

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

Section 1 - Identification

Product Name Mercury Filled Thermometers and Hydrometers

Synonyms Colloidal mercury; Hydrargyrum; Metallic mercury

Product Code	11-603-3B; 11-603-3R; 11-603-4K; 11-603-4P; 11-603-4R; 11-603-4T; 11-603-5A; 11-603-5B; 11-603-5C; 11-603-5E; 11-603-5F; 11-603-5J; 11-604; 11-689-8; 11-689-9; 12-144-15; 13-246; 13-411; 13-480; 13-481; 13-500; 13-501; 13-987-30; 14-983-10B; 14-983-10C; 14-983-10E; 14-983-10G; 14-983-15A; 14-983-16A; 14-983-17H; 14-985-5B; 14-985-5C; 14-985-5E; 14-985-5G; 14-985B; 14-985C; 14-985E; 14-985G; 14-986B; 14-986C; 14-986E; 14-990-5C; 14-990B; 14-995-5B; 14-995-5G; 15-000A; 15-000B; 15-005B; 15-041-1B; 15-041-1C; 15-041-3A; 15-041-3C; 15-041-3D; 15-041A; 15-041B; 15-041D; 15-043A; 15-070A; 15-070D; 15-114; 15-114-10; 15-140B; 15-140C; 15-140D; 15-140E; 15-166A; 15-167A; 15-169-105; 15-169-106; 15-169-107; 15-169-111; 15-169-120; 15-169-127; 15-169-129; 15-169-41; 15-169-51; 15-169-59; 15-169-81; 15-169-95; 15-171-1; 15-171-2; 15-171-3; 15-171-4; 15-171-5; 15-173-24A; 15-173-24B; 15-173-24C
Address	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
Emergency Tel.	CHEMTREC® 03 9757 4559 or +613 9757 4559
Telephone / Fax Numbers	Tel: 1300 735 292 Fax: 1800 067 639
E-mail address	ANZinfo@thermofisher.com

Recommended Use Laboratory chemicals.

Uses advised against This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Section 2 - Hazard(s) Identification

Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

Physical hazards
No hazards identified

Health hazards

Acute Inhalation Toxicity - Vapors
Reproductive Toxicity
Specific target organ toxicity - (repeated exposure)

Category 2
Category 1B
Category 1

Environmental hazards

Acute aquatic toxicity
Chronic aquatic toxicity

Category 1
Category 1

Label Elements



Skull and Crossbones



Health Hazard



Environment

Signal Word

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
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
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P284 - Wear respiratory protection
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 - Immediately call a POISON CENTER or doctor
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

Toxicity to Soil Dwelling Organisms
Toxic to terrestrial vertebrates

Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Mercury	7439-97-6	100

Section 4 - First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Self-Protection of the First Aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
First Aid Facilities	Eyewash, safety shower and washroom.
Most important symptoms and effects	None reasonably foreseeable.
Notes to Physician	Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. approved class D extinguishers.

Extinguishing media which must not be used for safety reasons

Water may be ineffective.

Hazardous Decomposition Products

Mercury oxide, Toxic fumes.

Specific Hazards Arising from the Chemical

Very toxic. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition. Do not allow run-off from fire-fighting to enter drains or water courses.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 - Accidental Release Measures

Emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. No special precautions required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental Precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up

Clean-up methods - small spillage

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Pick up and transfer to properly labelled containers.

