



MATERIAL SAFETY DATA SHEET
Mercury(II) chloride

Section 1 - Chemical Product and Company Identification

MSDS Name: Mercury(II) chloride

Catalog Numbers: M/2800/48, M/2800/50, M/2800/53, M/2850/48, M/2850/50, M/2850/53, M/2850/60

Synonyms: Calochlor; Corrosive mercury chloride; Corrosive sublimate; Mercury bichloride; Mercury perchloride; Mercury(II) chloride; Mercuric chloride.

Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG

For information in Europe, call: (01509) 231166

Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
7487-94-7	Mercury(II) chloride	>99.5	231-299-8

Hazard Symbols: T+ C N



Risk Phrases: 28 34 48/24/25 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Very toxic if swallowed. Causes burns. Toxic : danger of serious damage to health by prolonged exposure in contact with skin and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Light sensitive.

Potential Health Effects

- Eye:** Exposure to mercury or mercury compounds can cause discoloration on the front surface of the lens, which does not interfere with vision. Causes severe eye irritation and possible burns. Contact with mercury or mercury compounds can cause ulceration of the conjunctiva and cornea.
- Skin:** May be fatal if absorbed through the skin. Causes severe skin irritation and possible burns. May cause allergic contact dermatitis.
- Ingestion:** May be fatal if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause muscle tremor and impaired motor function. May cause cardiac disturbances.
- Inhalation:** May cause central nervous system effects including vertigo, anxiety, depression, muscle incoordination, and emotional instability. May cause gastrointestinal effects including gum and mouth inflammation, jaw necrosis, and loosening of the teeth. May cause burns to the respiratory tract. Acute exposure to high concentrations of mercury vapors may cause severe respiratory tract irritation.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause reproductive and fetal effects. Chronic ingestion may cause accumulation of mercury in body tissues. Laboratory experiments have resulted in mutagenic effects. May be rapidly transferred across the placenta and cause adverse fetal effects.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: The concentration of mercury in whole blood is a reasonable measure of the body-burden of mercury and thus is used for monitoring purposes. Persons with kidney disease, chronic respiratory disease, liver disease, or skin disease may be at increased risk from exposure to this substance.

Antidote: The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel. The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible.

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or alcohol type foam.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Store protected from light. Use only with adequate ventilation. Extreme care should always be taken to prevent skin and gastrointestinal absorption because these routes of entry can greatly increase the total body burden and are often overlooked in occupational settings.

Storage: Store in a tightly closed container. Keep away from food and drinking water. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations

below the permissible exposure limits.

Exposure Limits

CAS# 7487-94-7:

United States OSHA: 0.1 mg/m³ Ceiling (Mercury, aryl and inorganic compounds).
Belgium - TWA: (mercury, aryl and inorganic compounds): 0.1 mg/m³ VLE (as Hg)
France - VME: (mercury, aryl and inorganic compounds): 0.1 mg/m³ VME (as Hg)
Germany: (mercury, aryl and inorganic compounds): 0.1 mg/m³ VME (as Hg) Germany:
(mercury inorganic compounds): Skin absorber
Malaysia: (mercury, aryl and inorganic compounds): 0.1 mg/m³ TWA (as Hg)
Netherlands: (mercury inorganic compounds): 0.15 mg/m³ STEL Netherlands: (mercury
inorganic compounds): 0.05 mg/m³ MAC
Russia: (mercury inorganic compounds): 0.2 mg/m³ TWA (as Hg) Russia: (mercury
inorganic compounds): 0.05 mg/m³ STEL (as Hg)
Spain: (mercury, aryl and inorganic compounds): 0.1 mg/m³ VLA-ED (as Hg)

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: white

Odor: odorless

pH: 4.7

Vapor Pressure: slightly volatile @RT

Viscosity: Not applicable.

Boiling Point: 300 deg C (572.00°F)

Freezing/Melting Point: 277 deg C (530.60°F)

Autoignition Temperature: Not available.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

Decomposition Temperature: Not available

Solubility in water: Soluble

Specific Gravity/Density: 5.44 at 25°C

Molecular Formula: HgCl₂

Molecular Weight: 271.50

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Light, dust generation, excess heat.

Incompatibilities with Other 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, vegetable astringents.

**Hazardous
Decomposition
Products**

Mercury/mercury oxides, chloride fumes.

**Hazardous
Polymerization**

Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 7487-94-7: OV9100000

LD50/LC50: RTECS:
CAS# 7487-94-7: Draize test, rabbit, eye: 50 ug/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;
Oral, mouse: LD50 = 6 mg/kg;
Oral, rat: LD50 = 1 mg/kg;
Skin, rat: LD50 = 41 mg/kg;

Carcinogenicity: Mercury(II) chloride - IARC: Group 3 (not classifiable) (Mercury inorganic compounds).

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Rainbow trout: LC50 = 0.903 mg/L; 24 Hr; Unspecified
Fish: Fathead Minnow: LC50 = 0.037 mg/L; 48 Hr; Unspecified
Fish: Bluegill/Sunfish: LC50 = 0.16 mg/L; 96 Hr; Static at 13.5-16.2°C (pH 7.1-7.3)
Water flea Daphnia: LC50 = 0.093 mg/L; 48 Hr; Unspecified

Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	MERCURIC CHLORIDE	MERCURIC CHLORIDE	MERCURIC CHLORIDE
Hazard Class:	6.1	6.1	6.1
UN Number:	1624	1624	1624
Packing Group:	II	II	II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+ C N

Risk Phrases:

R 28 Very toxic if swallowed.

R 34 Causes burns.

R 48/24/25 Toxic : danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 7487-94-7: 3

Canada

CAS# 7487-94-7 is listed on Canada's DSL List

US Federal

TSCA

CAS# 7487-94-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/15/1999

Revision #5 Date 1/18/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
