

Material Safety Data Sheet

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Version 1.4

According to 91/155/EEC

1 - Product and Company Information

Product Name	MERCURY
Product Number	83359
Company	Sigma-Aldrich Pte Ltd #08-01 Citilink Warehouse Singapore 118529 Singapore
Technical Phone #	65 271 1089
Fax	65 271 1571

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
MERCURY	7439-97-6	231-106-7	080-001-00-0

Formula	Hg
Molecular Weight	200.59 AMU
Synonyms	Colloidal mercury * Hydrargyrum * KWIK (Dutch) * Liquid silver * Mercure (French) * Mercurio (Italian) * Mercury (ACGIH:OSHA) * Metallic mercury * NCI-C60399 * Quecksilber (German) * Quick silver * RCRA waste number U151 * RTEC (Polish)

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Toxic by inhalation. Danger of cumulative effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is

conscious. Call a physician immediately.

GENERAL INFORMATION

Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland	Polan	NDS	0.01 MG/M3
Poland	Polan	NDSP	- - -

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	0.025 mg/m3

Remarks: H

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	0.01 ppm 0.08 mg/m3, E

Remarks: 4

Remarks: 25

EXPOSURE LIMITS - SWEDEN

Source	Type	Value
	LLV (Level)	0.03 mg/m3

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	0.05 mg/m3 0.005 ppm

Remarks: M

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	TWA	0.025MG(HG)/M3

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	356.6 °C	760 mmHg
MP/MP Range	-38.87 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	1 mmHg	126 °C
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	7 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Ammonia, Azides, Nitrates, Chlorates Copper, Copper alloys.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nature of decomposition products not known.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: OV4550000

SENSITIZATION

Respiratory: May cause allergic respiratory reaction.

Skin: May cause allergic skin reaction.

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: Toxic if absorbed through skin.

Eye Contact: Causes eye irritation.

Inhalation: Toxic if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

TARGET ORGAN INFORMATION

Kidneys.

CONDITIONS AGGRAVATED BY EXPOSURE

May cause nervous system disturbances.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Rat

Route of Application: Intraperitoneal

Exposure Time: 14D

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Man

150 UG/M3

Unreported

Cytogenetic analysis

CHRONIC EXPOSURE - TERATOGEN

Species: Rat

Dose: 1 MG/M3/24H

Route of Application: Inhalation

Exposure Time: (1-20D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death,

e.g., stunted fetus).

Species: Rat
Dose: 300 UG/M3/4H
Route of Application: Inhalation
Exposure Time: (7-21D PREG)
Result: Specific Developmental Abnormalities: Central nervous system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 890 NG/M3/24H
Route of Application: Inhalation
Exposure Time: (16W MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

Species: Rat
Dose: 7440 NG/M3/24H
Route of Application: Inhalation
Exposure Time: (16W MALE)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Material in the elemental state should be recovered for reuse or recycling. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2809
Class: 8
PG: III
Proper Shipping Name: Mercury

IMDG

UN#: 2809
Class: 8
PG: III
Proper Shipping Name: Mercury
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 2809
Class: 8
PG: III
Proper Shipping Name: Mercury
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 080-001-00-0

INDICATION OF DANGER: T N

Toxic. Dangerous for the environment.

R-PHRASES: 23 33 50/53

Toxic by inhalation. Danger of cumulative effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 7 45 60 61

Keep container tightly closed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

SWITZERLAND

SWISS POISON CLASS: 2

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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