Mercuric Nitrate, 0.025N (0.0013M)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 04/06/2015 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Mercuric Nitrate, 0.025N (0.0013M)

Product code : LC16657

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

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Dermal)	H312
STOT RE 2	H373
Aquatic Acute 3	H402
Aquatic Chronic 3	H412

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS07 GHS08

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H312 - Harmful in contact with skin
H373 - May cause damage to organs (nervous system, kidneys, blood) through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapors, spray
P273 - Avoid release to the environment
P280 - Wear eye protection, protective gloves, protective clothing
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P312 - Call a POISON CENTER/doctor if you feel unwell
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5	99.35	Not classified
Mercuric Nitrate, Dihydrate	(CAS No) 22852-67-1	0.45	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nitric Acid, 70% w/w	(CAS No) 7697-37-2	0.2	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes damage to organs (liver, kidneys, nervous system).

Symptoms/injuries after inhalation : Possible inflammation of the respiratory tract. Headache.

Symptoms/injuries after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

Symptoms/injuries after eye contact : May cause slight irritation.

Symptoms/injuries after ingestion : Nausea. Vomiting. Diarrhoea. Impairment of the nervous system.

Chronic symptoms : Impairment of the nervous system.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Protective clothing. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist, vapors, spray.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong reducing agents. silver nitrate. Strong bases.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Mercuric Nitrate, 0.025N (0.0013M)		
ACGIH	Not applicable	
OSHA	Not applicable	

Mercuric Nitrate, Dihydrate (22852-67-1)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	0.1 mg/m³ as Hg

Nitric Acid, 70% w/w (7697-37-2)		
ACGIH	ACGIH TWA (ppm)	2 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	2 ppm

Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor : None.

Odor threshold : No data available

pH	:	≤ 7
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Specific gravity / density	:	1 g/ml
Solubility	:	Soluble in water. Water: Solubility in water of component(s) of the mixture : • Mercuric Nitrate, Dihydrate: • Nitric Acid, 70% w/w:
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Discolours on exposure to light.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

silver nitrate. Strong reducing agents. Strong bases.

10.6. Hazardous decomposition products

Nitrogen oxides. mercury.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Skin and eye contact
Acute toxicity	:	Dermal: Harmful in contact with skin.

Mercuric Nitrate, 0.025N (0.0013M)	
LD50 oral rat	11402 mg/kg
LD50 dermal rat	1109 mg/kg
LC50 inhalation rat (mg/l)	10.95 mg/l/4h
ATE US (oral)	11402.000 mg/kg body weight
ATE US (dermal)	1109.000 mg/kg body weight
ATE US (vapors)	10.950 mg/l/4h

Mercuric Nitrate, 0.025N (0.0013M)	
ATE US (dust, mist)	10.950 mg/l/4h

Mercuric Nitrate, Dihydrate (22852-67-1)	
LD50 oral rat	26 mg/kg (Rat)
LD50 dermal rat	75 mg/kg (Rat)
ATE US (oral)	26.000 mg/kg body weight
ATE US (dermal)	5.000 mg/kg body weight
ATE US (gases)	100.000 ppmV/4h
ATE US (vapors)	0.500 mg/l/4h
ATE US (dust, mist)	0.050 mg/l/4h

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: ≤ 7

Serious eye damage/irritation : Not classified
pH: ≤ 7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs (nervous system, kidneys, blood) through prolonged or repeated exposure.

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful in contact with skin.

Symptoms/injuries after inhalation : Possible inflammation of the respiratory tract. Headache.

Symptoms/injuries after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.

Symptoms/injuries after eye contact : May cause slight irritation.

Symptoms/injuries after ingestion : Nausea. Vomiting. Diarrhoea. Impairment of the nervous system.

Chronic symptoms : Impairment of the nervous system.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Mercuric Nitrate, 0.025N (0.0013M)	
EC50 Daphnia 1	22.2 mg/l

Mercuric Nitrate, Dihydrate (22852-67-1)	
LC50 fish 1	< 1 mg/l (96 h; Pisces; Mercury ion)
LC50 other aquatic organisms 1	< 1 mg/l (96 h)
EC50 Daphnia 1	0.0052 mg/l (48 h; Daphnia magna; Mercury ion)
LC50 fish 2	0.033 ppm 96 h; Salmo gairdneri (Oncorhynchus mykiss)
Threshold limit other aquatic organisms 1	< 1 mg/l (96 h)
Threshold limit algae 1	0.4 ppm (Chlorella vulgaris; Mercury ion)

Nitric Acid, 70% w/w (7697-37-2)	
LC50 fish 1	25 - 36 mg/l (96 h; Lepomis macrochirus; Pure substance)
EC50 Daphnia 1	180 mg/l (48 h; Daphnia magna; Pure substance)
LC50 fish 2	72 ppm (Gambusia affinis; Pure substance)
Threshold limit algae 1	> 19 mg/l (Algae; Pure substance)

12.2. Persistence and degradability

Mercuric Nitrate, 0.025N (0.0013M)	
Persistence and degradability	May cause long-term adverse effects in the environment.

Mercuric Nitrate, Dihydrate (22852-67-1)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Nitric Acid, 70% w/w (7697-37-2)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Mercuric Nitrate, 0.025N (0.0013M)	
Bioaccumulative potential	Not established.

Mercuric Nitrate, Dihydrate (22852-67-1)	
Bioaccumulative potential	Bioaccumable.

Nitric Acid, 70% w/w (7697-37-2)	
BCF fish 1	<= 1 (Pisces)
Log Pow	-2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Bioaccumulation: not applicable.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Mercuric Nitrate, 0.025N (0.0013M)	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Mercuric Nitrate, Dihydrate	CAS No 22852-67-1	0.45
Nitric Acid, 70% w/w	CAS No 7697-37-2	0.2

Mercuric Nitrate, Dihydrate (22852-67-1)	
Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb

Nitric Acid, 70% w/w (7697-37-2)	
Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

Mercuric Nitrate, Dihydrate (22852-67-1)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Nitric Acid, 70% w/w (7697-37-2)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class E - Corrosive Material Class C - Oxidizing Material

Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National regulations

Mercuric Nitrate, Dihydrate (22852-67-1)
Listed on the Canadian IDL (Ingredient Disclosure List)

Nitric Acid, 70% w/w (7697-37-2)
Listed on the Canadian IDL (Ingredient Disclosure List)

Water (7732-18-5)
Not listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

Mercuric Nitrate, Dihydrate (22852-67-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	No	

SECTION 16: Other information

Other information : None.

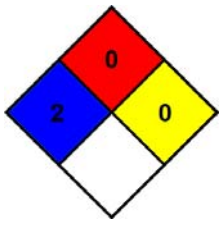
Full text of H-phrases: see section 16:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Ox. Liq. 3	Oxidizing liquids Category 3
Skin Corr. 1A	Skin corrosion/irritation Category 1A
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H300	Fatal if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating		
Health	:	2 Moderate Hazard - Temporary or minor injury may occur * - Chronic (long-term) health effects may result from repeated overexposure
Flammability	:	0 Minimal Hazard - Materials that will not burn
Physical	:	0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal Protection	:	C C - Safety glasses, Gloves, Synthetic apron

SDS US (GHS HazCom 2012)

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