

Creation Date Oct-2013

Revision Date Oct-2018

Revision Number 2

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description: Mercury(I) nitrate dihydrate
Product Grade: SQ
Cat No. Q25333
Synonyms nitric acid mercury salt; Mercurous nitrate
CAS No: 7782-86-7

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company Thermo Fisher Scientific India Pvt. Ltd
 403-404, B-wing, Delphi, Hiranandani Business Park,
 Powai, Mumbai 400076, INDIA.
E-mail address laboratorysolutions@thermofisher.com

Emergency telephone number
 India Toll Free: 18 00 22 22 30
 Chemtrec US: (800)424-9300
 Chemtrec EU: 001(202)483-7616

SECTION 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture
 REGULATION (EC) No 1272/2008**

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 1
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Specific target organ systemic toxicity (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s) T+ - Very toxic
 N - Dangerous for the environment
R-phrases R33 - Danger of cumulative effects
Risk Combination Phrases R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed
 R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Danger

Hazard Statements

- H300 - Fatal if swallowed
- H310 - Fatal in contact with skin
- H330 - Fatal if inhaled
- H410 - Very toxic to aquatic life with long lasting effects
- H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - EU (§28, 1272/2008)

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician
- P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
- P273 - Avoid release to the environment

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Mercurous nitrate 10415-75-5	EEC No. 233-886-4	0	10415-75-5	T+; R26/27/28 R33 N; R50-53	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mercurous nitrate dihydrate 7782-86-7		>95	7782-86-7	T+; R26/27/28 R33 N; R50-53	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-
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For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Ingestion

Call a physician immediately. Clean mouth with water.

Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Burning produces obnoxious and toxic fumes.

Advice for fire-fighters

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As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep locked-up.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component

Mercurous nitrate

Mercurous nitrate dihydrate

European Union	The United Kingdom	France	Belgium	Spain
		VME: 0.1 mg/m ³ 8 heures. Hg Skin		Skin VLA-ED: 0.025 mg/m ³ 8 horas
		VME: 0.1 mg/m ³ 8 heures. Hg Skin		Skin VLA-ED: 0.025 mg/m ³ 8 horas

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Component	Italy	Germany	Portugal	The Netherlands	Finland
Mercurous nitrate		MAK: 0.02 mg/m ³ 8 Stunden. inhalable fraction Skin Peak: 0.16 mg/m ³ TWA: 0.1 mg/m ³ 8 Stunden. inhalable fraction exposure factor 8	TWA: 0.025 mg/m ³ 8 horas Skin		
Mercurous nitrate dihydrate		MAK: 0.02 mg/m ³ 8 Stunden. inhalable fraction Skin Peak: 0.16 mg/m ³ TWA: 0.1 mg/m ³ 8 Stunden. inhalable fraction exposure factor 8	TWA: 0.025 mg/m ³ 8 horas Skin		

Component	Austria	Denmark	Switzerland	Poland	Norway
Mercurous nitrate	Skin STEL: 0.4 mg/m ³ 15 Minuten TWA: 0.1 mg/m ³ 8 Stunden		STEL: 0.8 mg/m ³ 15 Minuten MAK: 0.1 mg/m ³ 8 Stunden		TWA: 0.02 mg/m ³ 8 timer
Mercurous nitrate dihydrate	Skin STEL: 0.4 mg/m ³ 15 Minuten TWA: 0.1 mg/m ³ 8 Stunden		STEL: 0.8 mg/m ³ 15 Minuten MAK: 0.1 mg/m ³ 8 Stunden		TWA: 0.02 mg/m ³ 8 timer

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Protective gloves

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No information available.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder, Solid
Appearance	Off-white
odor	odorless
pH	No information available.
Vapor Pressure	No information available.
Vapor Density	No information available.
Boiling Point/Range	No information available.
Melting Point/Range	70°C / 158°F
Decomposition temperature	> 70°C
Flash Point	No information available.
Autoignition Temperature	No information available.
Water Solubility	20 g/l (20°C)
Specific Gravity	4.78
Molecular Formula	Hg ₂ N ₂ O ₆ . 2 H ₂ O
Molecular Weight	561.22

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical Stability

Light sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions . No information available.

Conditions to Avoid

Exposure to light, Incompatible products.

Incompatible Materials

Alcohols, Strong reducing agents.

Hazardous Decomposition Products

Nitrogen oxides (NO_x).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component

Mercurous nitrate

LD50 Oral	LD50 Dermal	LC50 Inhalation
170 mg/kg (Rat)	2330 mg/kg (Rat)	

Chronic Toxicity

Carcinogenicity

Component Mercurous nitrate Mercurous nitrate dihydrate

There are no known carcinogenic chemicals in this product

IARC	UK
Group 2A	
Group 2A	

Sensitization

Mutagenic Effects

Reproductive Effects

Developmental Effects

Target Organs

Other Adverse Effects

No information available.

No information available.

No information available.

No information available.

No information available.

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

Endocrine Disruptor Information

None known

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects

Do not empty into drains

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

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Other adverse effects

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues / Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No 1627
Hazard Class 6.1
Packing Group II
Proper Shipping Name MERCUROUS NITRATE

ADR

UN-No 1627
Hazard Class 6.1
Packing Group II
Proper Shipping Name MERCUROUS NITRATE

IATA

UN-No 1627
Hazard Class 6.1
Packing Group II
Proper Shipping Name MERCUROUS NITRATE

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Mercurous nitrate	233-886-4	-		X	X	-	X	X	X	X	X

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Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Mercurous nitrate dihydrate	-	-		-	-	-	X	X	-	-	-

Legend

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/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

CHINA - China Inventory of Existing Chemical Substances

AICS - Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R33 - Danger of cumulative effects

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Creation Date Oct-2013
Next Revision Date Oct-2023
Revision Summary SDS section 1 updated and update of Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet