SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Mercuric Chloride
CAS number	7487-94-7
Synonyms	Mercury(II) chloride, dichloromercury, sublimate, mercury bichloride

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

Identified uses	reagent, disinfectant, fungicide

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute dermal toxicity:	Category 1
Acute oral toxicity:	Category 2
Chronic hazards to the aquatic enviroment:	Category 2
Acute hazards to the aquatic enviroment:	Category 1
Skin corrosion:	Category 1B
Serious eye damage:	Category 1
Germ cell mutagenicity:	Category 2
Reproductive toxicity:	Category 2

Specfic target organ toxicity following repeated exposure: Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word Danger

Hazard statements Fatal if swallowed. Fatal in contact with skin. 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. Very toxic to aquatic life with long lasting effects.

Precautionary Statements If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Obtain special instructions before use. Do no handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid release to the enviroment. Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (on hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Specific measures (see supplemental first aid instructions on this label). Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before resuse. Store locked up. Dispose of contents and container to an approved waster disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

WHMIS

D1A D2A E

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration

Mercuric chloride	Mercury (II) chloride, Mercury bichloride	7487-94-7	100.00%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

In case of skin contact Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Get medical attention immediately.

If swallowed Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid immediately and call Poison Control Center.

4.2 Most important symptoms and effects, both acute and delayed

May cause muscle tremor and impaired motor function. May cause cardiac disturbances. Sever over-exposure can product lung damage, choking, unconsciousness or death. Shortness of breath, headache, nausea, dizziness, irritation/burns, all routes of exposure. Can cause ulceration of the conjunctiva and cornea. May cause allergic contact dermatitic. Cause gastrintestinal irritation with nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically. The concentration of mecury in whole blood is a reasonable measure of the bodyburden of mercury and thus is used for monitoring purposes. The use of Dimercaprol of BAL (British AntiLewisite), of d-Penicillamine as a chelated agent should be determined by qualified medical personnel. Persons with kidney disease, chronic respiratory disase, or skin disease may be at increased risk. Get medical aid immediately and call Poison Control Center.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Irritating and highly toxic gases may be generated by thermal decomposition or combustion. Hydrogen chloride gas, Mercury/mecury oxides.

5.3 Special protective equipment and precautions for firefighters

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Water runoff can cause enviromental damage. Dike and collect water used to fight fire.

5.4 Further information

Flash Point Not determined

Autoignition Temperature Not determined

Explosion limits

Upper Not determined

Lower Not determined

Sensitivity to Mechanical Impact Not determined

Sensitivity to Static Discharge Not determined

NFPA

Health	Flammability	Instability	Physical hazards
4	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Should not be released into enviroment. Prevent from reaching drains, sewer, or waterway.

6.3 Methods and materials for containment and cleaning up

Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary, use trained response staff or contractor. Evecuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Avoide contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemicals substances. Do not breathe dust, mist, or vapor. Do not ingest or inhale. Extreme care should always be taken to prevent skin and gastrointestinal absorption because there routes of entry can greatly increase the total body burden.

Hygiene measures
Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

Incompatibilities
Light sensitive. Moisture sensitive.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
No information available.

US. ACGIH Threshold Limit Values

Component	Type	Value
Mercuric chloride	TWA	0.025 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards
No information available.

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Emergency eye wash fountains and safety showers should be available in the immediate vicinty of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable exposure limits indicated above.

Personal protective equipment

Eye/face protection
Wear equipment for eye protection tested and approved under appropriate government standards such a NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection.

Skin/Body protection
Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glave removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

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. When necessary use NIOSH approved breathing equipment.

Control of environmental exposure
No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	
Appearance	White
Odor	Odorless
Odor Threshold	Not determined
pH	4.7
Melting Point/Range	277 °C (531 °F)
Boiling Point/Range	302 °C (576 °F) at 1013 hPa (760 mmHg)
Evaporation Rate	Not determined.
Flammability (solid)	Not determined.
Flammability or explosive limit	
Upper	Not determined
Lower	Not determined
Vapor Pressure	1.7 hPa (1.3 mmHg) at 236 °C (457 °F)
Vapor Density	Not determined
Density	Not determined
Solubility	Soluble in Water
Partition coefficient; n-octanol/water	Not determined
Autoignition Temp	Not determined
Decomposition Temp	Not determined
Viscosity	Not determined
Molecular Formula	HgCl2
Molecular Weight	271.5
VOC Content(%)	Not determined

Oxidizing properties	Not determined

9.2 Other safety information
No additional information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Nonreactive under normal conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
None under normal processing.

10.4 Conditions to avoid
Incompatible materials. Light sensitive. Dust generation. Excess heat.

10.5 Incompatible materials
Strong oxidizing agents, strong bases, ammonia, copper, iron, silver salts, potassium, antimony, sodium, lead, hypophosphites, formates, sulfites, phosphates, albumin, gelatin, alkalies, alkaloid salts, lime water, arsenic, bromides, borax, carbonates, reduced iron, infusions of cinchona, columbo, oak bark or senna, tannic acid, metallic halides, vegatable astringents.

10.6 Hazardous decomposition products
Mercury/mercury oxides, chloride fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Mercuric Chloride	41 mg/kg (rat)	-	-

Oral: Extremely hazardous in case of ingestion, of inhalation, causes gastrointestinal tract burns.
Dermal: Very hazardous in case of skin contact (irritant, permeator), of eyecontact (irritant).
Inhalation: Inhalation of dust will product irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing

Skin corrosion/irritation
Rabbit: Skin irritation - 24 h

Serious eye damage/eye irritation
Rabbit: Severe eye irritation - 24 h

Respiratory or skin sensitization
No additional information.

Germ cell mutagenicity
Has occurred in experimental animals.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Mercuric Chloride	7487-94-7	Group 3	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure
No additional information.

Specific target organ toxicity - repeated exposure
May cause kidney damage. May cause central nervous system effects.

Reproductive toxicity
Overexposure may cause reproductive disorder(s) based on tests with labortatory animals. Suspected human reproductive toxicant. May impair fertility or cause harm to an unborn child.

Chronic effects
Chronic mercury poisoning involves kidney damage, visual defect, tremor, and sever psychological changes. The brain is the critical organ for chronic mercury poisoning. The half-life of mercury in the brain is 10 years.

11.2 Additional Information
No additional informatin available.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Mercuric Chloride	7487-94-7	Lates calcarifer (Fish LOEC)	0.113 mg/l - 96.0 h
	7487-94-7	Daphnia magna (water flea)	0.002 mg/l - 48 h

12.2 Persistence and degradability
Compound decomposes to metallic mercury when in contact with organic matter and sunlight.

12.3 Bio accumulative potential
Bioconcentration factor (BCF): 5,680

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No informational available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN No.	UN1624
Proper Shipping Name	MERCURIC CHLORIDE
Hazard Class	6.1
Packing Group	II

IMDG

UN No.	UN1624
Proper Shipping Name	MERCURIC CHLORIDE
Hazard Class	6.1
Packing Group	II

IATA

UN No.	UN1624
Proper Shipping Name	MERCURIC CHLORIDE
Hazard Class	6.1
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Listed (MERCURIC CHLORIDE)

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed (MERCURIC CHLORIDE)

SARA 304 Emergency release notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Listed (MERCURIC CHLORIDE) Reactive, Acute, Chronic.

SARA 313 (TRI reporting)

Listed (MERCURIC CHLORIDE)

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Not listed

US. New Jersey Worker and Community Right-to-Know Act

Not listed

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed

California Proposition 65

Not listed

SECTION 16: Other information

Issue date: 07/12/2024
Revision 1: 07/03/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.