

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier:

Identification as on the label/Trade name: Mercury.

Molecular weight: 200.59

Chemical formula: Hg

Synonyms: Colloidal mercury, Hydrargyrum, Metallic mercury, Quicksilver, Liquid silver, Liquid metal mercury

Details of the supplier of the Safety Data Sheet:

Neonest AB
Storgatan 70C, Solna
SE-17152
Sweden

Contact details:

+46-76-219-9731

24-hour Emergency Contact:

Swedish Poisons Centre
Phone: 112 - Ask for Poisons Information, 112 – begär Giftinformation.

Other International Contacts:

CHEMTREC 24-hour: +1-703-741-5500 (US + Worldwide)
NHS: 111 (UK)
Charite: +49 30 450 531 000 (Netherlands)
INTCF: +34 917689800 (Spain)
CapTv: +33 1 40 05 48 48 (France)

Section 2: Hazards Identification

Classification of the substances or mixture:

The mixture is classified according to: Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories:

Acute Toxicity, Inhalation (Category 2)
Reproductive Toxicity (Category 1B)
STOT RE (Category 1)
Aquatic Acute (Category 1)
Aquatic Chronic (Category 1)

Hazard statement:

H330
H360
H372
H400
H410

Label elements:

Hazard pictograms:



Signal Words: Danger.

Hazard Statements:

H330 Fatal if inhaled.

H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor.

P391 Collect spillage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Section 3: Composition/Information on Ingredients

Substance/Mixture: Substance.

Ingredients:

Substance name (IUPAC/EC)	CAS-No.	Concentration % by weight	Classification EC1272/2008	
	EC-No.			
Mercury	7439-97-6	>99.9%	Repr. 1B	H360
			Acute Tox. 2	H330
			STOT RE 1	H372
	231-106-7		Aquatic Acute 1	H400
			Aquatic Chronic 1H410	

For explanation of abbreviations see Section 16.

Section 4: First-Aid Measures

Description of first aid measures:

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. 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.

Most important symptoms and effects, both acute and delayed:

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. Treat symptomatically and supportively. Persons with kidney disease, chronic respiratory disease, liver disease, or skin disease may be at increased risk from exposure to this substance.

Indication of any immediate medical attention and special treatment needed:

Antidote: The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. 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

Extinguisher media:

General Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Undergoes hazardous reactions in the presence of heat and sparks or ignition. Smoke may contain toxic mercury or mercuric oxide. Smoke may contain toxic mercury or mercuric oxide.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Do not allow water runoff to enter sewers or waterways.

Explosion: Not considered to be an explosion hazard.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Use proper personal protective equipment as indicated in Section 8.

Environmental precautions: Avoid release into the environment.

Methods and materials for containment and cleaning up:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7: Handling and Storage

Precautions for safe handling:

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Use only in a chemical fume hood. Discard contaminated shoes. Do not breathe vapour.

Conditions for safe storage, including any incompatibilities:

Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Store protected from azides.

Section 8: Exposure Controls/Personal Protection

Control parameters:

Occupational exposure limits:

ACGIH	0.025 mg/m ³ ; skin - potential for cutaneous absorption
NIOSH	0.05 mg/m ³ TWA (vapour)
OSHA - Final PELs	1 mg/10m ³ Ceiling (vapour)
OSHA Vacated PELs	Mercury: 0.05 mg/m ³ TWA (vapour)

Exposure controls:

Appropriate engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Individual protection measures, such as personal protective equipment:

Eye: 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.

Hand: Wear appropriate protective gloves to prevent skin exposure.

Body: 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 a respirator's use.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance (form): Liquid.

Colour: Silver.

Odour: Odourless.

Odour threshold: No data available.

pH (concentration): Not applicable.

Melting point/range (°C): -38 °C

Boiling point/range (°C): 356 °C

Flash point (°C): No data available.

Evaporation rate: Not applicable.

Flammability (solid, gas): No data available.

Ignition temperature (°C): No data available.

Upper/lower flammability/explosive limits: No data available.

Vapour pressure (Pa at 20 °C): 0.163

Vapour density: 0.468

Relative density (25 °C): 13.55 g/cm³

Water solubility (g/L) at 20 °C: Insoluble.

n-Octanol/Water partition coefficient: No data available.

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity, dynamic (mPa.sec at 20 °C): 1.55

Explosive properties: The substance or mixture is not classified as explosive.

Oxidising properties: The substance or mixture is not classified as oxidizing.

Section 10: Stability and Reactivity

Reactivity & Chemical stability: Stable under normal temperatures and pressures.

Conditions to avoid: High temperatures, incompatible materials.

Incompatible materials to avoid: Metals, aluminium, ammonia, chlorates, copper, copper alloys, ethylene oxide, halogens, iron, nitrates, sulphur, sulfuric acid, oxygen, acetylene, lithium, rubidium, sodium carbide, lead, nitromethane, peroxyformic acid, calcium, chlorine dioxide, metal oxides, azides, 3-bromopropyne, alkynes + silver perchlorate, methylsilane + oxygen, tetracarbonylnickel + oxygen, boron diiodophosphide.

Hazardous Decomposition Products: Mercury/mercury oxides.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Information on toxicological effects:

Fatal if inhaled.

Classification according to GHS (1272/2008/EG, CLP)

Skin corrosion/irritation:

Not classified based on available information.

Serious eye damage/eye irritation:

Not classified based on available information.

Respiratory or skin sensitisation:

Not classified based on available information.

Germ cell mutagenicity:

Not classified based on available information.

