AQUA YIELD OPERATIONS

Safety Data Sheet
NanoNitro™

SECTION 1: Identification

1.1 GHS Product identifier

Product name	NanoNitro™
Brand	Turf Nano Tech™

1.3 Recommended use of the chemical and restrictions on use

Soil and foliar nutrient for turf management. Do not exceed the recommended application rates.

1.4 Supplier's details

Name	Aqua Yield Operations
Address	9180 Sandy Parkway Suite D Sandy Utah 84070 United States
Telephone	(801) 449-9220
email	info@aquayield.com

1.5 Emergency phone number

ChemTel Inc.
+1(800)255-3924 (North America)
+1(813)248-0585 (International)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. Urea
Concentration 77 % (weight)
CAS no. 57-13-6

2. Ammonium thiosulfate
Concentration 21 % (weight)
EC no. 231-982-0
CAS no. 7783-18-8

3. Water/Aqua/Eau
Concentration Not specified, Trade secret*
CAS no. 7732-18-5

4. Silicon dioxide
Concentration Not specified, Trade secret*
CAS no. 69012-64-2

Trade secret statement (OSHA 1910.1200(i))
*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
If inhaled	If large amounts are inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if irritation develops or persists.
In case of skin contact	Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.
In case of eye contact	Immediately flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Obtain medical attention if irritation develops or persists.

If swallowed	Do not induce vomiting. Rise out mouth and then drink plenty of water. Get medical attention and call Poison Center if irritation develops and persists.

4.2 Most important symptoms/effects, acute and delayed
Prolonged or repeated skin contact may cause irritation.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically. If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Use extinguishing media appropriate for surrounding fire.

5.2 Specific hazards arising from the chemical
Ammonium thiosulfate: Not readily combustible. When heated to decomposition (as in fires) emits toxic fumes of ammonia, hydrogen sulfide, nitrogen oxides and sulfur oxides.

5.3 Special protective actions for fire-fighters
Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid inhalation of spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing, gloves, and eye/face protection. Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. For personal protection, see section 8 of the SDS.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers, or watercourses.

6.3 Methods and materials for containment and cleaning up
Wipe up small spills with paper towel and discard. For larger spills, add sawdust, chalk, or other inert binding material, then sweep up and discard. Dispose of the collected material according to regulations.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equiptment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Proper PPE should be worn while handling. Avoid inhalation of vapors/sprays and contact with skin and eyes. Use only with adequate ventilation. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Keep out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry, cool and well-ventilated place. Protect containers from physical damage. Keep container tightly closed. Do not store above 25°C (77°F) for maximum storage life. Protect from freezing. Store away from food and feed.

Specific end use(s)
Industrial uses: None identified
Professional uses: Foliar and Soil Nutrient

SECTION 8: Exposure controls/personal protection

8.2 Appropriate engineering controls
No relevant information available.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Follow relevant national guidelines concerning the use of protective eyewear.

Skin protection
Not required under normal conditions of use.

Body protection
Body protection:
Wear suitable protective clothing.

Face protection:
Wear safety glasses with side shields (or goggles).

Hand protection:
Chemical reistant gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Respiratory protection
Not required under normal conditions of use.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

SECTION 9: Physical and chemical properties and safety characteristics

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear/Liquid
Odor	Slight ammonia
Odor threshold	Not determined
Melting point/freezing point	Not determined
Boiling point or initial boiling point and boiling range	100°C (212°F)
Flammability	Not applicable
Lower and upper explosion limit/flammability limit	Not determined
Flash point	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Oxidizing properties	non-oxidizing
pH	
Kinematic viscosity	Not determined

Solubility	Soluble with water
Partition coefficient n-octanol/water (log value)	Not determined
Vapor pressure	Not determined
Evaporation rate	Not determined
Density and/or relative density	1.2653 g/mL
Relative vapor density	Not determined

Particle characteristics
Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable and non-reactive under normal conditions.

10.2 Chemical stability
Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions
No dangerous or hazardous reaction under normal conditions.

10.4 Conditions to avoid
No relevant information available.

10.5 Incompatible materials
Ammonium thiosulfate: Seriously corrodes copper-based alloy.

10.6 Hazardous decomposition products
Ammonium thiosulfate: Emits toxic fumes of ammonia, hydrogen sulfide, nitrogen oxides and sulfur oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Ammonium thiosulfate: Skin: May cause skin irritation.
Eyes: Causes eye irritation.
Inhalation: Causes respiratory tract irritation.
Ingestion: May cause gastrointestinal tract irritation with diarrhea.

May affect behavior/central nervous system (somnolence, convulsions, ataxia). respiration (emphysema), Kidneys (acute renal failure, acute tubular necrosis), blood
(hemorrhage). The toxicological properties of this substance have not been fully investigated.

Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitization
Based on available data, the classification criteria are not met.

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.

SECTION 12: Ecological information

Toxicity
Ammonium thiosulfate: Data not available.

Persistence and degradability
Ammonium thiosulfate: Hazardous short term degradation products are not likely to form. However, long term degradation products may arise. The material itself and its products of degradation are not toxic.

Bioaccumulative potential
No relevant information available.

Mobility in soil
This product is water soluble and may disperse in soil.

Results of PBT and vPvB assessment
No relevant information available.

Endocrine disrupting properties
No relevant information available.

Other adverse effects
No relevant information available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of waste material in accordance with local, regional, national, provincial, territorial, and international regulations. Do not allow this material to drain into sewers/water supplies.

Packaging disposal
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Waste treatment
Disposeal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

SECTION 14: Transport information

14.1 UN Number
14.2 UN Proper Shipping Name
14.3 Transport hazard class(es)
14.4 Packing group

SECTION 15: Regulatory information

No data available.

SECTION 16: Other information

16.2 Preparation information
This information is based on our present knowledge. However, this shall not constitute a guarentee for any specific product features and shall not establish a legally valid contractual relationship. This safety data sheet provides health and safety information. The product is to be used in applications consistent with best farming practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information data sheet is to the best of Aqua-Yield's knowledge correct as at the date of publication. Neither Aqua-Yield, importer or local supplier accepts liability for any loss or damage resulting from reliance on this information. Further information on this product may be obtained from the supplier whose name, address and telephone number will be found on the product container. The information provided herein is offered solely for your consideration, investigation and verification. This information herein is provided by Aqua-Yield in good faith as accurate at the time of writing but without guarantee. This information includes information which has been generated by other parties and provided to Aqua-Yield and which Aqua-Yield has not independently verified. The information provided herein relates only to the specific product designated and may not be valid if the product is used in combination with any other materials or in any process.

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