

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Mercuric Nitrate, 0.35 g/L, for Vanadium
Product code : LC16680

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
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: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Oxidizing liquids Category 3	H272	May intensify fire; oxidizer
Corrosive to metals Category 1	H290	May be corrosive to metals
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs (nervous system, kidneys, blood, intestinal tract) through prolonged or repeated exposure

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)

: Warning

Hazard statements (GHS-US)

: H272 - May intensify fire; oxidizer
H290 - May be corrosive to metals
H373 - May cause damage to organs (nervous system, kidneys, blood, intestinal tract) through prolonged or repeated exposure

Precautionary statements (GHS-US)

: P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P220 - Keep/Store away from clothing, combustible materials
P234 - Keep only in original container
P260 - Do not breathe mist, vapors, spray
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P314 - Get medical advice and attention if you feel unwell
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2) to extinguish
P390 - Absorb spillage to prevent material damage
P406 - Store in corrosive resistant container with a resistant inner liner
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.

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2.4. Unknown acute toxicity (GHS US)

Not applicable

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	99.91	Not classified
Nitric Acid, 70% w/w	(CAS-No.) 7697-37-2	0.05	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Mercuric Nitrate, Dihydrate	(CAS-No.) 22852-67-1	0.04	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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 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.
- 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)

- Symptoms/effects : Causes damage to organs.
- Chronic symptoms : Impairment of the nervous system. Decreased renal function. Change in the haemogramme/blood composition.

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.

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.

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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. 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/m³)	0.025 mg/m³ (Mercury, Inorganic forms, as Hg; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m³)	0.1 mg/m³ as Hg
IDLH	US IDLH (mg/m³)	10 mg/m³ as Hg
NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ 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)
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	2 ppm
IDLH	US IDLH (ppm)	25 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	10 mg/m³
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.

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves.



Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Respiratory protection not required in normal conditions

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	: No data available
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
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

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10.2. Chemical stability

Stable under normal conditions.

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 : Not classified

Mercuric Nitrate, 0.35 g/L, for Vanadium	
LD50 oral rat	139674 mg/kg
LD50 dermal rat	13587 mg/kg
LC50 inhalation rat (mg/l)	131 mg/l/4h
ATE US (oral)	139674 mg/kg body weight
ATE US (dermal)	13587 mg/kg body weight
ATE US (vapors)	131 mg/l/4h
ATE US (dust, mist)	131 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 mg/kg body weight
ATE US (dermal)	75 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

Serious eye damage/irritation : Not classified

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, intestinal tract) 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.

Chronic symptoms : Impairment of the nervous system. Decreased renal function. Change in the haemogramme/blood composition.

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SECTION 12: Ecological information

12.1. Toxicity

Mercuric Nitrate, 0.35 g/L, for Vanadium	
EC50 Daphnia 1	272 mg/l
Mercuric Nitrate, Dihydrate (22852-67-1)	
EC50 Daphnia 1	0.0052 mg/l (EC50; 48 h)
LC50 fish 2	0.033 ppm (LC50; 96 h)
Threshold limit algae 1	0.4 ppm (EC50)
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, 0.35 g/L, for Vanadium	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil.
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
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, 0.35 g/L, for Vanadium	
Bioaccumulative potential	Bioaccumable.
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

No additional information available

12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

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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

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
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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	0.04%
Nitric Acid, 70% w/w	CAS-No. 7697-37-2	0.05%

Mercuric Nitrate, Dihydrate (22852-67-1)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
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Nitric Acid, 70% w/w (7697-37-2)

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	Immediate (acute) health hazard

15.2. International regulations

CANADA

Mercuric Nitrate, Dihydrate (22852-67-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Mercuric Nitrate, Dihydrate (22852-67-1)

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, developmental and/or reproductive harm

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 significant risk level (NSRL)
No	Yes	No	No	

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SECTION 16: Other information

Revision date : 11/28/2017

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
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

NFPA health hazard

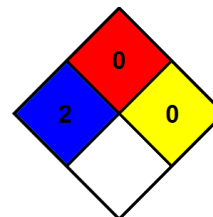
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical dire 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.



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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