1474923

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Iron (III) Nitrate, 0.25M

SECTION 1: Identification

Product identifier

Product name: Iron (III) Nitrate, 0.25M **Product code:** KEMFE3385-400ML

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable. **Uses advised against:** Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: Supplier:

AquaPhoenix Scientific AquaPhoenix Scientific Inc.

860 Gitts Run Road 860 Gitts Run Road

Hanover PA 17331 PA 17331 (717) 632-1291 (717) 632-1291

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Skin irritation, category 2 Eye irritation, category 2A

Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H315 Causes skin irritation

H319 Causes serious eye irritation

Precautionary statements:

P264 Wash skin thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection P321 Specific treatment (see supplemental first aid instructions on this label).

P362 a lothing and wash before reuse

P302+P If on skin: Wash with soap and water

P332+P If skin irritation occurs: Get medical advice/attention

P305+P If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if

present . Continue rinsing

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Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Water	89.75
CAS number: 7697-37-2	Nitric Acid	0.15
CAS number: 7782-61-8	Ferric Nitrate Nonahydrate	10.1

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water

If symptoms develop or persist, seek medical attention

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lenses, if present and easy to do

Continue rinsing

Get medical advice/attention

Remove contact lens(es) if able to do so during rinsing

Seek medical attention if irritation persists or if concerned

After swallowing:

Rinse mouth and then drink plenty of water

Do not induce vomiting

Get medical advice/attention if you feel unwell

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

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Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

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Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Ferric Nitrate Nonahydrate	7782-61-8	ACGIH TLV 1.0 mg/m³, as Fe (soluble iron salts)
	Nitric Acid	7697-37-2	ACGIH TLV TWA 2 ppm
	Nitric Acid	7697-37-2	ACGIH TLV STEL 4 ppm
United States (OSHA)	Nitric Acid	7697-37-2	OSHA PEL TWA 2 ppm
	Nitric Acid	7697-37-2	OSHA PEL TWA 5 mg/m³
NIOSH	Nitric Acid	7697-37-2	NIOSH REL TWA 2 ppm
	Nitric Acid	7697-37-2	NIOSH REL TWA 5 mg/m ³
	Nitric Acid	7697-37-2	NIOSH REL ST 4 ppm
	Nitric Acid	7697-37-2	NIOSH REL ST 10 mg/m ³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

Perform routine housekeeping.

Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Pale green liquid
Odor	Odorless
Odor threshold	Not determined or not available.
рН	Not determined or not available.
Melting point/freezing point	Approx. 0 °C
Initial boiling point/range	Approx. 100 °C
Flash point (closed cup)	Not determined or not available.

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Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Approx. 1 (Water = 1)
Solubilities	Soluble.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Density at 20 °C	Approx. 1 g/cm³ (8.345 lbs/gal) at 20 °C (68 °F)
Hydrochloric Acid	MW is 36.46

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment: Causes skin irritation **Product data:** No data available.

Substance data:

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Name	Result
Ferric Nitrate Nonahydrate	Causes skin irritation.
Nitric Acid	Causes severe skin burns and eye damage.

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Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

Name	Result
Ferric Nitrate Nonahydrate	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

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

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

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
1	Specific Target Organ Toxicity, Single Exposure - May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available. **Substance data:** No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

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Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available. **Substance data:** No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available. Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

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UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

7782-61-8	Ferric Nitrate Nonahydrate	Not Listed
7732-18-5	Water	Listed
7697-37-2	Nitric Acid	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
Yes	No	No	No	No

SARA Section 302 extremely hazardous substances:

	7697-37-2	Nitric Acid	Listed		
SAI	SARA Section 313 toxic chemicals:				
	7697-37-2	Nitric Acid	Listed		

Nitric Acid 7697-37-2

CLI	RCLA:			
	7697-37-2	Nitric Acid	Listed	1000

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

	7697-37-2	Nitric Acid	Listed
Ne	w Jersey Right to K	now:	
	7697-37-2	Nitric Acid	Listed

New York Right to Know:

7697-37-2	Nitric Acid	Listod
1/09/-3/-2	INitric Acid	IListed

Pennsylvania Right to Know:

7697-37-2	Nitric Acid	Listed
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California Proposition 65: None of the ingredients are listed.

