

**MATERIAL SAFETY DATA SHEET****Product Name:** Mercuric(II) chloride**CAS No.:** 7487-94-7**Version:** 0**1. Identification**

**Product Code** : 90185, 90454  
**Company Name** : Advent Chembio Private Limited  
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**2. Composition/Information on Ingredients**

<b>Ingredient</b>	<b>CAS No</b>	<b>Percent</b>
MERCURIC(II)CHLORIDE	7487-94-7	90-100%

**3. Hazards Identification****Hazard classification****Health hazards**

Acute toxicity (Oral) : Category 2  
Skin corrosion/irritation : Category 1  
Serious eye damage/eye irritation : Category 1  
Germ cell mutagenicity : Category 2  
Toxic to reproduction : Category 1  
Specific target organ toxicity - repeated exposure : Category 1

**Environmental hazards**

Acute hazards to the aquatic environment : Category 1  
Chronic hazards to the aquatic environment : Category 1

**Labels elements****Hazard symbol**

**Signal word** : Danger

**Hazard statement** : Fatal if swallowed.  
Causes severe skin burns and eye damage.  
Suspected of causing genetic defects.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure.

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Very toxic to aquatic life with long lasting effects.

**Precautionary statement****Prevention**

: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Do not breathe dust/fume/gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

**Response**

: **IF SWALLOWED:** Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting. **IF ON SKIN (or hair):** Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **IF exposed or concerned:** Get medical advice/attention. Collect spillage.

**Storage**

: Store locked up.

**Disposal**

: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification**

: None.

**4. First Aid Measures****General information**

: Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

**Ingestion**

: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation**

: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.

**Skin contact**

: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye contact**

: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

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- Most important symptoms/effects, acute and delayed** : Fatal if swallowed. Corrosive to skin and eyes.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

**5. Fire fighting measures**

- General fire hazards** : In case of fire and/or explosion do not breathe fumes.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : During fire, gases hazardous to health may be formed.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental Release Measures**

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Avoid dust formation. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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## 7. Handling and Storage

- Precautions for safe handling** : Use personal protective equipment as required. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Avoid inhalation of dust. Wash thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage, including any incompatibilities** : Keep container tightly closed. Store in a cool and well-ventilated place. Store in a dry place. Store away from incompatible materials.

## 8. Exposure Controls Personal Protection

### Control parameters

### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
MERCURIC CHLORIDE - as Hg	TWA	0.025 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (03 2013)
MERCURIC CHLORIDE - Vapor. - as Hg	Ceil_Time	0.1 ppm	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
MERCURIC CHLORIDE - as Hg	Ceiling	0.1 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

### Biological limit values

Chemical identity	Exposure Limit values	Source
MERCURIC CHLORIDE (Total inorganic mercury: Sampling time: Prior to shift.)	20 µg/g (Creatinine in urine)	ACGIH BEL (02 2013)

**Appropriate engineering controls** : No data available.

### Individual protection measures, such as personal protective equipment

**General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

**Eye/face protection** : Use tight fitting goggles if dust is generated.

**Hand protection** : Chemical resistant gloves.

**Other** : Wear suitable protective clothing.

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**Respiratory protection** : In case of inadequate ventilation use suitable respirator.  
**Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

**9. Physical and Chemical Properties**

**Appearance** : White Solid Crystals or powder.  
**Odor** : Odorless  
**pH** : 3.2 (0.2 molar aqueous solution)  
**Melting point/freezing point** : 277 °C  
**Initial boiling point and boiling range** : 302 °C  
**Flash Point** : Not applicable  
**Vapor pressure** : 0.13 kPa (136.2 °C)  
**Vapor density** : 8.7 AIR=1  
**Relative density** : 5.4 (20 °C)  
**Solubility in water** : 74 g/l  
**Solubility (other)** : glycerol: 8.33 g/l  
**Formula** : Cl<sub>2</sub>Hg  
**Molecular Weight** : 271.52 g/mol

**10. Stability and Reactivity**

**Reactivity** : No dangerous reaction known under conditions of normal use.  
**Chemical stability** : Material is stable under normal conditions.  
**Possibility of hazardous reactions** : Hazardous polymerization does not occur.  
**Conditions to avoid** : Contact with incompatible materials. Heat.  
**Incompatible materials** : Strong oxidizing agents. Metals. Phosphates. Albumin. Ammonia. Carbonates.  
**Hazardous decomposition products** : Toxic metal fumes may form when heated to decomposition.

