# SIGMA-ALDRICH

## **Material Safety Data Sheet**

Version 3.0 Revision Date 08/19/2009 Print Date 09/09/2010

#### 1. PRODUCT AND COMPANY IDENTIFICATION Product name Mercury Product Number : 215457 Brand Sigma-Aldrich 2 Company Sigma-Aldrich 5 3050 Spruce Street SAINT LOUIS MO 63103 USA Telephone : +18003255832 Fax +18003255052 2 Emergency Phone # : (314) 776-6555 2. COMPOSITION/INFORMATION ON INGREDIENTS Formula Hg Molecular Weight 200.59 g/mol 2 CAS-No. EC-No. Index-No. Concentration Mercury 7439-97-6 231-106-7 080-001-00-0 -3. HAZARDS IDENTIFICATION **Emergency Overview OSHA Hazards** Target Organ Effect, Highly toxic by inhalation, Respiratory sensitiser **Target Organs** Kidney **HMIS Classification** Health Hazard: 4 Chronic Health Hazard: Flammability: 0 Physical hazards: 0 **NFPA** Rating Health Hazard: 4 0 Fire: **Reactivity Hazard:** 0 **Potential Health Effects** Inhalation May be fatal if inhaled. May cause respiratory tract irritation. Skin May be harmful if absorbed through skin. May cause skin irritation.

Sigma-Aldrich - 215457 Sigma-Aldrich Corporation www.sigma-aldrich.com

#### 4. FIRST AID MEASURES

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### **5. FIRE-FIGHTING MEASURES**

#### Flammable properties

Flash point not applicable

Ignition temperature no data available

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

#### **Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

#### Handling

Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

#### Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis		
Mercury	7439-97-6	TWA	0.05 mg/m3	1989-03-01	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000		
Remarks	Skin contact does contribute to exposure. See Table Z-2.						
		CEIL	0.001 mg/m3	1993-06-30	USA. Occupational Exposure Limits (OSHA) - Table Z2		
	(Z37.8-1971)						
		TWA	0.03 mg/m3	1994-09-01	USA. ACGIH Threshold Limit Values (TLV)		
	carcinogenic of data. In vi sufficient to contribute to Refers to Ap 1994-1995 A	tor huma tro or anir classify th exposure pendix A	ns but which cann nal studies do not e agent into one o e. Carcinogens.	en: Agents which cause concern that they could be annot be assessed conclusively because of a lack tot provide indications of carcinogenicity which are e of the other categories. Skin contact does gical Exposure Index or Indices (see BEI® section)			

#### Personal protective equipment

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES Appearance liquid

Form

Safety data

pН

no data available

Sigma-Aldrich - 215457

Melting point	-38.87 °C (-37.97 °F) - lit.
Boiling point	356.6 °C (673.9 °F) - lit.
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	< 0.01 hPa (< 0.01 mmHg) at 20 °C (68 °F) 1 hPa (1 mmHg) at 126 °C (259 °F)
Water solubility	no data available
Relative vapour density	6.93 - (Air = 1.0)

#### **10. STABILITY AND REACTIVITY**

#### Storage stability

Stable under recommended storage conditions.

#### Materials to avoid

Strong oxidizing agents, Ammonia, Azides, Nitrates, Chlorates, Copper

#### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Mercury/mercury oxides.

#### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

no data available

#### Irritation and corrosion

no data available

#### Sensitisation

May cause allergic respiratory reaction.

#### Chronic exposure

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

IARC:	3 - Group 3: Not classifiable as to its carcinogenicity to humans (Mercury)
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- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Potential Health Effects**

Inhalation	May be fatal if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.
Target Organs	Kidney,

#### **Additional Information**

RTECS: OV4550000

ECOLOGICAL INFORM	ATION			
Elimination informatio	n (persistenc	e and degradability)		
Bioaccumulation		auratus (goldfish) - 1,789 d ration factor (BCF): 155,986		
Ecotoxicity effects				
Toxicity to fish	LC50 - Lab	eo rohita - 0.018 mg/l - 96 ł	1	
Further information or	ı ecology			
An environmental hazar	d cannot be e>	cluded in the event of unpro	ofessional handling or dispos	al.
Very toxic to aquatic or	janisms, may o	cause long-term adverse effe	ects in the aquatic environme	nt.
DISPOSAL CONSIDER	TIONS			
service to dispose of thi incinerator equipped wit	s material. Dis h an afterburn	solve or mix the material wit	ntact a licensed professional h a combustible solvent and	
<b>Contaminated packag</b> Dispose of as unused p				
TRANSPORT INFORMA	TION			
<b>DOT (US)</b> UN-Number: 2809 Class Proper shipping name: M Marine pollutant: No Poison Inhalation Hazard	lercury	Packing group: III		
IMDG UN-Number: 2809 Class Proper shipping name: M Marine pollutant: No		Packing group: III	EMS-No: F-A, S-B	
IATA UN-Number: 2809 Clas Proper shipping name: N		Packing group: III		
REGULATORY INFORM	IATION			
OSHA Hazards	ghly toxic by in	halation, Respiratory sensiti	ser	
raiget organ Encot, rig		the Canadian DSL list.		
<b>DSL Status</b> All components of this p	roduct are on t			
DSL Status All components of this p SARA 302 Component	S	ial are subject to the reporti	ng requirements of SARA Titl	e III, Section 302.
DSL Status All components of this p SARA 302 Component	s Is in this mater	ial are subject to the reporti		
DSL Status All components of this p SARA 302 Component SARA 302: No chemica	s Is in this mater	ial are subject to the reporti	ng requirements of SARA Titl CAS-No. 7439-97-6	e III, Section 302. Revision Date 1991-07-01

#### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

#### Massachusetts Right To Know Components

	CAS-No.	Revision Date
Mercury	7439-97-6	1991-07-01
Pennsylvania Right To Know Components		
	CAS-No.	Revision Date
Mercury	7439-97-6	1991-07-01
New Jersey Right To Know Components		
	CAS-No.	Revision Date
Mercury	7439-97-6	1991-07-01
California Prop. 65 Components		
WARNING! This product contains a chemical known in the State of	CAS-No.	Revision Date
California to cause birth defects or other reproductive harm.	7439-97-6	1990-07-01
Mercury		

#### **16. OTHER INFORMATION**

#### **Further information**

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