

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Mercuric Nitrate, 0.0171N (0.0086M)
Product code : LC16655

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
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 +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Reproductive toxicity Category 1B H360 May damage the unborn child.
Specific target organ toxicity (repeated exposure) Category 2 H373 May cause damage to organs (nervous system, liver, kidneys) through prolonged or repeated exposure
Hazardous to the aquatic environment - Chronic Hazard Category 3 H412 Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H360 - May damage the unborn child.
H373 - May cause damage to organs (nervous system, liver, kidneys) through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, vapors, spray.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P314 - Get medical advice and attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards which do not result in classification

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

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Water	(CAS-No.) 7732-18-5	99.59	Not classified
Mercuric Nitrate, Dihydrate	(CAS-No.) 22852-67-1	0.31	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Repr. 1B, H360 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nitric Acid, 70% w/w	(CAS-No.) 7697-37-2	0.1	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318

Full text of hazard classes and H-statements : 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 affected person 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 (acute and delayed)

- Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful in contact with skin.
- Symptoms/effects : Causes damage to organs (liver, kidneys, nervous system).
- Symptoms/effects after inhalation : Possible inflammation of the respiratory tract. Headache.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
- Symptoms/effects after eye contact : May cause slight irritation.
- Symptoms/effects after ingestion : Nausea. Vomiting. Diarrhoea. Impairment of the nervous system.
- Chronic symptoms : Impairment of the nervous system.

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

- 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.

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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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Mercuric Nitrate, Dihydrate (22852-67-1)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ Vapor, As Hg
Nitric Acid, 70% w/w (7697-37-2)		
ACGIH	ACGIH TWA (ppm)	2 ppm (Nitric acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	4 ppm (Nitric acid; USA; Short time value; TLV - Adopted Value)
NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	10 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	4 ppm
Water (7732-18-5)		
Not applicable		

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Chemical resistant apron.

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Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Respiratory protection not required in normal conditions. High vapour/gas concentration: self-contained respirator

Personal protective equipment symbol(s):



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)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: 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.

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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

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Mercuric Nitrate, 0.0171N (0.0086M)	
LD50 oral rat	8387 mg/kg
LD50 dermal rat	24194 mg/kg
LC50 inhalation rat (mg/l)	16.13 mg/l/4h
ATE US (oral)	8387 mg/kg body weight
ATE US (dermal)	24194 mg/kg body weight
ATE US (vapors)	16.13 mg/l/4h
ATE US (dust, mist)	16.13 mg/l/4h

Mercuric Nitrate, Dihydrate (22852-67-1)	
LD50 oral rat	26 mg/kg (Rat, Oral)
ATE US (oral)	26 mg/kg body weight
ATE US (dermal)	50 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 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 : May damage the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs (nervous system, liver, kidneys) through prolonged or repeated exposure.

Mercuric Nitrate, Dihydrate (22852-67-1)	
STOT-repeated exposure	May cause damage to organs (central nervous system) through prolonged or repeated exposure.

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.

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Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful in contact with skin.
Symptoms/effects	: Causes damage to organs (liver, kidneys, nervous system).
Symptoms/effects after inhalation	: Possible inflammation of the respiratory tract. Headache.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after eye contact	: May cause slight irritation.
Symptoms/effects 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, 0.0171N (0.0086M)	
EC50 Daphnia 1	32.4 mg/l
Mercuric Nitrate, Dihydrate (22852-67-1)	
LC50 fish 1	0.033 ppm (96 h, Salmo gairdneri, Mercury ion)
EC50 Daphnia 1	0.0052 mg/l (48 h, Daphnia magna, Mercury ion)
Nitric Acid, 70% w/w (7697-37-2)	
EC50 Daphnia 1	180 mg/l (EC50; 48 h)
LC50 fish 2	72 ppm (LC50; 96 h)
Threshold limit algae 1	> 19 mg/l (EC0)

12.2. Persistence and degradability

Mercuric Nitrate, 0.0171N (0.0086M)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Mercuric Nitrate, Dihydrate (22852-67-1)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: 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
Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Mercuric Nitrate, 0.0171N (0.0086M)	
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 (BCF)
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

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Mercuric Nitrate, Dihydrate (22852-67-1)	
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal 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

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Mercuric Nitrate, 0.0171N (0.0086M)	
SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Reproductive toxicity

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	0.31%
Nitric Acid, 70% w/w	CAS-No. 7697-37-2	0.1%

Mercuric Nitrate, Dihydrate (22852-67-1)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Specific target organ toxicity (single or repeated exposure)
Nitric Acid, 70% w/w (7697-37-2)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 311/312 Hazard Classes	Physical hazard - Oxidizer (liquid, solid or gas) Physical hazard - Corrosive to metals Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation

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15.2. International regulations

CANADA

Mercuric Nitrate, Dihydrate (22852-67-1)

Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

⚠ WARNING: This product can expose you to Mercuric Nitrate, Dihydrate, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

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

Revision date : 03/13/2020

Other information : None.

Full text of H-phrases: see section 16:

H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H300	Fatal if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic 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

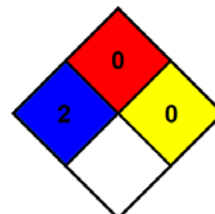
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



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Hazard 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

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