



UAN Custom Blend 27-0-0+1S

Koch Fertilizer, LLC.

Chemwatch Hazard Alert Code: 0

Version No: 3.4

Issue Date: 24/05/2017

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Print Date: 24/05/2017

S.GHS.U.S.A.EN

SECTION 1 IDENTIFICATION

Product Identifier

Product name: UAN Custom Blend 27-0-0+1S

Synonyms: Not Available

Other means of identification: Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses: Use according to manufacturer's directions.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Koch Fertilizer, LLC.
Address	4111 E 37th Street North, Wichita, KS 67201-2219
Telephone	1-316-828-7672
Fax	Not Available
Website	Not Available
Email	Not Available

Emergency phone number

Association / Organisation	Call CHEMTREC day or night
Emergency telephone numbers	1.800.424.9300
Other emergency telephone numbers	Outside USA/Canada 1.703.527.3887

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

ChemWatch Hazard Ratings

Flammability	0	
Toxicity	0	0 = Minimum
Body Contact	0	1 = Low
Reactivity	0	2 = Moderate
Chronic	0	3 = High
		4 = Extreme

Classification	Acute Aquatic Hazard Category 3
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Label elements

Hazard pictogram(s)

Not Applicable

SIGNAL WORD: NOT APPLICABLE

Hazard statement(s)

H402: Harmful to aquatic life

Continued...

Hazard(s) not otherwise specified

Not Applicable

Precautionary statement(s) Prevention

P273: Avoid release to the environment.

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501: Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
6484-52-2*	32-55	<u>ammonium nitrate</u>
57-13-6*	23-38	<u>urea</u>
7732-18-5	14-32	<u>water</u>
7783-18-8*	5	<u>diammonium thiosulfate</u>
7664-41-7*	<0.14	<u>Free Ammonia</u>

SECTION 4 FIRST-AID MEASURES

Description of first aid measures**Eye Contact**

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

Ingestion

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility

None known.

Special protective equipment and precautions for fire-fighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard

- Non combustible.
 - Not considered a significant fire risk, however containers may burn.
- May emit corrosive fumes.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

Major Spills

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue (see Section 13 for specific agent).
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.

- Prevent concentration in hollows and sumps.
- **DO NOT enter confined spaces until atmosphere has been checked.**
- **DO NOT allow material to contact humans, exposed food or food utensils.**
- Avoid contact with incompatible materials.
- **When handling, DO NOT eat, drink or smoke.**
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- **DO NOT allow clothing wet with material to stay in contact with skin**

Other information

Conditions for safe storage, including any incompatibilities

Suitable container

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility

None known

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	Free Ammonia	Ammonia	35 mg/m ³ / 50 ppm	27 mg/m ³ / 35 ppm	Not Available	TLV® Basis: Eye dam; URT irr
US NIOSH Recommended Exposure Limits (RELs)	Free Ammonia	Anhydrous ammonia, Aqua ammonia, Aqueous ammonia [Note: Often used in an aqueous solution.]	18 mg/m ³ / 25 ppm	35 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	Free Ammonia	Ammonia	25 ppm	Not Available	Not Available	Not Available

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)

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grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

2.5-10 m/s
(500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Personal protection



Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

Hands/feet protection

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection

See Other protection below

Other protection

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

Thermal hazards

Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: Colorless to white

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity:

See section 7

Chemical stability:

- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Possibility of hazardous reactions:

See section 7

Conditions to avoid:

See section 7

Incompatible materials:

See section 7

Hazardous decomposition products:

See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Ingestion

The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of

corroborating animal or human evidence.

Skin Contact

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.

Eye

Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Chronic

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

UAN Custom Blend 27-0-0+1S	TOXICITY	IRRITATION
	Not Available	Not Available
ammonium nitrate	TOXICITY	IRRITATION
	Oral (rat) LD50: 2217 mg/kg ^[2]	Not Available
urea	TOXICITY	IRRITATION
	Intraperitoneal (rat) LD50: >5000 mg/kg ^[2]	Skin (human): 22 mg/3 d (I)- mild
	Intratracheal (rat) LD50: 567 mg/kg ^[2]	
	Intravenous (mouse) LD50: 4600 mg/kg ^[2]	
	Intravenous (Rat) LD50: 5300 mg/kg ^[2]	
	Oral (mouse) LD50: 11000 mg/kg ^[2]	
	Oral (rat) LD50: 8471 mg/kg ^[2]	
	Subcutaneous (mouse) LD50: 9200 mg/kg ^[2]	
	Subcutaneous (rat) LD50: 8200 mg/kg ^[2]	
water	TOXICITY	IRRITATION
	Not Available	Not Available
diammonium thiosulfate	TOXICITY	IRRITATION
	Oral (Guinea pig) LD50: 1098 mg/kg ^[2]	Not Available
	Oral (Mouse) LD50: 2100 mg/kg ^[2]	
Oral (Rat) LD50: 2890 mg/kg ^[2]		
Free Ammonia	TOXICITY	IRRITATION
	Not Available	Not Available

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

urea

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

For urea:

Urea is used in ointments and creams to treat dry skin. Long-term follow-up studies have indicated that the substance does not cause allergy, and is virtually free from side effects. It is usually tolerated well, although diarrhea is sometimes reported after ingestion of very large amounts (60-90 grams/day). There is the possibility that infection of H. pylori in the human stomach may aggravate local effects by urea because of the generation of ammonia.

