**SAFETY DATA SHEET**

**Mercuric chloride**


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

1.1. **Product identifier**

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Mercuric chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product number</strong></td>
<td>FM35310</td>
</tr>
<tr>
<td><strong>CAS number</strong></td>
<td>7487-94-7</td>
</tr>
</tbody>
</table>

1.2. **Identified uses**

| **Identified uses** | Laboratory reagent. Manufacture of substances. Research and development. |

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

<table>
<thead>
<tr>
<th><strong>Supplier</strong></th>
<th>Carbosynth Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>8&amp;9 Old Station Business Park</td>
</tr>
<tr>
<td></td>
<td>Compton</td>
</tr>
<tr>
<td></td>
<td>Berkshire</td>
</tr>
<tr>
<td></td>
<td>RG20 6NE</td>
</tr>
<tr>
<td></td>
<td>UK</td>
</tr>
<tr>
<td><strong>Emergency telephone</strong></td>
<td>+44 1635 578444</td>
</tr>
<tr>
<td></td>
<td>+44 1635 579444</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:info@carbosynth.com">info@carbosynth.com</a></td>
</tr>
</tbody>
</table>

1.4. **Emergency telephone number**

| **Emergency telephone** | +44 7887 998634 |

### SECTION 2: Hazards identification

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

**Classification (EC 1272/2008)**

- **Physical hazards**: Not Classified
- **Health hazards**: Acute Tox. 2 - H300 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Muta. 2 - H341 Repr. 2 - H361f STOT RE 1 - H372
- **Environmental hazards**: Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

#### 2.2. Label elements

**Pictogram**

![Pictogram](image)

**Signal word**

Danger

**Hazard statements**

- H300 Fatal if swallowed.
- H314 Causes severe skin burns and eye damage.
- H341 Suspected of causing genetic defects.
- H361f Suspected of damaging fertility.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.
Mercuric chloride

Precautionary statements
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/ attention.

Supplementary precautionary statements
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P314 Get medical advice/ attention if you feel unwell.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances
Product name Mercuric chloride
CAS number 7487-94-7
Chemical formula Cl₂Hg

SECTION 4: First aid measures

4.1. Description of first aid measures
General information Get medical advice/attention if you feel unwell.
Inhalation Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if symptoms are severe or persist.
Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.
Skin contact Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.
Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed
General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures
Mercuric chloride

5.1. Extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Specific hazards
None known.
Hazardous combustion products
Thermal decomposition or combustion products may include the following substances:
Mercury/Mercury oxides (Hg) Hydrogen chloride (HCl).

5.3. Advice for firefighters
Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

6.2. Environmental precautions
Environmental precautions
Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections
Reference to other sections
For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid generation and spreading of dust. Avoid contact with skin and eyes. Avoid inhalation of dust and vapours.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Keep container tightly closed. Protect from light. Protect from moisture.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m3
WEL = Workplace Exposure Limit

8.2. Exposure controls
Mercuric chloride

**Appropriate engineering controls**
Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection**
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

**Hand protection**
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

**Other skin and body protection**
Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory protection**
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Particulate filters should comply with European Standard EN143. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

**Environmental exposure controls**
Keep container tightly sealed when not in use.

### SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available.</td>
</tr>
<tr>
<td>pH</td>
<td>No data available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>277°C</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>302°C @ 1013 hPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>5.440 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available.</td>
</tr>
</tbody>
</table>
Mercuric chloride

9.2. Other information
Molecular weight 271.50

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity No data available.

10.2. Chemical stability
Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions No data available.

10.4. Conditions to avoid
Conditions to avoid Light. Moisture.

10.5. Incompatible materials
Materials to avoid Strong oxidising agents. Strong alkalis.

10.6. Hazardous decomposition products
Hazardous decomposition products Mercury/Mercury oxides (Hg) Hydrogen chloride (HCl).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀) Acute Tox. 2 - H300 Fatal if swallowed.
ATE oral (mg/kg) 5.0

Acute toxicity - dermal
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation
Skin corrosion/irritation Severe skin irritation. May cause serious chemical burns to the skin.

Animal data
Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation
Serious eye damage/irritation Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation
Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation
Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro Suspected of causing genetic defects.

Carcinogenicity
Carcinogenicity Based on available data the classification criteria are not met.
Mercuric chloride

IARC carcinogenicity
None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility
Suspected of damaging fertility.

Reproductive toxicity - development
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure
Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure
STOT RE 1 - H372 Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
Aspiration hazard
Not relevant. Solid.

General information
May damage fertility. May cause genetic defects. Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.

Ingestion
A single exposure may cause the following adverse effects: Unconsciousness, possibly death. May cause stomach pain or vomiting. May cause severe internal injury. Small amounts may cause serious damage.

Skin contact
Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

Eye contact
Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Route of exposure
Ingestion Inhalation Skin and/or eye contact

Target organs
No specific target organs known.

RTECS #
OV9100000

SECTION 12: Ecological Information

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Acute aquatic toxicity

LE(C)₅₀

0.1 < L(E)C₅₀ ≤ 1

M factor (Acute)
1

Acute toxicity - fish
LOEC, 96 hours: 0.113 mg/l, Lates calcarifer
LC₅₀, 96 hours: 0.016 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 0.002 mg/l, Daphnia magna

Acute toxicity - aquatic plants
EC₅₀, 5 days: 0.01 mg/l, Algae

Chronic aquatic toxicity

M factor (Chronic)
1
Mercuric chloride

12.2. Persistence and degradability
Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential
Bioaccumulative potential BCF: 5680, Pimephales promelas (Fat-head Minnow)
Partition coefficient No data available.

12.4. Mobility in soil
Mobility No data available.

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects
Other adverse effects Dangerous for the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 1624
UN No. (IMDG) 1624
UN No. (ICAO) 1624
UN No. (ADN) 1624

14.2. UN proper shipping name
Proper shipping name (ADR/RID) MERCURIC CHLORIDE
Proper shipping name (IMDG) MERCURIC CHLORIDE
Proper shipping name (ICAO) MERCURIC CHLORIDE
Proper shipping name (ADN) MERCURIC CHLORIDE

14.3. Transport hazard class(es)
ADR/RID class 6.1
ADR/RID classification code T5
ADR/RID label 6.1
IMDG class 6.1
ICAO class/division 6.1
ADN class 6.1
Mercuric chloride

Transport labels

14.4. Packing group
ADR/RID packing group II
IMDG packing group II
ADN packing group II
ICAO packing group II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
EmS F-A, S-A
ADR transport category 2
Emergency Action Code 2X
Hazard Identification Number (ADR/RID) 60
Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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


15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
US - TSCA Present.

SECTION 16: Other information
Mercuric chloride

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Training advice

Only trained personnel should use this material.

Revision date

04/10/2017

Revision

1

SDS number

144926

Hazard statements in full

H300 Fatal if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H361f Suspected of damaging fertility.
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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.