Carcinogenicity:

Not classified based on available information.

Reproductive toxicity:

May damage fertility or the unborn child.

Specific target organ toxicity – single exposure (STOT):

Not classified based on available information.

Specific target organ toxicity (STOT) – repeated exposure:

Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity:

Not classified based on available information.

Section 12: Ecological Information

Toxicity:

Rainbow Trout: LC50 = 0.16-0.90 mg/L; 96 Hr

Bluegill/Sunfish: LC50 = 0.16-0.90 mg/L; 96 Hr

Channel Catfish: LC50 = 0.35 mg/L; 96 Hr

Water Flea (Daphnia): EC50 = 0.01 mg/L; 48 Hr

In aquatic systems, mercury appears to bind to dissolved matter or fine particulates, while the transport of mercury bound to dust particles in the atmosphere or bed sediment particles in rivers and lakes is generally less substantial. The conversion, in aquatic environments, of inorganic mercury to methyl mercury implies that recycling of mercury from sediment to water to air and back could be rapid.

Persistence and degradability: No data available.

Bioaccumulative potential: *Carassius auratus* (goldfish) - 1,789 d - 0.25 ug/l

Mobility in soil: No data available.

Results of PBT& vPvB assessment: PBT/vPvB assessment not available, as chemical safety assessment not required/not conducted.

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13: Disposal Considerations

Product: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Contaminated Packaging: Dispose of as unused product.

Section 14: Transport Information

UN number: 2809

UN proper shipping name: MERCURY.

Transport hazard class: Class 8

Subsidiary risk: Class 6.1

Transport hazard labels:



Packing group: III

Marine pollutant: Yes.

Section 15: Regulatory Information

EU regulations:

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations:

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use:

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding.

Not regulated.

Other EU regulations:

Directive 2012/18/EU on major accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Always applicable.

Directive 94/33/EC on the protection of young people at work

Not listed.

Additional Information:

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard.

Massachusetts Right to Know Components: CAS No. 7439-97-6 / Revision Date 2007-07-01

Pennsylvania Right to Know Components: CAS No. 7439-97-6 / Revision Date 2007-07-01

New Jersey Right to Know Components: CAS No. 7439-97-6 / Revision Date 2007-07-01

California Prop. 65 Components: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm: CAS-No. 7439-97-6 / Revision Date 2007-09-28

Chemical safety assessment: No Chemical Safety Assessment has been carried out.

Section 16: Other Information

List of abbreviations:

ACGIH American Conference of Governmental Industrial Hygienists
ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA As Low As Is Reasonably Achievable
AMU Atomic Mass Unit
ANSI American National Standards Institute
BLS Basic Life Support
CAM Continuous Air Monitor
CAS Chemical Abstracts Service (division of the American Chemical Society)
CEN European Committee for Standardization
CERCLA Comprehensive Environmental Response Compensation and Liability Act
CLP Classification, Labelling and Packaging (European Union)
CPR Controlled Products Regulations (Canada)
CWA Clean Water Act (USA)
DAC Derived Air Concentration (USA)
DOE United States Department of Energy (USA)
DOT United States Department of Transportation (USA)
DSL Domestic Substances List (Canada)
EC50 Half Maximal Effective Concentration
EINECS European Inventory of Existing Commercial Chemical Substances
EHS Environmentally Hazardous Substance
ELINCS European List of Notified Chemical Substances
EMS Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA Environmental Protection Agency (USA)
EPCRA Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS Globally Harmonized System
HMIS Hazardous Materials Identification System (USA)
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Containers
ICAO International Civil Aviation Organization
IDLH Immediately Dangerous to Life or Health
IMDG International Maritime Code for Dangerous Goods
LC50 Lethal concentration, 50 percent
LD50 Lethal dose, 50 percent
LDLO Lethal Dose Low
LOEC Lowest-Observed-Effective Concentration
MARPOL International Convention for the Prevention of Pollution from Ships
MSHA Mine Safety and Health Administration (USA)

NCRP National Council on Radiation Protection & Measurements (USA)
NDSL Non-Domestic Substances List (Canada)
NFPA National Fire Protection Association (USA)
NIOSH National Institute for Occupational Safety and Health (USA)
NOEC No Observed Effect Concentration
N.O.S. Not Otherwise Specified
NRC Nuclear Regulatory Commission (USA)
NTP National Toxicology Program (USA)
OSHA Occupational Safety and Health Administration (USA)
PBT Persistent Bioaccumulative and Toxic Chemical
PEL Permissible Exposure Limit
PIH Poisonous by Inhalation Hazard
RCRA Resource Conservation and Recovery Act (USA)
RCT Radiation Control Technician
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID Regulations Concerning the International Transport of Dangerous Goods by Rail
RTECS Registry of Toxic Effects of Chemical Substances
SARA Superfund Amendments and Reauthorization Act (USA)
TDG Transportation of Dangerous Goods (Canada)
TIH Toxic by Inhalation Hazard
TLV Threshold Limit Value
TPQ Threshold Planning Quantity
TSCA Toxic Substances Control Act
TWA Time Weighted Average
UN United Nations (Number)
VOC Volatile Organic Compound
vPvB Very Persistent Very Bioaccumulative Chemical
WGK Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS Workplace Hazardous Materials Information System

References:

Not available.

Full text of any H-statements not written out in full under Sections 2 to 15:

H330 Fatal if inhaled.

H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Revision information:

None.

Training information:

Follow training instructions when handling this material.

Further Information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.