Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Iron (III) Nitrate, 0.25M

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Iron (III) Nitrate, 0.25M

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: FE3385-400ML

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:

Irritant
Skin irritation, category 2
Eye irritation, category 2A

Serious Eye Damage/Eye Irritation - Category 2.
Skin corrosion/irritation - Category 2.

Signal word: Warning

Hazard statements:

Causes skin irritation.
Causes serious eye irritation.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with soap and water.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists get medical advice/attention.

Other Non-GHS Classification: None

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Iron (III) Nitrate, 0.25M

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 7782-61-8	Ferric Nitrate	10.1 %
CAS 7732-18-5	Deionized Water	89.75 %
CAS 7697-37-2	Nitric Acid, ACS	0.15 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical attention if irritation or coughing persists.

After skin contact:

Wash affected area with soap and water. Immediately remove contaminated clothing and shoes. Rinse thoroughly with plenty of water for at least 15 minutes. Immediately seek medical attention.

After eye contact:

Protect unexposed eye. Flush thoroughly with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Continue rinsing eyes during transport to hospital.

After swallowing:

Rinse mouth thoroughly. Dilute with water or milk. Get medical assistance. Induce vomiting.

Most important symptoms and effects, both acute and delayed:

Inhalation may cause irritation to nose and upper respiratory tract, ulceration, coughing, chest tightness and shortness of breath. Higher concentrations cause tachypnoea, pulmonary oedema and suffocation. Pain, eye ulceration, conjunctival irritation, cataracts and glaucoma may occur following eye exposure. None identified.

Indication of any immediate medical attention and special treatment needed:

Provide SDS to Physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use dry chemical, foam, carbon dioxide, or mist to extinguish surrounding fire.

Unsuitable extinguishing agents:

None identified.

Special hazards arising from the substance or mixture:

None identified. Not considered to be a fire or explosion hazard.

Advice for firefighters:

Protective equipment:

Use normal procedures. Use protective clothing. Use NIOSHapproved breathing equipment.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

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Iron (III) Nitrate, 0.25M

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Soak up with inert absorbent material and dispose of as hazardous waste. Cover spill with suitable absorbing agent. Mix and add water to form slurry. Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Prevent contact with skin, eyes, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Store protected from moisture. Provide ventilation for containers. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

Control parameters:

7782-61-8, Ferric nitrate nonahydrate , OSHA PEL TWA 1 mg/m3.
7782-61-8 , Ferric nitrate nonahydrate , ACGIH TLV TWA 1 mg/m3.
7697-37-2 , Nitric Acid , NIOSH 4 ppm STEL; 10 mg/m3 STEL.
7697-37-2 , Nitric Acid , NIOSH 2 ppm TWA; 5 mg/m3 TWA.
7697-37-2 , Nitric Acid , ACGIH 4 ppm STEL.
7697-37-2 , Nitric Acid ACGIH, 2 ppm TWA.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of handling. Normal ventilation is adequate.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Tightly fitting safety goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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Iron (III) Nitrate, 0.25M

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Pale green liquid	**Explosion limit lower**: **Explosion limit upper**:	Non Explosive Non Explosive
Odor:	Odorless	**Vapor pressure at 20°C**:	No information available
Odor threshold:	No information available	**Vapor density**:	No Determined.
pH-value:	No information available	**Relative density**:	Approx. 1 (Water = 1)
Melting/Freezing point:	Approx. 0C	**Solubilities**:	Soluble.
Boiling point/Boiling range:	Approx. 100C	**Partition coefficient (n-octanol/water)**:	Not determined
Flash point (closed cup):	Not applicable	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	No information available	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Not flammable	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Approx. 1 g/cm³ (8.345 lbs/gal) at 20 °C (68 °F)		
Hydrochloric Acid	MW is36.46		

SECTION 10: Stability and reactivity

Reactivity:

Under normal conditions product is stable.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Strong bases, hydrogen sulfides, turpentines, metallic powders, hydrogen sulfides, wood and combustible organics.

Hazardous decomposition products:

Can emit toxic fumes of hydrogen nitrate or nitrogen oxides.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.
Chronic Toxicity: No additional information.
Skin corrosion/irritation:

Irritating to skin 7782-61-8 (Ferric Nitrate).

