



SAFETY DATA SHEET

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Revision Date: N/A

Revision Number: 1

SECTION 1 identification

1.1. Product Identifier

Trade Name or Designation: Mercuric Chloride 5% W/V

Product Number: PS18072

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Dawn Scientific Inc

121 Liberty Street, Metuchen, NJ, 08840

Tel : 732-902-6300 | Fax : 973-802-1005

sales@dawnscientific.com | www.dawnscientific.com

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

| | | |
|--|------|--|
| Acute toxicity (oral) Category 2 | H300 | Fatal if swallowed |
| Acute toxicity (dermal) Category 3 | H311 | Toxic in contact with skin |
| Carcinogenicity Category 2 | H351 | Suspected of causing cancer |
| Reproductive toxicity Category 2 | H361 | Suspected of damaging fertility or the unborn child |
| Specific target organ toxicity (repeated exposure) Category 2 | H373 | May cause damage to organs (nervous system) through prolonged or repeated exposure |
| Hazardous to the aquatic environment - Acute Hazard Category 1 | H400 | Very toxic to aquatic life |
| Hazardous to the aquatic environment - Chronic Hazard Category 2 | H411 | Toxic to aquatic life with long lasting effects |

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS06

GHS08

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

- H300 - Fatal if swallowed
- H311 - Toxic in contact with skin
- H351 - Suspected of causing cancer
- H361 - Suspected of damaging fertility or the unborn child
- H373 - May cause damage to organs (nervous system) through prolonged or repeated exposure
- H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P260 - Do not breathe mist

P264 - Wash exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P273 - Avoid release to the environment
 P280 - Wear protective gloves, protective clothing, eye protection, face protection
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P308+P313 - IF exposed or concerned: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P391 - Collect spillage
 P405 - Store locked up
 P501 - Dispose of contents/container to comply with local, state and federal regulations
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % |
|-------------------|---------------------|----|
| Water | (CAS-No.) 7732-18-5 | 95 |
| Mercuric Chloride | (CAS-No.) 7487-94-7 | 5 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. Suspected of causing cancer. IF exposed or concerned: Get medical advice/attention.
 First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
 First-aid measures after skin contact : Immediately call a poison center or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
 First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
 First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Fatal if swallowed. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Suspected of damaging fertility or the unborn child. Causes damage to organs (central nervous system).
 Symptoms/effects after inhalation : No data available.
 Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
 Symptoms/effects after eye contact : No data available.
 Symptoms/effects after ingestion : Fatal if swallowed.
 Chronic symptoms : Impairment of the nervous system.

4.3. Immediate medical attention and special treatment, if necessary

Hospitalize at once.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids. Strong oxidizers.
Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Mercuric Chloride (7487-94-7) | | |
|-------------------------------|--|---|
| ACGIH | ACGIH TWA (mg/m ³) | 0.025 mg/m ³ (Mercury, Inorganic forms, as Hg; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 0.1 mg/m ³ |
| IDLH | US IDLH (mg/m ³) | 10 mg/m ³ |
| NIOSH | NIOSH REL (TWA) (mg/m ³) | 0.05 mg/m ³ |
| NIOSH | NIOSH REL (ceiling) (mg/m ³) | 0.1 mg/m ³ |
| Water (7732-18-5) | | |
| Not applicable | | |

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing.



Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Respiratory protection not required in normal conditions

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---------------------|
| Physical state | : Liquid |
| Color | : Colorless |
| Odor | : None. |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : Soluble in water. |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Hydrogen chloride. mercury.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Likely routes of exposure : Skin and eye contact
 Acute toxicity : Oral: Fatal if swallowed. Dermal: Toxic in contact with skin.

| Mercuric Chloride, 5% w/v | |
|----------------------------------|-----------------------|
| LD50 oral rat | 20 mg/kg |
| LD50 dermal rat | 820 mg/kg |
| ATE US (oral) | 20 mg/kg body weight |
| ATE US (dermal) | 820 mg/kg body weight |

| Mercuric Chloride (7487-94-7) | |
|--------------------------------------|----------------------|
| LD50 oral rat | 1 mg/kg (Rat) |
| LD50 dermal rat | 41 mg/kg (Rat) |
| ATE US (oral) | 1 mg/kg body weight |
| ATE US (dermal) | 41 mg/kg body weight |

| Water (7732-18-5) | |
|--------------------------|-------------------------|
| LD50 oral rat | ≥ 90000 mg/kg |
| ATE US (oral) | 90000 mg/kg body weight |

Skin corrosion/irritation : Not classified
 Serious eye damage/irritation : Not classified
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Suspected of causing cancer.

| Mercuric Chloride (7487-94-7) | |
|--------------------------------------|--------------------------------------|
| IARC group | 2B - Possibly carcinogenic to humans |

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
 Specific target organ toxicity – single exposure : Not classified
 Specific target organ toxicity – repeated exposure : May cause damage to organs (nervous system) through prolonged or repeated exposure.
 Aspiration hazard : Not classified
 Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Toxic in contact with skin. Fatal if swallowed.
 Symptoms/effects after inhalation : No data available.

Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.

Symptoms/effects after eye contact : No data available.

Symptoms/effects after ingestion : Fatal if swallowed.

Chronic symptoms : Impairment of the nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

| Mercuric Chloride (7487-94-7) | |
|-------------------------------|-------------------------|
| LC50 fish 1 | 0.03 mg/l (LC50; 96 h) |
| EC50 Daphnia 2 | 0.003 mg/l (EC50; 48 h) |
| Threshold limit algae 2 | 0.07 mg/l (EC0) |

12.2. Persistence and degradability

| Mercuric Chloride, 5% w/v | |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |

| Mercuric Chloride (7487-94-7) | |
|---------------------------------|--|
| Persistence and degradability | Biodegradability: not applicable. No test data on mobility of the substance available. |
| Biochemical oxygen demand (BOD) | |
| Chemical oxygen demand (COD) | |
| ThOD | |

| Water (7732-18-5) | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

12.3. Bioaccumulative potential

| Mercuric Chloride, 5% w/v | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

| Mercuric Chloride (7487-94-7) | |
|-------------------------------|--|
| BCF fish 1 | 10000 (BCF) |
| BCF fish 2 | 500 - 4620 (BCF) |
| BCF other aquatic organisms 1 | 10000 (BCF) |
| Log Pow | 0.1 - 0.22 (Calculated) |
| Bioaccumulative potential | Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$). |

| Water (7732-18-5) | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Hazardous waste due to toxicity. Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2024 Mercury compounds, liquid, n.o.s. (Mercuric chloride), 6.1, II

UN-No.(DOT) : UN2024

Proper Shipping Name (DOT) : Mercury compounds, liquid, n.o.s.

Transport hazard class(es) (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 6.1 - Poison inhalation hazard



Dangerous for the environment : Yes

Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 243

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

DOT Packaging Exceptions (49 CFR 173.xxx) : 153

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

| Mercuric Chloride, 5% w/v | |
|-------------------------------------|--|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Delayed (chronic) health hazard |

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|-------------------|-------------------|----|
| Mercuric Chloride | CAS-No. 7487-94-7 | 5% |
|-------------------|-------------------|----|

| Mercuric Chloride (7487-94-7) | |
|--|--|
| Listed on the United States SARA Section 302 | |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 500 lb |
| SARA Section 302 Threshold Planning Quantity (TPQ) | 500 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Delayed (chronic) health hazard |

15.2. International regulations

CANADA

| Mercuric Chloride (7487-94-7) | |
|---|--|
| Listed on the Canadian DSL (Domestic Substances List) | |

EU-Regulations

No additional information available

National regulations

| Mercuric Chloride (7487-94-7) | |
|---|--|
| Listed on the Canadian IDL (Ingredient Disclosure List) | |

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

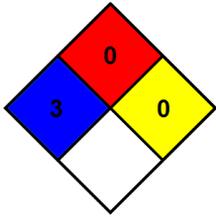
| Mercuric Chloride (7487-94-7) | | | | |
|---|---|---|---|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| No | Yes | No | No | |

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

| | |
|------|---|
| H300 | Fatal if swallowed |
| H310 | Fatal in contact with skin |
| H311 | Toxic in contact with skin |
| H351 | Suspected of causing cancer |
| H361 | Suspected of damaging fertility or the unborn child |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |

| | | |
|----------------------|---|---|
| NFPA health hazard | : 3 - Materials that, under emergency conditions, can cause serious or permanent injury. |  |
| NFPA fire hazard | : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. | |
| NFPA reactivity | : 0 - Material that in themselves are normally stable, even under fire conditions. | |
| Hazard Rating | | |
| Health | : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given * - Chronic (long-term) health effects may result from repeated overexposure | |
| Flammability | : 0 Minimal Hazard - Materials that will not burn | |
| Physical | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives. | |
| Personal protection | : D - Face shield and eye protection, Gloves, Synthetic apron | |

Last Revision Date: 01/01/2019

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and Dawn Scientific Inc assumes no legal responsibility or liability whatsoever resulting from its use.