Clean-up methods - large spillage

Typically only supplied in small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep in a dry place. Keep away from acids.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection

Exposure limits

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Mercury	TWA: 0.003 ppm TWA: 0.025 mg/m ³	TWA: 0.025 mg/m ³ Skin	TWA: 0.025 mg/m ³ Skin	TWA: 0.02 mg/m ³ 8 hr	TWA: 0.02 mg/m ³ (8 Stunden). AGW - exposure factor 8 TWA: 0.02 mg/m ³ (8 Stunden). MAK Höhepunkt: 0.16 mg/m ³ Haut

Biological limit values

UK - Biological Monitoring Guidance Values provided by the UK's Health and Safety Executive (HSE) Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended) and EH40/2005; **NZ** - Substances assigned Biological Exposure Indices in the New Zealand Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

Component	Australia	New Zealand	European Union	United Kingdom	Germany
Mercury		20 µg/g creatinine (urine) prior to shift (Mercury)		Mercury: 20 µmol/mol creatinine urine random	Mercury: 25 µg/g Creatinine urine (no restriction)

Exposure Controls

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. None under normal use conditions.

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection	No special protective equipment required			
Glove material Disposable gloves	Breakthrough time See manufacturers recommendations	Glove thickness -	AUS/NZ Standard AS/NZS 2161	Glove comments (minimum requirement)
Skin and body protection	Long sleeved clothing			
Respiratory Protection	Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted			
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.			
Environmental exposure controls	Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.			

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Silver	
Physical State	Liquid	
Odor	Odorless	
Odor Threshold	No data available	
pH	No information available	
Melting Point/Range	-38.87 °C / -38 °F	
Softening Point	No data available	
Boiling Point/Range	356.72 °C / 674.1 °F	
Flash Point	Not applicable	Method - No information available
Evaporation Rate	No information available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	0.002 mmHg @ 25 °C	
Vapor Density	7.0	(Air = 1.0)
Specific Gravity / Density	13.59 (H ₂ O=1)	
Bulk Density	Not applicable	Liquid
Water Solubility	Insoluble	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Other information		
Molecular Formula	Hg	
Molecular Weight	200.59	

Section 10 - Stability and Reactivity

Reactivity	None known, based on information available
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Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products, Excess heat.
Incompatible Materials	Strong oxidizing agents, Ammonia, Metals, Halogens.
Hazardous Decomposition Products	Mercury oxide. Toxic fumes.
Hazardous Polymerization	Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;	
Oral	No data available
Dermal	No data available
Inhalation	Category 2

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Mercury			LC50 < 27 mg/m ³ (Rat) 2 h

(b) skin corrosion/irritation;	No data available
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(c) serious eye damage/irritation;	No data available
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(d) respiratory or skin sensitization;	
Respiratory	No data available
Skin	No data available

(e) germ cell mutagenicity;	No data available
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(f) carcinogenicity;	No data available
	The table below indicates whether each agency has listed any ingredient as a carcinogen

(g) reproductive toxicity;	Category 1B
Developmental Effects	May cause harm to the unborn child

(h) STOT-single exposure;	No data available
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(i) STOT-repeated exposure;	Category 1
Target Organs	Central nervous system (CNS), Eyes, Respiratory system, Kidney, Skin.

(j) aspiration hazard;	No data available
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Symptoms / effects, both acute and delayed	No information available
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Section 12 - Ecological Information

Ecotoxicity effects	The product contains following substances which are hazardous for the environment. Very
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toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Mercury	0.9 mg/L LC50 96h 0.18 mg/L LC50 96h 0.16 mg/L LC50 96h 0.5 mg/L LC50 96h			

Persistence and Degradability	Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary
Persistence	Insoluble in water, May persist.
Degradability	Not relevant for inorganic substances.
Degradation in sewage treatment plant	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Bioaccumulative Potential	May have some potential to bioaccumulate Product has a high potential to bioconcentrate
Mobility	Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility
Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors
Persistent Organic Pollutant	This product does not contain any known or suspected substance
Ozone Depletion Potential	This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues/Unused Products	Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.
Other Information	Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

Section 14 - Transport Information

IMDG/IMO

UN-No	UN2809
Proper Shipping Name	Mercury
Hazard Class	8
Packing Group	III

ADG

UN-No	UN2809
Proper Shipping Name	Mercury
Hazard Class	8
Subsidiary Hazard Class	6.1
Packing Group	III

Component	Hazchem Code
Mercury 7439-97-6 (100)	2X

IATA

UN-No	UN2809
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Proper Shipping Name Mercury
Hazard Class 8
Subsidiary Hazard Class 6.1
Packing Group III

Environmental hazards Dangerous for the environment
 Product is a marine pollutant according to the criteria set by IMDG/IMO

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National Regulations Australia

See section 8 for national exposure control parameters.