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SECTION 16: Other information

Abbreviations and Acronyms: None **Disclaimer:**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0 **HMIS:** 1-0-0

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End of Safety Data Sheet

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Printing date: March 08, 2019 Revision: March 08, 2019

1 Identification

Product identifier

• Trade name: Nitric Acid, 0.2N • Product code: KEMNA7030-P

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

Distributor:

AquaPhoenix Scientific, Inc.

860 Gitts Run Road Hanover, PA 17331

(717) 632-1291

· Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

2 Hazard(s) identification

Classification of the substance or mixture

Met. Corr.1 H290 May be corrosive to metals.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- Label elements
- GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:



GHS05

· Signal word: Warning

· Hazard statements:

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· Precautionary statements:

P234 Keep only in original container. P264 Wash thoroughly after handling.

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P280 Wear protective gloves and eye protection. P302+P352 If on skin: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
If eye irritation persists: Get medical advice/attention.

P390 Absorb spillage to prevent material damage.

P406 Store in corrosive resistant container with a resistant inner liner,

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

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:			
7732-18-5	Water		>98%
7697-37-2		© Ox. Liq. 2, H272 Acute Tox. 3, H331 Met. Corr.1, H290; Skin Corr. 1A, H314	<2%

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: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately rinse with water.

If skin irritation continues, 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:

Irritant to skin and mucous membranes.

Causes eye irritation.

Gastric or intestinal disorders when ingested.

Nausea in case of ingestion.

Methaemoglobinaemia

Causes skin irritation.

- · Danger: No relevant information available.
- · Indication of any immediate medical attention and special treatment needed:

Medical supervision for at least 48 hours.

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Treat skin and mucous membrane with antihistamine and corticoid preparations. 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

Formation of toxic gases is possible during heating or in case of fire.

- 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

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

· Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Methods and material for containment and cleaning up

Use limestone to neutralize and/or absorb spill.

Wipe up small spills with paper towel and discard.

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.

Avoid splashes or spray in enclosed areas.

Use only in well ventilated areas.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

Unsuitable material for receptacle: aluminium.

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Unsuitable material for receptacle: steel.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from oxidizing agents.

- · Further information about storage conditions: Keep containers tightly sealed.
- · Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

Control parameters

Components w	· Components with limit values that require monitoring at the workplace:		
7697-37-2 nitric	7697-37-2 nitric acid		
PEL (USA)	Long-term value: 5 mg/m³, 2 ppm		
REL (USA)	REL (USA) Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm		
TLV (USA)	TLV (USA) Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm		
EL (Canada) Short-term value: 4 ppm Long-term value: 2 ppm			
EV (Canada) Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm			
LMPE (Mexico)	Short-term value: 4 ppm Long-term value: 2 ppm		

Exposure controls

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- Engineering controls: Provide adequate ventilation.
- · Breathing equipment: Not required under normal conditions of use.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Neoprene gloves

Natural rubber, NR

Butyl rubber, BR

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to (Cont'd. on page 5)

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be observed.

· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- · Body protection: Acid resistant protective clothing.
- · Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical proper	rties	
Information on basic physical ar	nd chemical properties	
· Appearance:		
Form:	Liquid	
Color:	Clear, colorless	
· Odor:	Not determined.	
· Odor threshold:	Not determined.	
pH-value:	Not determined.	
 Melting point/Melting range: 	Not determined.	
 Boiling point/Boiling range: 	100-1105 ℃ (212-2021 ℉)	
· 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:	Not determined.	
· Vapor pressure:	Not determined.	
Density at 20 ℃ (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/wate	er): Not determined.	
· Viscosity		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
		(Cont'd. on page 6)

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Other information

No relevant information available.