Serious eye damage/irritation:

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Irritating to eyes. 7782-61-8 (Ferric Nitrate).

Respiratory or skin sensitization:

None identified.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability:

No Information Available.

Bioaccumulative potential:

No Information Available.

Mobility in soil:

No Information Available.

Other adverse effects:

No Information Available.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Absorb with suitable material and containerize for disposal.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA — Not regulated

Limited Quantity Exception: — None

Bulk:
RQ (if applicable): None
Proper shipping Name: Not regulated.
Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Not regulated.
Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

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Iron (III) Nitrate, 0.25M

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute,Chronic

SARA Section 313 (Specific toxic chemical listings):

7782-61-8 Ferric nitrate nonahydrate.
7697-37-2 Nitric Acid.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7783-85-9 Ferrous Ammonium Sulfate 1000 lbs.
7697-37-2 Nitric acid 1000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

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. Note. 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
GHS Full Text Phrases: None

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Iron (III) Nitrate, 0.25M

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Potassium Thiocyanate, 0.0025M

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Potassium Thiocyanate, 0.0025M

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: PT4032-275ML

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture: Not classified for physical or health hazards under GHS.

Signal word: None

Hazard statements: None

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 333-20-0	Potassium Thiocyanate, ACS	<0.02 %
CAS 7732-18-5	Deionized Water	>99.96 %
CAS 26628-22-8	Sodium Azide	<0.02 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Potassium Thiocyanate, 0.0025M

After inhalation:

Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get immediate medical attention. Do not use mouth-to-mouth. Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult give oxygen.

After skin contact:

Flush with water for 15 minutes. Get medical assistance if irritation develops. Wash affected area with soap and water. Rinse thoroughly. Remove contaminated clothing and wash before reuse or discard. Seek medical attention if irritation, discomfort, or vomiting persists.

After eye contact:

Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance. Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Seek medical assistance.

After swallowing:

Do NOT induce vomiting. Dilute with water or milk. Get medical assistance. Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Immediately seek medical attention.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention. Provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents:

None identified.

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid contact with skin, eyes, and clothing. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. Follow proper disposal methods. Pick up and arrange disposal without creating dust. Sweep up and shovel. Refer to Section 13. Place into properly labeled containers for recovery or disposal. If necessary use trained response staff or contractor.

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Effective date : 12.14.2014

Potassium Thiocyanate, 0.0025M

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wash hands after handling. Avoid contact with skin and eyes. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store away from foodstuffs. Store in well sealed containers. Keep away from food and beverages. Store away from incompatible materials. Store in a cool location. Provide ventilation for containers. Keep product and empty container away from heat and sources of ignition. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

Control parameters: 333 - 20 - 0, Potassium thiocyanate, TWA 5 mg/m3 USA. OSHA.
26628-22-8, Sodium azide, C 0.100000 ppm USA. NIOSH.
26628-22-8, Sodium azide, C 0.110000 ppm USA. ACGIH.

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 or dusts below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection: Not required under normal conditions of use.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Safety glasses with side shields or goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

General hygienic measures: Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Perform routine housekeeping. Before re-wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	Not determined Not determined
Odor:	Odorless	**Vapor pressure at 20°C**:	Not determined
Odor threshold:	Not determined	**Vapor density**:	Not determined
pH-value:	Not determined	**Relative density**:	Not determined
Melting/Freezing point:	Approximately 0°C	**Solubilities**:	Soluble in water.
Boiling point/Boiling range:	Approximately 100°C	**Partition coefficient (n-octanol/water)**:	Not determined

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Potassium Thiocyanate, 0.0025M

Flash point (closed cup):	Not determined	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	Not determined	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Not determined	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None identified.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

strong oxidizers, calcium chlorite, perchloryl fluoride, active halogen compounds.

Hazardous decomposition products:

Oxides of nitrogen, sulfur, potassium, and possibly cyanides.

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD50 Dermal - Rabbit - 20 mg/kg 26628 - 22 - 8.

Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Ecotoxicity, Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Do not release into the environment.
333 - 20 - 0, LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96.0 h.
333 - 20 - 0, EC50 - Daphnia magna (Water flea) - 11 mg/l - 48 h.
26628 - 22 - 8, EC50 - Daphnia pulex (Water flea) - 4.2 mg/l - 48 h.

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Potassium Thiocyanate, 0.0025M

Persistence and degradability:

Readily biodegradable. Readily degradable in the environment.

Bioaccumulative potential:

33 - 20 - 0 Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 16 Weeks - 35,000 µg/l. 33 - 20 - 0 Bioconcentration factor (BCF) : 13.4.

Mobility in soil: No additional information.
Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA — Not Regulated

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Not Regulated.
Hazard Class: None
Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Not Regulated.
Hazard Class: None
Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

333-20-0 Potassium thiocyanate.
26628-22-8 Sodium azide.

RCRA (hazardous waste code):

None of the ingredients are listed.

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Potassium Thiocyanate, 0.0025M

TSCA (Toxic Substances Control Act) :

333-20-0 Thiocyanic acid, potassium salt (1:1): not listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

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. Note. 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
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Potassium Thiocyanate, 0.0025M

NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Nitric Acid, 0.2N

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Nitric Acid, 0.2N

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: NA7030-P

Recommended uses of the product and restrictions on use: Laboratory chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:

Irritant
Skin irritation, category 2

Skin corrosion/irritation - Skin Irritation 2.

Signal word: Warning

Hazard statements:
Causes skin irritation.

Precautionary statements:
If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
If skin irritation occurs: Get medical advice/attention.
IF ON SKIN: Wash with soap and water.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Nitric Acid, 0.2N

Ingredients:		
CAS 7732-18-5	Deionized Water	98.05 %
CAS 7697-37-2	Nitric Acid, ACS	1.95 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

After skin contact:

Wash affected area with soap and water. Rinse or flush skin/hair gently with water for at least 20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse or flush eye gently with water for at least 15-20 minutes, lifting upper and lower lids. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation- all routes of exposure. Headache. Shortness of breath. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Nitric acid vapors may lead pneumonia or pulmonary edema at prolonged exposure.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep

unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Neutralize with calcium carbonate and soda ash.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection



Control parameters:	7697-37-2, Nitric acid, ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) 4 ppm STEL. 7697-37-2, Nitric acid, ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) 2 ppm TWA. 7697-37-2, Nitric acid, NIOSH - STEL 4 ppm; 10 mg/m3. 7697-37-2, Nitric acid , NIOSH - TWA 2 ppm; 5 mg/m3. 7697-37-2, Nitric acid , OSHA - Final PELs - Time Weighted Averages (TWAs) 2 ppm; 5 mg/m3.
Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Eye protection:	Safety glasses with side shields or goggles.

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General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	0 Vol % 0 Vol %
Odor:	Odorless	**Vapor pressure at 20°C**:	2.3 kPa (@ 20°C) or 23 hPa (17 mm Hg) at 20 °C (68 °F)
Odor threshold:	Not determined	**Vapor density**:	0.62 (Air = 1)
pH-value:	< 1	**Relative density**:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	**Solubilities**:	Soluble in water.
Boiling point/Boiling range:	100°C (212°F)	**Partition coefficient (n-octanol/water)**:	Not determined
Flash point (closed cup):	Not applicable	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	> 1	**Decomposition temperature**:	Not determined
Flammability (solid, gaseous):	Not applicable	**Viscosity**:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density at 20°C:	1 g/cm³ (8.345 lbs/gal) at 20 °C (68 °F)		

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong bases. Metallic powder.

Hazardous decomposition products:

Nitrogen oxides. Hydrogen nitrate.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Classified as Skin Irritant. Section 2.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

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Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.
Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Neutralize with calcium carbonate and soda ash.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA — Not regulated.

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Not regulated.
Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Not regulated.
Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

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SARA Section 311/312 (Specific toxic chemical listings):

Acute

SARA Section 313 (Specific toxic chemical listings):

7697-37-2 Nitric acid 1.0 % de minimis concentration.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7697-37-2 Nitric acid 1000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

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. Note. 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: 2-0-0
HMIS: 2-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.

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CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.