Nitrite Titrant

SECTION 1: Identification

Product identifier

Product name: Nitrite Titrant
Product code: AR-1074-500

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:

Aqua Analytics
245 Matheson Blvd East, Units 1 & 2
Mississauga, Ontario Canada L4Z 3C9
(888) 712-4000

Emergency telephone number:

ChemTel: (24-hour)
+1(800)255-3924
+1(813)248-0585 (International)

SECTION 2: Hazard identification

GHS classification:

Skin corrosion, category 1A.
Skin sensitization, category 1.
Serious eye damage, category 1.
Corrosive to metals, category 1.

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

May be corrosive to metals
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Causes serious eye damage

Precautionary statements:

Keep only in original container.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISONCENTER or doctor/physician.
If on skin: Wash with soap and water.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.Rinse skin with water/shower.
Immediately call a POISON CENTER or doctor/physician.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable forbreathing. Immediately call a poison center or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contactlenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation or a rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Collect spillage.
Store locked up.
Store in corrosive resistant stainless steel container with a resistant inner liner.
Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Water	84.4
CAS number: 16774-21-3	Ceric Ammonium Nitrate	4.6
CAS number: 7664-93-9	Sulfuric Acid	11

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:
No additional information.

After inhalation:
Move exposed individual to fresh air.
Loosen clothing as necessary and position individual in a comfortable position.
Maintain an unobstructed airway.
Immediately call a POISON CONTROL CENTER or seek medical attention.

After skin contact:
Immediately remove all contaminated clothing.
Wash affected area with soap and water.

Immediately call a POISON CONTROL CENTER or seek medical attention.

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 ingestion:

Immediately call a POISON CONTROL CENTER or seek medical attention.
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 available.

Delayed symptoms and effects:

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

No additional information.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

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

Unsuitable extinguishing media:

No information available.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors.
May form corrosive mixtures with water.

Special protective equipment for fire-fighters:

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.
Wear protective eye wear, gloves and clothing.

Reference to other sections:

None

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.
Keep container tightly sealed.
Protect from freezing and physical damage.
Store in corrosive resistant container with a resistant inner lining.

SECTION 8: Exposure controls/personal protection

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Sulfuric Acid	7664-93-9	OSHA PEL TWA 1.0 mg/m³
ACGIH	Sulfuric Acid	7664-93-9	ACGIH TLV 0.2 mg/m³, thoracic fraction
	Sulfuric Acid	7664-93-9	ACGIH TLV STEL 3.0 mg/m³
NIOSH	Sulfuric Acid	7664-93-9	NIOSH REL TWA 1.0 mg/m³

Biological limit value:

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.

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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 (physical state, color):	Clear, orange colored liquid
Odor:	Odorless
Odor threshold:	Not available
pH-value:	<3
Melting/Freezing point:	Approx. 0°C
Boiling point/range:	Approx. 100°C
Flash point:	Not available
Evaporation rate:	Not available
Flammability (solid, gaseous):	Not available
Explosion limit upper:	Not available
Explosion limit lower:	Not available
Vapor pressure:	Not available
Vapor density:	>1
Density:	Not available
Relative density:	Approx. 1.05
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:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

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Conditions to avoid:
Incompatible materials, excess heat.

Incompatible materials:
Organics, chlorates, carbides, fulminates, picrates, alkalines, reducing agents, nitrates, acetic acids, oxidizing agents, metals.

Hazardous decomposition products:
Oxides of sulfur.

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
Ceric Ammonium Nitrate	oral	LD50 Oral - Rat - female - 300 - 2,000 mg/kg

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
Ceric Ammonium Nitrate	Causes skin irritation
Sulfuric Acid	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment: Causes serious eye damage

Product data: No data available.

Substance data:

Name	Result
Ceric Ammonium Nitrate	Causes serious eye damage

Respiratory or skin sensitization

Assessment: May cause an allergic skin reaction

Product data: No data available.

Substance data:

Name	Result
Ceric Ammonium Nitrate	May cause an allergic skin reaction.

Carcinogenicity

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

Product data: No data available.

Substance data:

Name	Species	Result
Sulfuric Acid	Strong Inorganic Acid Mists Containing Sulfuric Acid	Known to be human carcinogens.

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International Agency for Research on Cancer (IARC):

Name	Classification
Sulfuric Acid	Group 1 - Carcinogenic to humans

National Toxicology Program (NTP):

Name	Classification
Sulfuric Acid	Known to be human carcinogens

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
Ceric Ammonium Nitrate	Specific target organ toxicity - single exposure. Inhalation - 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.

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
Ceric Ammonium Nitrate	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.14 mg/l - 96 h

Chronic (long-term) toxicity

Assessment: Toxic to aquatic life with long lasting effects

Product data: No data available.

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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 information 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

Canadian Transportation of Dangerous Goods (TDG)

UN number	UN 1760
UN proper shipping name	Corrosive Liquid, N.O.S. (Sulfuric Acid, Ceric Ammonium Nitrate), Marine Pollutant (Ceric Ammonium Nitrate)
UN transport hazard class(es)	8 
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN 1760
UN proper shipping name	Corrosive Liquid, N.O.S. (Sulfuric Acid, Ceric Ammonium Nitrate), Marine Pollutant (Ceric Ammonium Nitrate)
UN transport hazard class(es)	8 
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None

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

UN number	UN 1760
UN proper shipping name	Corrosive Liquid, N.O.S. (Sulfuric Acid, Ceric Ammonium Nitrate), Marine Pollutant (Ceric Ammonium Nitrate)
UN transport hazard class(es)	8 
Packing group	II
Environmental hazards	Marine Pollutant
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

Canada regulations

Domestic substances list (DSL):

16774-21-3	Ceric Ammonium Nitrate	Listed
7664-93-9	Sulfuric Acid	Listed
7732-18-5	Water	Listed

Non-domestic substances list (NDSL): Not listed

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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End of Safety Data Sheet