Component	Health Surveillance
Mercury 7439-97-6 (100)	Listed Demographic, medical and occupational history Physical examination with emphasis on dermatological, gastrointestinal, neurological and renal systems Urinary inorganic Mercury

Standard for the Uniform Scheduling of Medicines and Poisons

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

Component	Standard for the Uniform Scheduling of Medicines and Poisons
Mercury - 7439-97-6	Schedule 2 listed Schedule 4 listed - for cosmetic or therapeutic use except when separately specified in these Schedules, or in a sealed device which prevents access to the mercury S7 Scheduled

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Mercury - 7439-97-6	Present	-

Australian - Illicit Drug Precursors/Reagents Substance List

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances.

Chemicals of Security Concern

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

Component	Australian - Illicit Drug Precursors/Reagents Substance List	Chemicals of Security Concern
Mercury - 7439-97-6	Category 2	

Legend

Category 2 - Chemicals and apparatus that require an End User Declaration when sold to non-account customers

National pollutant inventory Subject to reporting requirements

Component	National pollutant inventory
Mercury - 7439-97-6	5 kg/yr. Threshold category 1b 20 MW. Threshold category 2b 60000 MWH. Threshold category 2b 2000 tonne/yr. Threshold category 2b

Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licensing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

International Inventories

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
Mercury	X	X	231-106-7	-	X	X	-	X	X		X	KE-23117

Legend: X - Listed. '-' - Not Listed. S - Indicates a substance that is identified in a proposed or final Significant New Use Rule. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

International Regulations

Ozone Depletion Potential This product does not contain any known or suspected substance

Persistent Organic Pollutant This product does not contain any known or suspected substance

Rotterdam Convention (PIC) Chemicals Subject to Prior Informed Consent (PIC)

Component	Rotterdam Convention (PIC)
Mercury - 7439-97-6	X

Basel convention on the control of transboundary movements of hazardous wastes and their disposal

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Component	Basel Convention (Hazardous Waste)	Australian Hazardous Waste Act - Categories of Wastes to Be Controlled
Mercury - 7439-97-6	Annex I - Y29	Y29

Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Mercury	7439-97-6	Listed	0.1% (Max. Conc.)	Not applicable	Not applicable

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Mercury	-	Use restricted. See item 18[a]. (see link for restriction details) Use restricted. See item 30. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

Section 16 - Other Information

Legend

AICS - Australian Inventory of Chemical Substances	NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List	ENCS - Japanese Existing and New Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances	KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances	CAS - Chemical Abstracts Service
TWA - Time Weighted Average	ACGIH - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
IARC - International Agency for Research on Cancer	IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association	
MARPOL - International Convention for the Prevention of Pollution from Ships	
NZS 5433:2012 - Transport of Dangerous Goods on Land	OECD - Organisation for Economic Co-operation and Development
LD50 - Lethal Dose 50%	LC50 - Lethal Concentration 50%
EC50 - Effective Concentration 50%	ATE - Acute Toxicity Estimate
WEL - Workplace Exposure Limit	RPE - Respiratory Protective Equipment
DNEL - Derived No Effect Level	NOEC - No Observed Effect Concentration
POW - Partition coefficient Octanol:Water	BCF - Bioconcentration factor
vPvB - very Persistent, very Bioaccumulative	PBT - Persistent, Bioaccumulative, Toxic
VOC - (Volatile Organic Compound)	

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Chemical incident response training.

Revision Date	21-Nov-2022
Revision Summary	Not applicable.

This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).

Disclaimer

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

End of Safety Data Sheet