### Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

When using do not eat, drink or smoke. Avoid contact with skin and eyes. Remove contaminated, saturated clothing immediately. Wash hands before breaks and after work. Draw up and observe skin protection programme.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place. Keep locked up. (Store in a place accessible by authorized persons only.)

#### Requirements for storage rooms and vessels:

Floors should be impervious, resistant to liquids and easy to clean. Observe laws and regulations for storage and use of water pollutants. Restrict access to stockrooms.

#### Hints on storage assembly:

Do not store together with: Food and feedingstuffs

**Storage class:** 6.1 B

#### Further information on storage conditions:

Keep only in the original container in a cool, well-ventilated place.

### 7.3. Specific end use(s)

No data available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ remark
TRGS 900 (DE)	mercury CAS No.: 7439-97-6	① 0.02 mg/m <sup>3</sup> ② 0.16 mg/m <sup>3</sup> ⑤ (einatembare Fraktion)
IOELV (EU)	mercury CAS No.: 7439-97-6	① 0.02 mg/m <sup>3</sup> ⑤ (Mercury & its inorganic divalent compounds , calculated as Hg)

#### 8.1.2. biological limit values

Limit value type (country of origin)	Substance name	Limit value	① parameter ② Test material ③ Sample time ④ remark
TRGS 903 (DE)	mercury CAS No.: 7439-97-6	25 µg/g Creatinin	① Quecksilber ② Urin ③ keine Beschränkung

#### 8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
mercury CAS No.: 7439-97-6	0.02 mg/m <sup>3</sup>	① DNEL worker ② DNEL long-term inhalative (systemic)

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

See section 7. Additional information on plant design:

If handled uncovered, arrangements with local exhaust ventilation have to be used.

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### 8.2.2. Personal protection equipment



**Eye/face protection:**

Eye glasses

**Skin protection:**

Hand protection

Suitable material:

By short-term hand contact: NBR (Nitrile rubber), Thickness of the glove material: 0,11 mm

By long-term hand contact: NBR (Nitrile rubber), Thickness of the glove material: 0,11 mm

Breakthrough time (maximum wearing time) min In the case of wanting to use the gloves again, clean them before taking off and air them well. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

**Respiratory protection:**

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Combination filtering device (EN 14387)

Recommended Filter type: Hg-P3

### 8.2.3. Environmental exposure controls

No data available

### 8.3. Additional information

Do not inhale ingredient.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Appearance**

**Physical state:** solid

**Colour:** metallic

**Odour:** odourless

**Safety relevant basis data**

		at °C	Method	remark
pH	<i>not determined</i>			
Melting point/freezing point	-39 °C			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	357 °C			
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	<i>not applicable</i>			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not applicable</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	13.55 g/cm <sup>3</sup>	20 °C		
Bulk density	<i>not determined</i>			
Water solubility (g/L)	0.06 mg/l	25 °C		
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>	40 °C		

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product itself does not burn.

### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

Risk of explosion in contact with:

alkali metals, ammonia, aluminium, amines, acetylene; acetylene compounds; 3-bromopropyne; chlorine; dioxide; ethylene oxide; methylazide (impact); nickel, tetracarbonyl/ oxygen; nitromethane; oxalic acid; performic acid; silver perchlorate/ alkynes;

The substance can react dangerously with:

boron diiodinephosphide (vapour); calcium; aqua regia metals; methylsilane/ oxygen; sodium acetylide; oxygen (heat), bromine, chlorine, fluorine, nitric acid

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

Risk of explosion in contact with:

alkali metals, ammonia, aluminium, amines, acetylene; acetylene compounds; 3-bromopropyne; chlorine; dioxide; ethylene oxide; methylazide (impact); nickel, tetracarbonyl/ oxygen; nitromethane; oxalic acid; performic acid; silver perchlorate/ alkynes;

The substance can react dangerously with:

boron diiodinephosphide (vapour); calcium; aqua regia metals; methylsilane/ oxygen; sodium acetylide; oxygen (heat), bromine, chlorine, fluorine, nitric acid

### 10.6. Hazardous decomposition products

In case of fire: Gases/vapours, toxic

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute oral toxicity:

None for intact lamps.

#### Acute dermal toxicity:

No information available for acute dermal and inhalative toxicity.

#### Acute inhalation toxicity:

No information available for acute dermal and inhalative toxicity.

#### Skin corrosion/irritation:

Not an irritant.

#### Eye damage/irritation:

Not an irritant.

#### Respiratory or skin sensitisation:

May cause sensitisation by skin contact.

#### Germ cell mutagenicity:

Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test): negative.  
Possible risk of harm to the unborn child.

#### Carcinogenicity:

No indication of human carcinogenicity.

#### Reproductive toxicity:

The classification criteria for this hazard class are not met by definition.

#### STOT-repeated exposure:

Causes damage to organs through prolonged or repeated exposure.

#### Additional information:

Exposure to high concentrations of vapours 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.

## SECTION 12: Ecological information

### 12.1. Toxicity

CAS No.	Substance name	Toxicological information
7439-97-6	mercury	LC <sub>50</sub> : 0.16 mg/l 4 d LC <sub>50</sub> : 0.0205 mg/l 2 d EC <sub>50</sub> : 0.3 mg/l 3 d

#### Aquatic toxicity:

Very toxic to aquatic life.

### 12.2. Persistence and degradability

#### Abiotic degradation:

The product has not been tested.