10 Stability and reactivity

- Reactivity: No relevant information available.
- · 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 alkali (Ives).

Corrosive action on metals.

Reacts with certain metals.

Reacts with oxidizing agents.

Toxic fumes may be released if heated above the decomposition point.

- · Conditions to avoid Excessive heat and contact with acids.
- · Incompatible materials

Metals.

Alkalis

· Hazardous decomposition products

Under fire conditions only:

Nitrogen oxides (NOx)

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Inhalative LC50/4h >133 mg/l (rat)

- Primary irritant effect:
- · On the skin: Irritant to skin and mucous membranes.
- · On the eve: Irritating effect.
- · 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.

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- Acute effects (acute toxicity, irritation and corrosivity): Irritating to eyes and skin.
- · Repeated dose toxicity: No relevant information available.
- · 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: Based on available data, the classification criteria are not met.
- · 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:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- **PBT**: Not applicable.
- · **vPvB**: Not applicable.
- · Other adverse effects No relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. 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. Residual materials should be treated as hazardous.

- Uncleaned packagings
- Recommendation: Disposal must be made according to official regulations.

14 Transport information		
· UN-Number · DOT, ADR/RID/ADN, IMDG, IATA	UN3264	
· UN proper shipping name · DOT	Corrosive liquid, acidic, inorganic, n.o.s.(Nitric Acid <2%)	
	(Cont'd. on page 8)	

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Safety Data Sheet

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

Printing date: March 08, 2019 Revision: March 08, 2019

Trade name: Nitric Acid, 0.2N

	(Cont'd. of page 7)
· ADR/RID/ADN, IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(NITRIC ACID <2%)
· Transport hazard class(es)	
· DOT	
CORROGUE	
· Class	8
· Label	8
· ADR/RID/ADN	
· Class	8 (C1)
· Label	
· IMDG, IATA	
Class	8
· Label	8
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	III
· Environmental hazards	Not applicable.
· Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80 5 A C D
· EMS Number: · Segregation groups	F-A,S-B Acids
Transport in bulk according to Annex 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 355 (extremely hazardous substances):

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7697-37-2 nitric acid

Section 313 (Specific toxic chemical listings):

7697-37-2 nitric acid

TSCA (Toxic Substances Control Act)

All ingredients are listed.

· 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:

None of the ingredients are listed.

EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· Canadian Domestic Substances List (DSL) (Substances not listed.):

All ingredients are listed.

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

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

PBT: Persistant, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Ox. Liq. 2: Oxidizing liquids - Category 2

Met. Corr.1: Corrosive to metals - Category 1

Acute Tox. 3: Acute toxicity - Category 3

Skin Corr. 1A: Skin corrosion/irritation - Category 1A

Skin Irrit, 2: Skin corrosion/irritation - Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

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)

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(Cont'd. of page 9)

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Potassium Thiocyanate, 0.0025M

SECTION 1: Identification

Product identifier

Product name: Potassium Thiocyanate, 0.0025M

Product code: KEMPT4032-275ML

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: Supplier: United States United States

AquaPhoenix Scientific AquaPhoenix Scientific Inc.

860 Gitts Run Road 860 Gitts Run Road

Hanover PA 17331 PA 17331 (717) 632-1291 (717) 632-1291

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification: Not a hazardous substance or mixture

Label elements

Hazard pictograms: None

Signal word: None

Hazard statements: None

Precautionary statements: None

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 26628-22-8	Sodium Azide	<1.5
CAS number: 7732-18-5	Water	<100
CAS number: 333-20-0	Potassium thiocyanate	<1

Additional Information: None

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SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Move to fresh air

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

After skin contact:

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

Remove contact lens(es) if able to do so during rinsing

Immediately call a POISON CONTROL CENTER or seek medical attention

After swallowing:

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

Do not induce vomiting

Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

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Potassium Thiocyanate, 0.0025M

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Sodium Azide	26628-22-8	NIOSH REL C 0.1 ppm (as HN₃) [skin]
	Sodium Azide	26628-22-8	NIOSH REL C 0.3 mg/m³ (as NaN₃) [skin]
ACGIH	Sodium Azide	26628-22-8	ACGIH TLV C 0.29 mg/m³ (as NaN₃)
	Sodium Azide	26628-22-8	ACGIH TLV C 0.11 ppm (as HN₃)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

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Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

Perform routine housekeeping.

Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
<u>'''</u>	
Odor	Odorless
Odor threshold	Not available
рН	Not available
Melting point/freezing point	Approx. 0°C
Initial boiling point/range	Approx. 100°C
Flash point (closed cup)	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper flammability/explosive limit	Not available
Lower flammability/explosive limit	Not available
Vapor pressure	Not available
Vapor density	Not available
Density	Not available
Relative density	Approx. 1.0-1.1
Solubilities	Infinite solubility in water.
Partition coefficient (n-octanol/water)	Not available
Auto/Self-ignition temperature	Not available
Decomposition temperature	Not available
Dynamic viscosity	Not available
Kinematic viscosity	Not available
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

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Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Sodium Azide	oral	LD50 - Rat - 27 mg/kg
Potassium thiocyanate	oral	LD50 - Mouse - 594 mg/kg

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Potassium thiocyanate	Causes serious eye damage.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available. Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

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

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

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

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Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Sodium Azide	EC50 - Pseudokirchneriella subcapitata (Green Algae) - 0.348 mg/L - 96 hr
	LC50 - Oncorhynchus mykiss (Rainbow Trout) - 0.8 mg/L - 96 hr
Potassium thiocyanate	NOEC - Daphnia magna - 1.25 mg/L - 21 d

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.
Substance data: No data available.
Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

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United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

-	
UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

	•	
26628-22-8	Sodium Azide	Listed
7732-18-5	Water	Listed
333-20-0	Potassium thiocyanate	Listed

Significant New Use Rule (TSCA Section 5): Not determined. **Export notification under TSCA Section 12(b):** Not determined.

SARA Section 311/312 hazards:

1	Acute	Chronic	Fire	Pressure	Reactive	
- 1	Acute	Cilionic		i i coourc	1.Cucuvc	

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No	No	No	No	No	
SARA Section 302	extremely haz	ardous substance		I	
26628-22-8	Sodium Azi				Liste
SARA Section 313	toxic chemica	ls:			
26628-22-8	Sodium Azi	de			Liste
CERCLA:					
26628-22-8	Sodium Azi	de		Listed	1000
RCRA:	·			•	
26628-22-8	Sodium Azi	de		Listed	
Section 112(r) of	the Clean Air A	ct (CAA): Not deter	mined.	•	
la <u>ssachusetts</u> Ri	ght to Know:				
7732-18-5	Water				Not Liste
333-20-0	Potassium thiocyanate			Not Liste	
26628-22-8	Sodium Azide				Liste
lew Jersey Right	to Know:				ı
7732-18-5	Water			Not Liste	
333-20-0	Potassium thiocyanate			Not Liste	
26628-22-8	Sodium Azide			Liste	
lew York Right to	Know:				•
7732-18-5	Water			Not Liste	
333-20-0	Potassium thiocyanate			Not Liste	
26628-22-8	Sodium Azide				Not Liste
Pennsylvania Rigl	nt to Know:				
7732-18-5	Water			Not Liste	
	Potassium thiocyanate			Not	
333-20-0	Potassium	iniocyanate			Liste

California Proposition 65: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None **Disclaimer:**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the

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Potassium Thiocyanate, 0.0025M

conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

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End of Safety Data Sheet