Acute toxicity: Animal testing shows that the acute toxicity of urea is low.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

Altered sleep time, change in motor activity, antipsychosis, dyspnea, methaemoglobinaemia, convulsions, lymphomas recorded. Carcinogenic by RTECS criteria.

urea & diammonium thiosulfate & Free Ammonia

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases.

WATER & Free Ammonia

No significant acute toxicological data identified in literature search.

Acute Toxicity	⊗	Carcinogenicity	⊗
Skin Irritation/Corrosion	⊗	Reproductivity	⊗
Serious Eye Damage/Irritation	⊗	STOT - Single Exposure	⊗
Respiratory or Skin sensitisation	⊗	STOT - Repeated Exposure	⊗
Mutagenicity	⊗	Aspiration Hazard	⊗

Legend: ✘ – Data available but does not fill the criteria for classification
✔ – Data available to make classification
 ⊗ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

UAN Custom Blend 27-0-0+1S	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
ammonium nitrate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	=111840mg/L	1
	EC03	168	Algae or other aquatic plants	=83mg/L	4
	NOEC	20	Fish	0.003mg/L	4
urea	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	5mg/L	4
	EC50	48	Crustacea	3910mg/L	4
	EC50	96	Algae or other aquatic plants	42184.758mg/L	3
	BCF	24	Algae or other aquatic plants	0.05mg/L	4
	EC50	384	Crustacea	894.861mg/L	3
	NOEC	96	Crustacea	1000mg/L	4
water	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
diammonium thiosulfate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE

	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Free Ammonia	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.068mg/L	2
	EC50	48	Crustacea	0.179mg/L	5
	EC50	96	Algae or other aquatic plants	311.661mg/L	3
	EC50	1440	Crustacea	0.016mg/L	5
	NOEC	Not Applicable	Fish	0.0015mg/L	5

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
urea	LOW	LOW
water	LOW	LOW
Free Ammonia	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
urea	LOW (BCF = 10)
water	LOW (LogKOW = -1.38)
Free Ammonia	LOW (LogKOW = 0.229)

Mobility in soil

Ingredient	Mobility
urea	LOW (KOC = 4.191)
water	LOW (KOC = 14.3)
Free Ammonia	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- **DO NOT allow wash water from cleaning or process equipment to enter drains.**
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required**Marine Pollutant**

NO

	Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS	Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS	Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
UN number: NA			
UN proper shipping name: Not Applicable			
Transport hazard class(es): Not Applicable			
Subrisk: Not Applicable			
Packing group: Not Applicable			

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****ammonium nitrate(6484-52-2*) is found on the following regulatory lists**

- US - Massachusetts - Right To Know Listed Chemicals
- US - Rhode Island Hazardous Substance List
- US - Pennsylvania - Hazardous Substance List
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

urea(57-13-6*) is found on the following regulatory lists

- US AIHA Workplace Environmental Exposure Levels (WEELs)
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
- US EPA Carcinogens Listing

water(7732-18-5) is found on the following regulatory lists

- US - Pennsylvania - Hazardous Substance List
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

diammonium thiosulfate(7783-18-8*) is found on the following regulatory lists

- US - Massachusetts - Right To Know Listed Chemicals
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
- US - Pennsylvania - Hazardous Substance List

Free Ammonia(7664-41-7*) is found on the following regulatory lists

- International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft
- US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
- US - Alaska Limits for Air Contaminants
- US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
- US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELS)
- US - Washington Permissible exposure limits of air contaminants
- US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
- US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values
- US - California Permissible Exposure Limits for Chemical Contaminants
- US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
- US - Hawaii Air Contaminant Limits
- US ACGIH Threshold Limit Values (TLV)
- US - Idaho - Limits for Air Contaminants
- US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
- US - Massachusetts - Right To Know Listed Chemicals
- US CWA (Clean Water Act) - List of Hazardous Substances
- US - Michigan Exposure Limits for Air Contaminants
- US EPCRA Section 313 Chemical List
- US - Minnesota Permissible Exposure Limits (PELs)
- US NIOSH Recommended Exposure Limits (RELS)
- US - Oregon Permissible Exposure Limits (Z-1)
- US OSHA Permissible Exposure Levels (PELs) - Table Z1
- US - Pennsylvania - Hazardous Substance List
- US SARA Section 302 Extremely Hazardous Substances
- US - Rhode Island Hazardous Substance List
- US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
- US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants
- US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Section 311/312 hazard categories**

Immediate (acute) health hazard	No
Delayed (chronic) health hazard	No

Continued...

Fire hazard	No
Pressure hazard	No
Reactivity hazard	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Ammonia	100	45.4

State Regulations**US. California Proposition 65**

None Reported

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (ammonium nitrate; Free Ammonia; water; diammonium thiosulfate; urea)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (ammonium nitrate; Free Ammonia; water; urea)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
 PC—STEL: Permissible Concentration-Short Term Exposure Limit
 IARC: International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit.
 IDLH: Immediately Dangerous to Life or Health Concentrations
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection
 OTV: Odour Threshold Value
 BCF: BioConcentration Factors
 BEI: Biological Exposure Index

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