### 12.3. Bioaccumulative potential

#### Bioconcentration factor (BCF):

The product has not been tested.

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6. Other adverse effects

The product has not been tested.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

#### 13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

#### Waste code product:

#### remark:

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Waste treatment options

#### Appropriate disposal / Product:

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

#### Appropriate disposal / Package:







Handle contaminated packages in the same way as the substance itself.

### 13.2. Additional information

No data available

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN-No.</b>			
3506		3506	3506
<b>14.2. UN proper shipping name</b>			
MERCURY CONTAINED IN MANUFACTURED ARTICLES		MERCURY CONTAINED IN MANUFACTURED ARTICLES	MERCURY CONTAINED IN MANUFACTURED ARTICLES

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.3. Transport hazard class(es)</b>			
 8	 6.1	 8	 6.1
<b>14.4. Packing group</b>			
not determined		not determined	not determined
<b>14.5. Environmental hazards</b>			
	-	 MARINE POLLUTANT	not determined
<b>14.6. Special precautions for user</b>			
<p><b>Special provisions:</b>                      Manufactured articles or instruments containing not more than 1 kg of mercury are not subject to the requirements of ADR/RID.</p> <p><b>Limited quantity (LQ):</b> 5 kg</p> <p><b>Hazard identification number (Kemler No.):</b></p> <p><b>Classification code:</b>                      CT</p> <p><b>tunnel restriction code:</b> E</p> <p><b>remark:</b> Manufactured articles or instruments containing not more than 1 kg of mercury are not subject to the requirements of ADR/RID.</p>	<p><b>Special provisions:</b>  <b>Limited quantity (LQ):</b>  <b>Classification code:</b> -  <b>remark:</b></p>	<p><b>Special provisions:</b>                      Manufactured articles or instruments containing not more than 1 kg of mercury are not subject to the requirements of this code.</p> <p><b>Limited quantity (LQ):</b> 5 kg</p> <p><b>EmS-No.:</b> F-A; S-B  <b>remark:</b></p>	<p><b>Special provisions:</b>  <b>Limited quantity (LQ):</b>  <b>remark:</b> 1.2.11 IATA-DGR                      The following lamps are not subject to the IATA-DGR:                      (a) lamps each concerning not more than 1 g of dangerous goods and packaged so that there is not more than 30 g of dangerous goods per package, provided that                      1. the lamps are certified to a manufacturer's quality management system; and                      2. each lamp is either individually packed in inner packagings, separated by dividers, or surrounded with cushioning material to protect the lamps and packed into strong outer packagings meeting the general provisions of 5.0.2.4.1 and capable of passing a 1,2 drop test.</p>

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
 No

**SECTION 15: Regulatory information**

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

**15.1.1. EU legislation**

No data available



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### 15.1.2. National regulations

#### [DE] National regulations

##### Störfallverordnung

##### for substances contained in the product:

Annex I: Follow quantity limits related to R-phrases

##### Technische Anleitung Luft (TA-Luft)

##### Klasse 1:

0,25 g/h or 0,05 mg/m<sup>3</sup>

##### Water hazard class (WGK)

##### WGK:

3 - stark wassergefährdend

##### Description:

strongly hazardous to water (WGK 3)

##### Source:

Classification according to VwVwS, Annex 2.

##### Technische Regeln für Gefahrstoffe

TRGS 510

##### Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Informationen (BGI) BGI 536 Hazardous chemical substances

Berufsgenossenschaftliche Informationen (BGI) BGI 564 Working with hazardous substances (leaflet M 050)

### 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

### 15.3. Additional information

No data available

## SECTION 16: Other information

### 16.1. Indication of changes

SECTION 2: Hazards identification

SECTION 14: Transport information

## 16.2. Abbreviations and acronyms

AGW: workplace exposure limit

Technical Rule: Technical Guidelines for Hazardous Substances

TLV - Threshold Limit Value TWA - Time Weighted Average

STEL - short term exposure limit for permissible workplace concentration - Permissible Workplace concentration

STOT RE - Specific target organ toxicity (repeated exposure)

Acute Tox. - Acute toxicity

PBT - substances which are persistent, bioaccumulative and toxic

vPvB - substances which are very persistent and very bioaccumulative

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

RID: Government regulation internationally concerning the transport of 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

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EEC: Hazardous Substances (Ordinance on Hazardous Substances, Germany)

### 16.3. Key literature references and sources for data

European Chemicals Agency (ECHA), ECHA CHEM Registered substances  
 OECD The Global Portal to Information on Chemical Substances (ChemPortal)  
 Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS  
 substance database and International limit values for chemical substances  
 Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances  
 hazardous to water Rigoletto (catalog substances hazardous to water)

### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Acute toxicity (inhalative) ( <i>Acute Tox. 2</i> )	H330: Fatal if inhaled.	
Reproductive toxicity ( <i>Repr. 1B</i> )	H360: May damage fertility or the unborn child.	
STOT-repeated exposure ( <i>STOT RE 1</i> )	H372: Causes damage to organs through prolonged or repeated exposure.	
Hazardous to the aquatic environment ( <i>Aquatic Acute 1</i> )	H400: Very toxic to aquatic life.	

### 16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements (R-phrases)	
R26	Very toxic by inhalation.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61	May cause harm to the unborn child.
Hazard statements	
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.

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### 16.6. Training advice

No data available

### 16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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