



Safety Data Sheet

AQUA-YIELD™ acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: March 14, 2018

Revision: March 14, 2018

1 Identification

- **Product identifier**
- **Trade name:** NanoZn
- **Product code:** 010
- **Recommended use and restriction on use**
- **Recommended use:** Agricultural chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Aqua-Yield
12754 South 125 East
Draper, Utah 84020
+1(801)449-9220
info@aquayield.com
- **Emergency telephone number:**
ChemTel Inc.
+1(800)255-3924 (North America)
+1(813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS05
- **Signal word:** Danger
- **Hazard statements:**
H318 Causes serious eye damage.
- **Precautionary statements:**
P280 Wear eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
- **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Components:**

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68134-01-0 Citric acid, ammonium zinc salt

 Eye Dam. 1, H318
 Acute Tox. 4, H302

5-10%

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**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then 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:

Strong irritant with the danger of severe eye injury.

Danger: Causes serious eye damage.**Indication of any immediate medical attention and special treatment needed:**

If medical advice is needed, have product container or label at hand.

Medical supervision for at least 48 hours.

5 Fire-fighting measures

Extinguishing media**Suitable extinguishing agents:**

The product is not flammable.

Use fire fighting measures that suit the environment.

For safety reasons unsuitable extinguishing agents: None.**Special hazards arising from the substance or mixture** No relevant information available.**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

Ensure adequate ventilation.

Use personal protective equipment as required.

Environmental precautions

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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**

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.

- **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:**

Use only in well ventilated areas.

Keep out of reach of children.

Open and handle receptacle with care.

Avoid splashes or spray in enclosed 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 in a cool location.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **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 with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **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.

- **Engineering controls:** Provide adequate ventilation.

- **Breathing equipment:** Not required under normal conditions of use.

- **Protection of hands:** Rubber gloves

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing

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- **Limitation and supervision of exposure into the environment**
No relevant information available.
- **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form:	Liquid
Color:	Clear
Odor:	Characteristic
Odor threshold:	Not determined.

- | | |
|--------------------------------|-----------------|
| · pH-value: | 1 |
| · Melting point/Melting range: | Not determined. |
| · Boiling point/Boiling range: | Not determined. |

· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Not applicable.
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· Auto-ignition temperature:	Not determined.
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· Decomposition temperature:	Not determined.
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· Danger of explosion:	Product does not present an explosion hazard.
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· Explosion limits

Lower:	Not determined.
Upper:	Not determined.

· Oxidizing properties:	Non-oxidizing.
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· Vapor pressure:	Not determined.
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· Density:

Relative density:	1.15
Vapor density:	Not determined.
Evaporation rate:	Not determined.

· Solubility in / Miscibility with

Water:	Soluble.
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· Partition coefficient (n-octanol/water):	Not determined.
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· Viscosity

Dynamic:	Not determined.
Kinematic:	Not determined.

· Other information	No relevant information available.
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10 Stability and reactivity

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

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- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Reacts with strong acids and alkali.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products**

Under fire conditions only:
Toxic metal oxide smoke

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** May be harmful if swallowed.

LD/LC50 values that are relevant for classification:**ATE (Acute Toxicity Estimate)**

Oral | LD50 | >2000 mg/kg (rat)

68134-01-0 Citric acid, ammonium zinc salt

Oral | LD50 | 800-1,500 mg/kg (rat) (Acute Toxicity Estimate)

- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **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.

- **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**

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- **Aquatic toxicity** Harmful to aquatic life with long lasting effects.
- **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:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | Not regulated. |
| · UN proper shipping name | |
| · DOT, ADR, IMDG, IATA | Not regulated. |
| · Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not regulated. |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not regulated. |
| · Environmental hazards | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

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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):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· 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.

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health):

None of the ingredients are listed.

· Canadian Domestic Substances List (DSL):

All ingredients listed on DSL or NDSL.

16 Other information

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

- **Date of preparation / last revision** March 14, 2018 / -

· 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)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Sources

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

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