SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 *Product identifiers*

Product name: **MERCURY (II) CHLORIDE**

CAS-No.: **7487-94-7**

Product Number: **A69231**

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

Identified uses: Laboratory chemicals, Manufacture of substances

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

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR,
UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

1.4 *Emergency telephone number*

Emergency Phone #: **+44 (0)845 1200 506**

2. HAZARDS IDENTIFICATION

2.1 *Classification of the substance or mixture*

According to Regulation (EC) No1272/2008; Acute toxicity (Category 2), Specific target organ toxicity - repeated exposure (Category 1), Skin corrosion (Category 1B), Acute aquatic toxicity (Category 1), Chronic aquatic toxicity (Category 1)

According to European Directive 67/548/EEC as amended: Causes burns. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Very toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

2.2 *Label elements*

Pictogram

Signal word Danger

Hazard statement(s): H372 Causes damage to organs through prolonged or repeated exposure. H314 Causes severe skin burns and eye damage. H300 Fatal if swallowed. H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s): P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P501 Dispose of contents/container to an approved waste disposal plant.

Hazard symbol(s):

R-phrase(s): R28 Very toxic if swallowed. R34 Causes burns. R48/24/25 Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 *Other hazards* – no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 *Substances*

Mercuric chloride

Formula:	**$HgCl_2$**
Molecular Weight:	**271.5**
CAS-No.:	**7487-94-7**
EC-No.:	**231-299-8**
Index-No.:	**080-010-00-X**

4. FIRST AID MEASURES

4.1 *Description of first aid measures*

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes.

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 *Most important symptoms and effects, both acute and delayed:* no data available

4.3 *Indication of immediate medical attention and special treatment needed:* no data available

5. FIRE-FIGHTING MEASURES

5.1 *Extinguishing media*

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 *Special hazards arising from the substance or mixture:* no data available

5.3 *Precautions for fire-fighters:* Wear self contained breathing apparatus for fire fighting if necessary.

5.4 *Further information:* no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 *Personal precautions, protective equipment and emergency procedures:* Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 *Environmental precautions:* Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 *Methods and materials for containment and cleaning up:* Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

6.4 *Reference to other sections:* For disposal see section 13.

7. HANDLING AND STORAGE

7.1 *Precautions for safe handling:* Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 *Conditions for safe storage, including any incompatibilities:* Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive. Moisture sensitive. Product is sensitive to light and moisture.

7.3 *Specific end uses:* no data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 *Control parameters:* Contains no substances with occupational exposure limit values.

8.2 *Exposure controls*

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance: **Form**: Solid **Colour**: no data available
b) Odour: no data available
c) Odour Threshold: no data available
d) pH: no data available
e) Melting/freezing point: 277 °C Melting point/range: no data available
f) Initial boiling point and boiling range: 302 °C at 1,013 hPa
g) Flash point: no data available
h) Evaporation rate: no data available
i) Flammability (solid, gas): no data available
j) Upper/lower flammability or explosive limits: no data available
k) Vapour pressure: 1.7 hPa at 236 °C
l) Vapour density: no data available
m) Relative density: 5.440 g/cm^3
n) Water solubility: no data available
o) Partition coefficient: n-octanol/water: no data available
p) Autoignition temperature: no data available
q) Decomposition temperature: no data available
r) Viscosity: no data available
s) Explosive properties: no data available
t) Oxidizing properties: no data available

9.2 *Other safety information:* no data available

10. STABILITY AND REACTIVITY

10.1 *Reactivity:* no data available

10.2 *Chemical stability:* Stable under recommended storage conditions.

10.3 *Possibility of hazardous reactions:* no data available

10.4 *Conditions to avoid:* Avoid moisture. Light.

10.5 *Incompatible materials:* Strong oxidizing agents, Strong bases

10.6 ***Hazardous decomposition products:*** Formed under fire conditions. - Hydrogen chloride gas, Mercury/mercury oxides.

11. TOXICOLOGICAL INFORMATION

11.1 *Information on toxicological effects*

Acute toxicity: LD50 Dermal - rat - 41 mg/kg

Skin corrosion/irritation: Skin - rabbit - Severe skin irritation - 24 h

Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation - 24 h

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity: Suspected human reproductive toxicant. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: no data available

Potential health effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion May be fatal if swallowed. Causes burns.

Skin Toxic if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Additional Information: RTECS: OV9100000

12. ECOLOGICAL INFORMATION

12.1 ***Toxicity:*** Toxicity to fish mortality LOEC - *Lates calcarifer* - 0.113 mg/l-96h

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.016 mg/l-96h

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* (Water flea) - 0.002mg/l-48h

Toxicity to algae Growth inhibition EC50 - *Ditylum brightwellii* - 0.01 mg/l-5d

12.2 ***Persistence and degradability:*** no data available

12.3 ***Bioaccumulative potential:*** Bioaccumulation *Pimephales promelas* (fathead minnow) - Bioconcentration factor (BCF): 5,680

12.4 ***Mobility in soil:*** no data available

12.5 ***Results of PBT and vPvB assessment:*** no data available

12.6 *Other adverse effects:* Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 *Waste treatment methods*

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 *UN-Number*

ADR/RID: 1624 IMDG: 1624 IATA: 1624

14.2 *UN proper shipping name*

ADR/RID: MERCURIC CHLORIDE
IMDG: MERCURIC CHLORIDE
IATA: MERCURIC CHLORIDE

14.3 *Transport hazard class(es)*

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 *Packaging group*

ADR/RID: II IMDG: II IATA: II

14.5 *Environmental hazards*

ADR/RID: no IMDG Marine pollutant: YES IATA: no

14.6 *Special precautions for users:* EMS-No: F-A, S-A

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Acute Tox. Acute toxicity, Aquatic Acute Acute aquatic toxicity, Aquatic Chronic Chronic aquatic toxicity, H300 Fatal if swallowed. H314 Causes severe skin burns and eye damage. H372 Causes damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. Skin Corr. Skin corrosion, STOT RE Specific target organ toxicity - repeated exposure, N Dangerous for the environment, T+ Very toxic, R28 Very toxic if swallowed. R34 Causes burns. R48/24/25 Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R62 Possible risk of impaired fertility. R68 Possible risk of irreversible effects. Repr.Cat.3 Toxic to Reproduction Category 3