Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

1 Identification

· **Product identifier**

· **Trade name: Mercuric Nitrate Reagent**
· **Product code:** MN9272SS

· **Recommended use and restriction on use**
· **Recommended use:** Laboratory chemicals
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
Phone: (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com

· **Emergency telephone number:** 800-794-834

2 Hazard(s) identification

· **Classification of the substance or mixture**

Acute Tox. 3 H331 Toxic if inhaled.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS06 GHS08

· **Signal word:** Danger
· **Hazard statements:**
H331 Toxic if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
· **Precautionary statements:**

P260	Do not breathe mist/vapors/spray.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311	Call a poison center/doctor.
P321	Specific treatment (see on this label).
P314	Get medical advice/attention if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

(Cont'd. on page 2)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 1)

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**		
7783-34-8	Mercury dinitrate Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 STOT RE 2, H373	0.658%
7697-37-2	Nitric acid Ox. Liq. 2, H272 Acute Tox. 3, H331 Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318	0.075%
7732-18-5	Water	99.267%

· **Additional information:**
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately rinse with water.
If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Methaemoglobinaemia
Gastric or intestinal disorders when ingested.
· **Danger:**
May cause neurotoxic effects.
May cause damage to organs through prolonged or repeated exposure.
· **Indication of any immediate medical attention and special treatment needed:**
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** No relevant information available.
· **Special hazards arising from the substance or mixture**

(Cont'd. on page 3)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 2)

During heating or in case of fire poisonous gases are produced.
Substance/product is oxidizing when dry.

· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
· **Environmental precautions** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up**
Use limestone to neutralize and/or absorb spill.
Neutralized material is an oxidizer.
Send for recovery or disposal in suitable receptacles.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:**
Prevent formation of aerosols.
Use only in well ventilated areas.
Avoid splashes or spray in enclosed areas.
· **Information about protection against explosions and fires:**
Substance/product is oxidizing when dry.
Substance/product can reduce the ignition temperature of flammable substances.

· **Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with alkalis (caustic solutions).
Store away from metals.
· **Further information about storage conditions:**
Keep containers tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

(Cont'd. on page 4)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 3)

· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7783-34-8 Mercury dinitrate	
PEL (USA)	Long-term value: 0.1 mg/m³ as Hg; see OSHA standard interpretation memo
REL (USA)	Long-term value: 0.05* mg/m³ Ceiling limit value: 0.1 mg/m³ as Hg; *Vapor; Skin
TLV (USA)	Long-term value: 0.025 mg/m³ as Hg; Skin; BEI
EL (Canada)	Long-term value: 0.025 mg/m³ as Hg; Skin, R
EV (Canada)	Long-term value: 0.025 mg/m³ as Hg, Skin
LMPE (Mexico)	Long-term value: 0.025 mg/m³ A4, PIEL, IBE; como Hg

· **Ingredients with biological limit values:**	
7783-34-8 Mercury dinitrate	
BEI (USA)	35 µg/L Medium: urine Time: prior to shift Parameter: Total inorganic mercury (background) 15 µg/L Medium: blood Time: end of shift at end of workweek Parameter: Total inorganic mercury (background)

· **Exposure controls**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:** Not required under normal conditions of use.
· **Protection of hands:**

Protective gloves

· **Material of gloves** Laminated film gloves.
· **Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.
· **Body protection:**

(Cont'd. on page 5)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 4)

Protective work clothing
Protection may be required for spills.

· **Limitation and supervision of exposure into the environment**
No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**	
Form:	Liquid
Color:	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/Melting range:**	0 °C (32 °F)
· **Boiling point/Boiling range:**	100 °C (212 °F)
· **Flash point:**	The product is not flammable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Contains oxidizing agent.
· **Vapor pressure:**	Not determined.
· **Density at 20 °C (68 °F):**	1.01 g/cm³ (8.43 lbs/gal)
· **Relative density:**	Not determined.
· **Vapor density:**	Not determined.
· **Evaporation rate:**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

(Cont'd. on page 6)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 5)

· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Reacts with strong alkali.
Reacts with certain metals.
Toxic fumes may be released if heated above the decomposition point.
· **Conditions to avoid** No relevant information available.
· **Incompatible materials**
Alkalis.
Metals.
· **Hazardous decomposition products**
Under fire conditions only:
Mercury oxides.
Nitrogen oxides

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
Mercuric Nitrate Titrant		
Oral	LD50	3951 mg/kg (rat) (Acute Toxicity Estimate)
Dermal	LD50	11398 mg/kg (rat) (Acute Toxicity Estimate)
Inhalative	LC50/4h	7.6 mg/l (Acute Toxicity Estimate)
7783-34-8 Mercury dinitrate		
Oral	LD50	26 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Acute effects (acute toxicity, irritation and corrosivity):** No relevant information available.
· **Repeated dose toxicity:** Danger of very serious irreversible effects.

(Cont'd. on page 7)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 6)

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:**
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.
Do not allow product to reach ground water, water course or sewage system.
Harmful to aquatic organisms
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **UN proper shipping name**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Transport hazard class(es)**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	
· **Class**	Not regulated.
· **Packing group**	

(Cont'd. on page 8)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 7)

· **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Environmental hazards**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

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

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

7783-34-8	Mercury dinitrate

· **EPA (Environmental Protection Agency):**

7783-34-8	Mercury dinitrate	D

· **IARC (International Agency for Research on Cancer):**

7783-34-8	Mercury dinitrate	3

· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

(Cont'd. on page 9)

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 13, 2020

Trade name: Mercuric Nitrate Reagent

(Cont'd. of page 8)

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration
Ox. Liq. 2: Oxidizing liquids – Category 2
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com