Material Safety Data Sheet
Mercury (I) chloride

ACC# 13960

Section 1 - Chemical Product and Company Identification

MSDS Name: Mercury (I) chloride
Catalog Numbers: M159-100, S80079
Synonyms: Calomel; Mercurous chloride; Mercury monochloride; Mercury subchloride.
Company Identification:
Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7546-30-7	Mercury (I) chloride	>99.5	231-430-9

Hazard Symbols: XN N
Risk Phrases: 22 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid. **Warning!** Toxic. Light sensitive. Moisture sensitive. Harmful if swallowed. May cause kidney damage. May cause central nervous system effects. May be harmful if absorbed through the skin. May cause allergic skin reaction. May cause adverse reproductive effects. May cause irritation by all exposure routes.
Target Organs: Kidneys, central nervous system, reproductive system.

Potential Health Effects

Eye: May cause eye irritation. Contact may cause ulceration of the conjunctiva and cornea.
Skin: May cause skin irritation. May be harmful if absorbed through the skin. May cause an allergic reaction in certain individuals. May cause a gray discoloration of the skin.
Ingestion: Harmful if swallowed. May cause kidney failure. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause weakness, fatigue, vascular collapse, and esophagus damage.
Inhalation: May cause respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause kidney damage.
Chronic: Prolonged or repeated inhalation of dusts may cause neurological damage. May cause kidney injury. May cause tremors, irritability, loss of memory and intellect. May also cause Pink disease characterized by skin, cardiovascular, and neurobehavioral abnormalities. Long-term exposure may result in discoloration of the lens and cornea (mercurialentis). Mercurialentis is a sign of exposure and not of tox icity. anic Mercury substances such as Mercury (I) chloride ha ve not been shown to be human teratogens, but should be HANDLED WITH C

AUTION since related Mercury compounds effect fertility in males and f emales.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Notes to Physician: Treat symptomatically and supportively.
Antidote: The use of Dimercaprol or BAL (British Anti-Lewisite) 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
Flash Point: Not applicable.
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

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. 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. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin and clothing. Do not ingest or inhale.
Storage: Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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 explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Mercury (I) chloride	none listed	none listed	none listed

OSHA Vacated PELs: Mercury (I) chloride: No OSHA Vacated PELs are listed for this chemical.

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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: white
Odor: none reported
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: Not available.
Decomposition Temperature:> 752 deg F
Solubility: Insoluble in water.
Specific Gravity/Density: 7.1500
Molecular Formula: Cl2Hg2
Molecular Weight:472.086

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. May decompose when exposed to light.
Conditions to Avoid: High temperatures, incompatible materials, light, moisture.
Incompatibilities with Other Materials: Substance may react with acacia, ammonia, alkali chlorides, bromides, carbonates, cocaine, copper salts, cyanides, hydroxides, iodine, iodoform, lead salts, silver salts, soap, sulfates, and sulfites.
Hazardous Decomposition Products: Hydrogen chloride, mercury/mercury oxides.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 7546-30-7: OV8750000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 7546-30-7:
IARC: IARC Group 3 - not classifiable (listed as Mercury inorganic compounds).
Epidemiology: No information available.
Teratogenicity: Inorganic Mercury substances such as Mercury (I) chloride have not been shown to be human teratogens.
Reproductive Effects: Inorganic Mercury substances such as Mercury (I) chloride should be HANDLED WITH CAUTION since related Mercury compounds effect fertility in males and females.
Neurotoxicity: Neurotoxic effects have occurred in humans.
Mutagenicity: Mutagenic effects have occurred in experimental animals.
Other Studies: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information reported.
Physical: No information available.
Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	MERCURIC CHLORIDE				No information available.
Hazard Class:	6.1				
UN Number:	UN1624				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7546-30-7 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313
This material contains Mercury (I) chloride (listed as Mercury compounds), 99 5%, (CAS# 7546-30-7) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 7546-30-7 can be found on the following state right to know lists: New Jersey.
WARNING: This product contains Mercury (I) chloride, listed as `Mercury compounds', a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
XN N
Risk Phrases:
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system
and skin.

Safety Phrases:
S 13 Keep away from food, drink and animal feeding
stuffs.
S 24/25 Avoid contact with skin and eyes.
S 46 If swallowed, seek medical advice immediately
and show this container or label.

WGK (Water Danger/Protection)
CAS# 7546-30-7: No information available.
Canada - DSL/NDSL
CAS# 7546-30-7 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of D1B, D2B.
Canadian Ingredient Disclosure List
CAS# 7546-30-7 is listed on the Canadian Ingredient Disclosure List.
Exposure Limits

CAS# 7546-30-7: OEL-AUSTRALIA:TWA 0.05 mg(Hg)/m3;Skin JANUARY 1993 OEL-BELGIUM:TWA 0.05 mg(Hg)/m3;Skin JANUARY 1993 OEL-CZECHOSLOVAKIA :TWA 0.05 mg(Hg)/m3;STEL 0.15 mg(Hg)/m3 OEL-DENMARK:TWA 0.05 mg(Hg)/m 3 JANUARY 1993 OEL-FINLAND:TWA 0.05 mg(Hg)/m3 JANUARY 1993 OEL-FRA NCE:TWA 0.05 mg(Hg)/m3 JANUARY 1993 OEL-GERMANY:TWA 0.01 ppm (0.1 mg (Hg)/m3) JANUARY 1993 OEL-HUNGARY:TWA 0.02 mg(Hg)/m3;STEL 0.04 mg(Hg)/m JANUARY 1993 OEL-JAPAN:TWA 0.05 mg(Hg)/m3 JANUARY 1993 OEL-THE NETHERLANDS:TWA 0.05 mg(Hg)/m3;STEL 0.15 mg(Hg)/m3 OEL-THE PHILIPPINE S:TWA 0.05 mg(Hg)/m3 JANUARY 1993 OEL-POLAND:TWA 0.01 mg(Hg)/m3 JAN UARY 1993 OEL-RUSSIA:TWA 0.05 mg(Hg)/m3;STEL 0.01 mg(Hg)/m3 JANUARY 1 993 OEL-SWEDEN:TWA 0.05 mg(Hg)/m3 JANUARY 1993 OEL-THAILAND:STEL 0. 05 mg(Hg)/m3 JANUARY 1993 OEL-UNITED KINGDOM:TWA 0.05 mg(Hg)/m3;STEL 0.15 mg(Hg)/m3 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 4/29/1999
Revision #3 Date: 10/22/2003

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 Fisher 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 Fisher has been advised of the possibility of such damages.