



AQUA-YIELD®

AQUA-YIELD

Safety Data Sheet NanoCS

SECTION 1: Identification

1.1 Product identifier

Product name	NanoCS
Product number	016

1.3 Recommended use of the chemical and restrictions on use

Agricultural chemicals

1.4 Supplier's details

Name	Aqua-Yield
Address	12754 South 125 East Suite A Draper Utah 84020 United States
Telephone	(801)449-9220
email	info@aquayield.com

1.5 Emergency phone number(s)

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

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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. Phosphonic acid, potassium salt (1:2)

Concentration	17 - 20 % (weight)
CAS no.	13492-26-7

2. Zincate(2-), [[N,N'-1,2-ethanediylbis[N-[(carboxy-kappaO)methyl]glycinato-kappaN,kappaO]](4-)]-, ammonium (1:2), (OC-6-21)-

Concentration	15 - 18 % (weight)
CAS no.	67859-51-2

3. Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, ammonium salt (1:4)

Concentration	0.05 - 1 % (weight)
CAS no.	22473-78-5

Trade secret statement (OSHA 1910.1200(i))

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

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 inhaled	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention.
In case of skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. If skin irritation occurs, get medical advice/attention.

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In case of eye contact	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.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.
Causes mild skin irritation.
Gastric or intestinal disorders when ingested.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

5.2 Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

5.3 Special protective actions for fire-fighters

Move containers from fire area if you can do so without risk.
Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
For large spills, wear protective clothing.
Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Large spills: Dike the spilled material where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

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.

SECTION 7: Handling and storage

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7.1 Precautions for safe handling

Avoid splashes or spray in enclosed areas.
Handle with care.
Keep out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, dry conditions in well sealed receptacles.
Use only receptacles specifically permitted for this substance/product.
Unsuitable material for receptacle: aluminium
Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

8.2 Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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

Eye/face protection

No relevant information available.

Skin protection

Gloves not required under normal conditions of use.
Wear protective gloves to handle contents of damaged or leaking units.
Gloves are advised for repeated or prolonged contact.

Body protection

Eye/face protection: Safety glasses with side shields are recommended.

Skin protection:

Hand protection: For prolonged or repeated skin contact use suitable protective gloves.

Other: Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear/ liquid
Odor	No data available.
Odor threshold	No data available.
pH	6.36
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.
Flash point	No data available.

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Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	1.1
Solubility(ies)	Miscible in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2 Chemical stability

Material is stable under normal conditions.

10.3 Possibility of hazardous reactions

Reacts with alkali (lyes).

Reacts with strong oxidizing agents.

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

10.4 Conditions to avoid

Contact with incompatible materials.

10.5 Incompatible materials

Strong oxidizing agents.

Alkalies

10.6 Hazardous decomposition products

Under fire conditions only:

Carbon monoxide and carbon dioxide

Phosphorus oxides (e.g. P₂O₅)

Water: In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

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

Skin corrosion/irritation

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Causes mild skin irritation.
Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Slight irritant effect on eyes.
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

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

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

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

This product has no known adverse effect on human health.

SECTION 12: Ecological information

Toxicity

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

Not applicable

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

Disposal of contaminated packaging

Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

Waste treatment

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.

SECTION 14: Transport information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Canadian Non-Domestic Substances List (NDSL)

Chemical name: Phosphonic acid, dipotassium salt
CAS: 13492-26-7

Chemical name: Zincate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']-, diammonium, (OC-6-21)-
CAS: 67859-51-2

Canadian Domestic Substances List (DSL)

Chemical name: Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetraammonium salt
CAS: 22473-78-5

Chemical name: Water
CAS: 7732-18-5

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

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Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Water

CAS-No. 7732-18-5

New Jersey Right To Know Components

Water

CAS-No. 7732-18-5

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We

accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products.

Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

16.1 Further information/disclaimer

While the information contained herein is based on data considered accurate and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act, it is provided for guidance only. Aqua-Yield Operations, LLC does not guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations; in so doing, user assumes all risk in use of the material. The information contained herein is not to be taken as a warranty or representation for which Aqua-Yield Operations, LLC assumes legal responsibility.