

# Safety Data Sheet

acc. to OSHA HCS

Printing date 12/06/2017

Reviewed on 12/06/2017

## 1 Identification

- **Product identifier**
- **Trade name:** UAN Nitrogen Std #5 28.00% N  
Nitrogen Source: Urea: Ammonium Nitrate
- **Article number:** MID105
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson sherman@aquasolutions.org
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

*Ox. Liq. 1 H271 May cause fire or explosion; strong oxidizer.*

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS03

- **Signal word** *Danger*
- **Hazard statements**  
*May cause fire or explosion; strong oxidizer.*
- **Precautionary statements**  
*Keep/Store away from clothing and other combustible materials*  
*Take any precaution to avoid mixing with combustibles.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Wear fire/flame resistant/retardant clothing.*  
*If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.*  
*In case of fire: Use for extinction: CO2, powder or water spray.*  
*In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
 Fire = 3  
 Reactivity = 0

The substance possesses oxidizing properties.

- **HMIS-ratings (scale 0 - 4)**



Health = 0  
 Fire = 3  
 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

#### · **Dangerous components:**

CAS: 57-13-6	Urea	37.513%
CAS: 6484-52-2	Ammonium Nitrate	30.01%

#### · **Table of Nonhazardous Ingredients**

CAS: 7732-18-5	Water	32.477%
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### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
 Dilute with plenty of water.  
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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.
- **Protective Action Criteria for Chemicals**

### · PAC-1:

CAS: 57-13-6	Urea	30 mg/m <sup>3</sup>
CAS: 6484-52-2	Ammonium Nitrate	6.7 mg/m <sup>3</sup>

### · PAC-2:

CAS: 57-13-6	Urea	280 mg/m <sup>3</sup>
CAS: 6484-52-2	Ammonium Nitrate	73 mg/m <sup>3</sup>

### · PAC-3:

CAS: 57-13-6	Urea	1,700 mg/m <sup>3</sup>
CAS: 6484-52-2	Ammonium Nitrate	440 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
 The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
 At this time, the remaining constituent has no known exposure limits.

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CAS: 57-13-6 Urea

WEEL Long-term value: 10 mg/m<sup>3</sup>

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Liquid with possible crystals in bottle

**Color:** Clear

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.  
Explosive when mixed with combustible material.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

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· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.34174 g/cm <sup>3</sup> (11.19682 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	32.5 %
<b>VOC content:</b>	0.00 %
	0.0 g/l / 0.00 lb/gl
· <b>Solids content:</b>	67.5 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**ATE (Acute Toxicity Estimate)**

Oral	LD50	7,388 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.


## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (Self-assessment): slightly hazardous for water  
 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 further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  |   |
| <b>· DOT, IMDG, IATA</b>  | UN3139                                      |
| <b>· UN proper shipping name</b>  |   |
| <b>· DOT</b>  | Oxidizing liquid, n.o.s. (Ammonium nitrate) |
| <b>· IMDG, IATA</b>   | OXIDIZING LIQUID, N.O.S. (AMMONIUM NITRATE) |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT</b>  |   |
|  |   |
| <b>· Class</b>  | 5.1 Oxidizing substances                    |

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· <b>Label</b>	5.1
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	5.1 Oxidizing substances
· <b>Label</b>	5.1
· <b>Packing group</b>	
· <b>DOT, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Oxidizing substances
· <b>Danger code (Kemler):</b>	51
· <b>EMS Number:</b>	F-A,S-Q
· <b>Stowage Category</b>	B
· <b>Segregation Code</b>	SG38 Stow "separated from" ammonium compounds. SG49 Stow "separated from" cyanides SG60 Stow "separated from" peroxides
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	UN 3139 OXIDIZING LIQUID, N.O.S. (AMMONIUM NITRATE), 5.1, III

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

CAS: 6484-52-2 | Ammonium Nitrate

· **TSCA (Toxic Substances Control Act):**

Urea

Ammonium Nitrate

Water

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

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· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

CAS: 57-13-6 Urea

II

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS03

· **Signal word** Danger

· **Hazard statements**

May cause fire or explosion; strong oxidizer.

· **Precautionary statements**

Keep/Store away from clothing and other combustible materials

Take any precaution to avoid mixing with combustibles.

Wear protective gloves/protective clothing/eye protection/face protection.

Wear fire/flame resistant/retardant clothing.

If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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.

· **Department issuing SDS:** Environment protection department.

· **Contact:**

· **Date of preparation / last revision**

12-06-2017: review SDS for accuracy. STN

Creation date for SDS 03-03-2015. STN

12/06/2017 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Ox. Liq. 1: Oxidizing liquids – Category 1

US