Safety Data Sheet

SECTION 1: Identification

Product Name	Mercuric Chloride, ACS Reagent
Product Code	C1245500
Other Identifiers	Mercury(II) Chloride
Recommended Uses	General Laboratory Reagent/Chemical.
Uses Advised Against	Not intended for drug, food or household use.

Address 3825 Parrott Drive
Charlotte, NC 28214 USA
Email orders@reagents.com
Fax 1-888-843-4384
Telephone 1-800-732-8484
Website www.reagents.com

24-Hour Emergency Telephone

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1 + 730-527-3887

SECTION 2: Hazard(s) Identification

Acute toxicity Oral (Category 1)
Acute toxicity Dermal (Category 1)
Acute toxicity Inhalation (Category 2)
Serious eye damage/eye irritation (Category 1)
Skin corrosion/irritation (Category 1)
Germ cell mutagenicity (Category 2)
Reproductive toxicity (Category 2)
Specific target organ toxicity, repeated exposure (Category 1)
Hazardous to the aquatic environment, short-term (Category Acute 1)
Hazardous to the aquatic environment, long-term (Category Chronic 1)

Hazards not otherwise classified or covered by GHS

None identified.

Signal Word

DANGER

Hazard Statements

Fatal if swallowed, in contact with skin or if inhaled. Causes severe skin burns and serious 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

Obtain, read and follow all safety instructions before use. Do not breathe mist, vapors or spray. Do not get in eyes, on skin or on clothing. Wash areas of contact/exposure thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and clothing and eye protection. Wear respiratory protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get emergency medical help immediately. IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. Get emergency medical help immediately. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Get medical help. IF exposed or concerned, get medical advice. Get medical help if you feel unwell. Collect spillage. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local, state, federal and international regulations.

SECTION 3: Composition / Information on Ingredients

Component Name	Component Number CAS	Component Number EC	Component Weight %
Mercury (II) Chloride	7487-94-7	231-299-8	100

SECTION 4: First-Aid Measures

General Advice	Show this SDS to attending physician if medical treatment is needed.
Skin Contact	Immediately flush affected area with plenty of water while removing contaminated clothing . Seek medical attention if you are concerned or feel unwell.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Seek immediate medical attention.
Inhalation	1. Move victims to fresh air. Emergency personnel should avoid self-exposure to mercury salts. 2. Evaluate vital signs including pulse and respiratory rate and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support. 3. Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures. 4. RUSH to a health care facility.
Ingestion	1. Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support. 2. Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures. 3. Give the victims water or milk: children up to 1 year old, 125 mL (4 oz or 1/2 cup); children 1 to 12 years old, 200 mL (6 oz or 3/4 cup); adults, 250 mL (8 oz or 1 cup). Water or milk should be given only if victims are conscious and alert. 4. RUSH to a health care facility.
Symptoms/effects	Increased salivation, foul breath, inflammation and ulceration of the mucous membranes, abdominal pain, and bloody diarrhea. Dermal exposure may result in dermatitis (red, inflamed skin) and burns. Oliguria (scanty urination), anuria (suppression of urine formation), and acute renal failure may be noted. Weak pulse, seizures, psychic disturbances, circulatory collapse, chest pain, and dyspnea (shortness of breath) may be observed.
Treatment	For ingestion: Activated charcoal may be administered if victims are conscious and alert. Use 15 to 30 g (1/2 to 1 oz) for children, 50 to 100 g (1-3/4 to 3-1/2 oz) for adults, with 125 to 250 mL (1/2 to 1 cup) of water. Promote excretion by administering a saline cathartic or sorbitol to conscious and alert victims. Children require 15 to 30 g (1/2 to 1 oz) of cathartic; 50 to 100 g (1-3/4 to 3-1/2 oz) is recommended for adults.

SECTION 5: Fire-Fighting Measures

Extinguishing Media	Substance is not flammable, use agent most appropriate to extinguish surrounding fire (water, carbon dioxide, dry chemical, sand/earth, foam).
Specific Hazards	Thermal decomposition may produce toxic or irritating fumes.
Actions for Firefighters	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

Precautions and Procedures	Ensure adequate ventilation. Use personal protective equipment as required. Evacuate unprotected personnel to safe areas. Keep people away from and upwind of spill/leak.
Environmental Precautions	Take all precautions to avoid release to the environment.
Containment and Clean Up	Avoid dust formation. Wear respiratory protection, gloves, eye protection and protective clothing. Sweep up or vacuum up spillage and collect in suitable lidded container for disposal.

Section 7: Handling and Storage

Handling	Follow good hygiene procedures when handling chemical materials. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use personal items when handling this substance. Wear respiratory protection, gloves, protective clothing and eye protection when handling this substance.
Storage	Keep containers tightly closed in a cool, dry and well-ventilated place. Protect from freezing and physical damage. Store separately from incompatible materials. Store locked up.

