

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Mercuric Chloride, 5% w/v  
Product code : LC16600

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

Use of the substance/mixture : For laboratory and manufacturing use only.

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

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazards identification

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

##### Classification (GHS-US)

Acute Tox. 2 (Oral) H300  
Acute Tox. 3 (Dermal) H311  
Carc. 2 H351  
Repr. 2 H361  
STOT RE 2 H373  
Aquatic Acute 1 H400  
Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### 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+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P312 - Call a POISON CENTER/doctor if you feel unwell  
P330 - If swallowed, rinse mouth  
P361 - Remove/Take off immediately all contaminated clothing  
P363 - Wash contaminated clothing before reuse

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P391 - Collect spillage  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 2.3. Other hazards

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. Substance

Not applicable

### 3.2. Mixture

| Name              | Product identifier | %  | Classification (GHS-US)   |
|-------------------|--------------------|----|---|
| Water             | (CAS No) 7732-18-5 | 95 | Not classified  |
| Mercuric Chloride | (CAS No) 7487-94-7 | 5  | Acute Tox. 1 (Oral), H300<br>Acute Tox. 1 (Dermal), H310<br>Carc. 2, H351<br>Repr. 2, H361<br>STOT RE 2, H373<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

Full text of H-phrases: 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 persist.

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, both acute and delayed

Symptoms/injuries : Suspected of damaging fertility or the unborn child. Causes damage to organs (central nervous system).

Symptoms/injuries after inhalation : No data available.

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

Symptoms/injuries after eye contact : No data available.

Symptoms/injuries after ingestion : Fatal if swallowed.

Chronic symptoms : Impairment of the nervous system.

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

Hospitalize at once.

## SECTION 5: Firefighting measures

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

No additional information available

### 5.3. Advice for firefighters

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.

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### 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.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Mercuric Chloride, 5% w/v     |                        |             |
|-------------------------------|------------------------|-------------|
| ACGIH                         | Not applicable         |             |
| OSHA                          | Not applicable         |             |
| Mercuric Chloride (7487-94-7) |                        |             |
| ACGIH                         | ACGIH TWA (mg/m³)      | 0.025 mg/m³ |
| OSHA                          | OSHA PEL (TWA) (mg/m³) | 0.1 mg/m³   |
| Water (7732-18-5)             |                        |             |
| ACGIH                         | Not applicable         |             |
| OSHA                          | Not applicable         |             |

#### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Protective clothing.

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Respiratory protection : Wear appropriate mask.  
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) : No data available  
Explosion limits : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Vapor pressure : No data available  
Relative density : No data available  
Relative vapor density at 20 °C : No data available  
Solubility : Soluble in water.  
Water: Solubility in water of component(s) of the mixture :  
• Mercuric Chloride: 6.9 g/100ml  
  
Log Pow : No data available  
Log Kow : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Viscosity : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : 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

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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)             | 20.000 mg/kg body weight  |
| ATE US (dermal)           | 820.000 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)                 | 1.000 mg/kg body weight  |
| ATE US (dermal)               | 41.000 mg/kg body weight |

| Water (7732-18-5) |                             |
|-------------------|-----------------------------|
| LD50 oral rat     | ≥ 90000 mg/kg               |
| ATE US (oral)     | 90000.000 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/injuries after inhalation : No data available.

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

Symptoms/injuries after eye contact : No data available.

Symptoms/injuries 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 (96 h; Poecilia reticulata) |
| EC50 Daphnia 1                | 0.0081 mg/l (24 h; Daphnia magna)     |
| LC50 fish 2                   | 0.04 mg/l (96 h; Cyprinus carpio)     |
| EC50 Daphnia 2                | 0.003 mg/l (48 h; Daphnia magna)      |
| TLM fish 1                    | 0.82 mg/l (168 h; Carassius auratus)  |
| Threshold limit algae 1       | 0.08 mg/l (Selenastrum capricornutum) |
| Threshold limit algae 2       | 0.07 mg/l (Scenedesmus quadricauda)   |

### 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. |

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| Mercuric Chloride (7487-94-7)   |                |
|---------------------------------|----------------|
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD)    | Not applicable |
| ThOD                            | Not applicable |
| BOD (% of ThOD)                 | Not applicable |

| 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 (Pisces)   |
| BCF fish 2                    | 500 - 4620 (Cyprinus carpio; Test duration: 10 weeks)              |
| BCF other aquatic organisms 1 | 10000 (Ostreidae)  |
| 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 ecological damage caused by this product.

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment 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

Hazard labels (DOT) : 6.1 - Poison inhalation hazard



Packing group (DOT) : II - Medium Danger

Dangerous for the environment : Yes

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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"

### Additional information

Other information : No supplementary information available.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional 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<br>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  
Listed on United States SARA Section 313

|  |  |
|--|--|
| 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<br>Delayed (chronic) health hazard |

### 15.2. International regulations

#### CANADA

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### Mercuric Chloride (7487-94-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects

Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Class E - Corrosive Material

### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

### EU-Regulations

No additional information available

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

No additional information available

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

### National regulations

#### Mercuric Chloride (7487-94-7)

Listed on the Canadian IDL (Ingredient Disclosure List)

#### Water (7732-18-5)

Not listed on the Canadian IDL (Ingredient Disclosure List)

### 15.3. US State regulations

#### 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 significance risk  
level (NSRL)

No

Yes

No

No

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

|                       |   |
|-----------------------|---|
| Acute Tox. 1 (Dermal) | Acute toxicity (dermal) Category 1                                |
| Acute Tox. 1 (Oral)   | Acute toxicity (oral) Category 1                                  |
| Acute Tox. 2 (Oral)   | Acute toxicity (oral) Category 2                                  |
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal) Category 3                                |
| Aquatic Acute 1       | Hazardous to the aquatic environment - Acute Hazard Category 1    |
| Aquatic Chronic 1     | Hazardous to the aquatic environment - Chronic Hazard Category 1  |
| Aquatic Chronic 2     | Hazardous to the aquatic environment - Chronic Hazard Category 2  |
| Carc. 2               | Carcinogenicity Category 2  |
| Repr. 2               | Reproductive toxicity Category 2                                  |
| STOT RE 2             | Specific target organ toxicity (repeated exposure) Category 2     |
| 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                   |



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NFPA health hazard

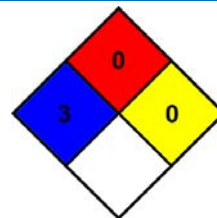
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III 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

D - Face shield and eye protection, Gloves, Synthetic apron

SDS US (GHS HazCom 2012)

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