**11. Toxicological Information****Information on likely routes of exposure**

**Ingestion** : Fatal if swallowed.  
**Inhalation** : Irritating to respiratory system.  
**Skin contact** : Causes skin burns.  
**Eye contact** : Causes serious eye damage.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

**Oral Product** : No data available.  
**Dermal Product** : No data available.

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<b>Inhalation Product</b>	:	No data available.
<b>Repeated dose toxicity Product</b>	:	No data available.
<b>Skin corrosion/irritation Product</b>	:	Causes skin burns.
<b>Serious eye damage/eye irritation Product</b>	:	Causes serious eye damage.
<b>Respiratory or skin sensitization Product</b>	:	Not a skin sensitizer.
<b>Carcinogenicity Product</b>	:	This substance has no evidence of carcinogenic properties.
<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE</b>	:	No carcinogenic components identified
<b>US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE</b>	:	No carcinogenic components identified
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	:	No carcinogenic components identified.
<b>Germ cell mutagenicity In vitro Product</b>	:	No mutagenic components identified
<b>In vivo Product</b>	:	No mutagenic components identified
<b>Reproductive toxicity Product</b>	:	Suspected of damaging fertility or the unborn child.
<b>Specific target organ toxicity - single exposure Product</b>	:	No data available.
<b>Specific target organ toxicity - repeated exposure Product</b>	:	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard Product</b>	:	Not classified.
<b>Other effects</b>	:	None known.

## 12. Ecological Information

### Ecotoxicity

#### Acute hazards to the aquatic environment :

<b>Fish Product</b>	:	No data available.
<b>Specified substance(s): MERCURIC CHLORIDE</b>	:	LC 50 (Bluegill (Lepomis macrochirus), 96 h): 0.096 - 0.133 mg/l Mortality LC 50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 96 h): 0.13 - 0.19 mg/l Mortality LC 50 (Fathead minnow (Pimephales promelas), 96 h): 0.1 - 0.182 mg/l Mortality
<b>Aquatic invertebrates Product</b>	:	No data available.
<b>Specified substance(s): MERCURIC CHLORIDE</b>	:	EC 50 (Water flea (Daphnia magna), 48 h): 0.005 mg/l Intoxication LC 50 (Water flea (Daphnia magna), 48 h): 0.0021 mg/l Mortality
<b>Chronic hazards to the aquatic environment :</b>		
<b>Fish Product</b>	:	No data available.

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- Aquatic invertebrates Product** : No data available.
- Specified substance(s): MERCURIC CHLORIDE** : LC 50 (Green algae (Chlorella vulgaris), 12 d): 0.128 mg/l Mortality  
LD 50 (Red algae (Plumaria elegans), 18 h): 3.12 mg/l Mortality
- Toxicity to Aquatic Plants Product:** : No data available.
- Persistence and degradability**
- Biodegradation Product** : The product is not expected to be biodegradable.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : Log Kow: 0.22
- Mobility in soil** : No data available.
- Other adverse effects** : Very toxic to aquatic life with long lasting effects.

### 13. Disposal consideration

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

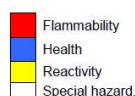
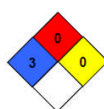
### 14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN 1624	Mercury oxide	6.1	II	Yes
<b>IMDG</b>	UN 1624	Mercury oxide	6.1	II	Yes
<b>IATA</b>	UN 1624	Mercury oxide	6.1	II	No

### 15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

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Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Issue Date :**01/08/2014**Version :** 0

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