Section 8: Exposure Controls / Personal Protection

Engineering Controls	As part of safe chemical handling, emergency eye wash fountains and safety showers should be available in handling areas. Provide sufficient ventilation measures to keep the airborne concentration below the applicable workplace exposure limits.
Exposure Limits	Mercury (inorganic compound as Hg) PEL-Ceiling 0.1 mg/m³ US-OSHA
Exposure Limits	Mercury (inorganic compound as Hg) REL-TWA 0.05 mg/m³ US-NIOSH
Exposure Limits	Mercury (inorganic compound as Hg) TLV-TWA 0.025 mg/m³ US-ACGIH
Exposure Limits	Mercury REL-Ceiling 0.1 mg/m³ US-NIOSH
Eye Protection	Wear safety glasses with side shields or safety goggles. Wear face shield if there is risk of splashes.
Skin Protection	Wear chemical resistant gloves and protective clothing.
Respiratory Protection	Wear respiratory protection.

Section 9: Physical and Chemical Properties

Physical State	Solid
Appearance/Color	Colorless/white
Odor	Odorless
Odor Threshold	Not applicable.
Melting/Freezing Point	276 - 277 °C
Boiling Point/Range	302°C
Flammability	Not flammable
Flammable/Explosive Limits	Not applicable
Flash Point	Not applicable
Auto-Ignition Temperature	Not applicable
Decomposition Temperature	Data not available
pH	3.2 - 4.7 (0.2M aqueous)
Viscosity	Not applicable.
Solubility (in water)	69 g/L at 20°C
Partition Coefficient (n-octanol/water)	0.1 - 0.22
Relative Density	5.44
Vapor Pressure	Not applicable
Vapor Density	9.8
Evaporation Rate	Not applicable.
Particle Characteristics	Data not available

Section 10: Stability and Reactivity

Reactivity	Mixture with sodium or potassium produces strong explosion on impact.
Chemical Stability	Stable under normal conditions of handling and storage.
Hazardous Reactions	Based on available data, no reaction hazards have been identified that would occur during normal handling and storage.
Conditions to Avoid	Avoid contact with incompatible materials.
Incompatible Materials	Sodium, potassium, formates, sulfites, hypophosphites, phosphates, sulfides, albumin, gelatin, alkalis, alkaloid salts, ammonia, lime water, antimony, arsenic, bromides, borax, carbonates, reduced iron, iron, copper, lead and silver salts, infusions of cinchona, oak bark or senna, tannic acids and vegetable astringents.
Hazardous Decomposition	Thermal decomposition can produce mercury oxides, chlorine.

Section 11: Toxicological Information

Acute Toxicity - Oral	LD50 (rat) 1 mg/kg
Acute Toxicity - Dermal	LD50 (rat) 41 mg/kg
Acute Toxicity - Inhalation	The toxicological data is limited or unavailable.
Skin Corrosion/Irritation	Fatal in contact with skin. Causes severe skin damage.
Eye Damage/Irritation	This material can cause serious eye damage.
Respiratory Sensitization	Not expected to cause respiratory sensitization.
Skin Sensitization	Not expected to cause skin sensitization.
Germ Cell Mutagenicity	Based on available data, this substance is suspected of causing germ cell mutagenicity.
Carcinogenicity	This material has not been identified as a carcinogen by IARC or NTP.
Reproductive Toxicity	Studies indicate that this material is suspected of causing damage to fertility or the unborn child.
STOT Single Exposure	None known.
STOT Repeated Exposure	The substance may have effects on the kidneys, central nervous system and peripheral nervous system. This may result in ataxia, sensory and memory disturbances, tremors, muscle weakness and kidney impairment.
Aspiration Hazard	This substance is not considered to be an aspiration hazard.
Other Information	No additional information available.

Section 12: Ecological Information

Toxicity Values	Empirical data is limited.
Persistence/Biodegradability	The methods for determining biological degradability do not apply to inorganic substances.
Bioaccumlation Potential	Mercury is known to bioaccumulate.
Mobility in Soil	Data is not available for this substance that does not meet the criteria of ecotoxin.
Other Adverse Effects	Mercury has been linked to endocrine disruption.

Section 13: Disposal Considerations

Discharge, treatment, or disposal may be subject to national, state, regional or local laws. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose in accordance with national, state, regional and local regulations.

Section 14: Transport Information

UN Number	UN1624
Proper Shipping Name, Hazard Class	MERCURIC CHLORIDE, 6.1
Packing Group	II
Marine Pollutant	Classified as a severe marine pollutant.

Section 15: Regulatory Information

USA TSCA	On or in compliance with the inventory.
USA SARA 302/304	Mercuric chloride (EHS), TPQ 227 kg (500 lbs), RQ 500 lbs
USA SARA 311/312	Mercuric chloride (EHS)
USA SARA 313 (TRI)	Mercuric chloride (EHS)
Canada DSL/NDSL	On or in compliance with DSL.
California Proposition 65	This product contains a chemical on the list.

Section 16: Other Information

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
ATE	Acute Toxicity Estimate (calculated toxicity value)
BCF	Bioconcentration Factor
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (USA)
DOT	Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EHS	Extremely Hazardous Substance
EPA	Environmental Protection Agency (United States)
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IDLH	Immediately Dangerous to Life and Health
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PEL	Permissible Exposure Limit
PNOR	Particulates Not Otherwise Classified
PPE	Personal Protective Equipment
ppb	Parts per billion
ppm	Parts per million
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act (USA)
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TRI	Toxic Release Inventory (USA)
TSCA	Toxic Substances Control Act (USA)
TWA	Time Weighted Average
UN	United Nations

Safety Data Sheet

Revision Date 03/14/23 Issue Date: 3/14/2023

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