

## 1. Identification

**Product identifier** UMAXX® Stabilized Nitrogen Fertilizer

### Other means of identification

**SDS Number** KAS\_UMAXX\_US\_EN

**Synonyms** UMAXX®

**Recommended use** Fertilizer.

**Recommended restrictions** None known.

### Manufacturer / Importer / Supplier / Distributor information

**Manufacturer/Supplier** Koch Agronomic Services, LLC  
 4111 E 37th St N  
 Wichita, KS 67220 US  
 kochmsds@kochind.com  
 1.866.863.5550

**Emergency** For Chemical Emergency  
 Call CHEMTREC day or night  
 USA/Canada - 1.800.424.9300  
 Mexico - 1.800.681.9531  
 Outside USA/Canada - 1.703.527.3887  
 (collect calls accepted)

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** The mixture does not meet the criteria for classification.

### Precautionary statement

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** Not classified.

### Supplemental information

Not applicable.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Urea	57-13-6	60 - 100
Dicyandiamide	461-58-5	1 - 5
N-(n-butyl)-thiophosphoric triamide	94317-64-3	< 0.1
N-Methyl-2-pyrrolidone	872-50-4	< 0.1
Non hazardous component	Proprietary	< 0.1
Non hazardous dye	Proprietary	< 0.1

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.  
This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

## 4. First-aid measures

**Inhalation** Move person to fresh air. Get medical attention if any discomfort continues.  
**Skin contact** Wash off with plenty of water. Get medical attention if irritation develops or persists.  
**Eye contact** Do not rub eye. Remove contact lenses, if present and easy to do. Flush thoroughly with water. If irritation occurs, get medical assistance.  
**Ingestion** Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort occurs.  
**Most important symptoms/effects, acute and delayed** Symptoms can include irritation, redness, scratching of the cornea, and tearing.  
**Indication of immediate medical attention and special treatment needed** Treat symptomatically.  
**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.  
**Unsuitable extinguishing media** None known.  
**Specific hazards arising from the chemical** The product is non-combustible. During fire, gases hazardous to health may be formed.  
**Special protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.  
**Fire-fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.  
**Methods and materials for containment and cleaning up** Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. After removal flush contaminated area thoroughly with water.  
Never return spills to original containers for re-use.  
**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.

## 7. Handling and storage

**Precautions for safe handling** Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Observe good industrial hygiene practices.  
**Conditions for safe storage, including any incompatibilities** Keep container tightly closed. Store in a cool, dry, well-ventilated place. Long term storage at temperatures above 100°F (36°C) can adversely affect the efficacy of products containing N-(n-butyl)-thiophosphoric triamide. Store away from incompatible materials.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Dust (CAS -)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Dust (CAS -)	TWA	5 mg/m3	Respirable fraction.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value	Form
		15 mg/m <sup>3</sup>	Total dust.
		50 millions of particle	Total dust.
		15 millions of particle	Respirable fraction.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Dust (CAS -)	TWA	3 mg/m <sup>3</sup>	Respirable particles.
		10 mg/m <sup>3</sup>	Inhalable particles.

**US. Workplace Environmental Exposure Level (WEEL) Guides**

Components	Type	Value	Form
N-Methyl-2-pyrrolidone (CAS 872-50-4)	TWA	40 mg/m <sup>3</sup>	
Urea (CAS 57-13-6)	TWA	10 ppm	Total particulate.
		10 mg/m <sup>3</sup>	

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
N-Methyl-2-pyrrolidone (CAS 872-50-4)	100 mg/l	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**US WEEL Guides: Skin designation**

N-Methyl-2-pyrrolidone (CAS 872-50-4) Can be absorbed through the skin.

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Risk of contact: Wear dust goggles.

**Skin protection**

**Hand protection** Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

**Other** No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear air supplied respiratory protection if exposure concentrations are unknown. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134 and ANSI Z88.2.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

**Appearance** Blue-green granules

**Physical state** Solid.

**Form** Granules.

**Color** Blue-green.

**Odor** Slight sulfurous

**Odor threshold** Not available.

<b>pH</b>	7.2 (10% in water)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	1.32
<b>Solubility(ies)</b>	Soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	47.00 lb/ft <sup>3</sup>

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal temperature conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Extreme temperatures.
<b>Incompatible materials</b>	Acids. Strong reducing agents. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Ammonia. Hydrogen sulfide. During combustion: Carbon oxides. Nitrogen oxides. Sulfur oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	May irritate and cause stomach pain, vomiting and diarrhea.
<b>Inhalation</b>	Dust may irritate respiratory system.
<b>Skin contact</b>	Dust may irritate skin.
<b>Eye contact</b>	Dust may irritate the eyes.

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms can include irritation, redness, scratching of the cornea, and tearing.

### Information on toxicological effects

**Acute toxicity** May irritate and cause stomach pain, vomiting, diarrhea and nausea.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2823 mg/kg
N-Methyl-2-pyrrolidone (CAS 872-50-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	8000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.1 mg/l

Components	Species	Test Results
Oral LD50	Rat	3914 mg/kg
Urea (CAS 57-13-6)		
Acute Oral LD50	Rat	14300 mg/kg
<b>Skin corrosion/irritation</b>	May cause irritation through mechanical abrasion.	
<b>Serious eye damage/eye irritation</b>	May cause eye irritation.	
<b>Respiratory sensitization</b>	No data available.	
<b>Skin sensitization</b>	Not a skin sensitizer.	
<b>Germ cell mutagenicity</b>	No data available.	
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
<b>Reproductive toxicity</b>	The product contains a small amount of substance that is suspected of damaging fertility or the unborn child.	
<b>Specific target organ toxicity - single exposure</b>	No data available.	
<b>Specific target organ toxicity - repeated exposure</b>	No data available.	
<b>Aspiration hazard</b>	Not classified.	
<b>Chronic effects</b>	Prolonged exposure may cause chronic effects.	
<b>Further information</b>	No other specific acute or chronic health impact noted.	

## 12. Ecological information

<b>Ecotoxicity</b>	The 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.		
Components	Species		Test Results
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	290 mg/l, 48 hours
Fish	LC50	Fish	1140 mg/l, 96 hours
N-Methyl-2-pyrrolidone (CAS 872-50-4)			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia magna	> 1000 mg/l, 24 hours
Urea (CAS 57-13-6)			
<b>Aquatic</b>			
Fish	LC50	Leuciscus idus	> 6810 mg/l, 96 hours
<b>Persistence and degradability</b>	No data available.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Partition coefficient n-octanol / water (log Kow)</b>			
N-Methyl-2-pyrrolidone (CAS 872-50-4)			-0.54
Urea (CAS 57-13-6)			-2.11
<b>Mobility in soil</b>	This product is water soluble and may disperse in soil.		
<b>Other adverse effects</b>	No data available.		

## 13. Disposal considerations

<b>Disposal instructions</b>	Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Disposal 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.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

Not regulated as a hazardous material by DOT.

### IATA

Not regulated as a dangerous good.

### IMDG

Not regulated as a dangerous good.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**US federal regulations** This product is not hazardous according to OSHA 29CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3) 1.0 % One-Time Export Notification only.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations** WARNING: This product contains chemical(s) known to the State of California to cause birth defects or other reproductive harm.

#### US. Massachusetts RTK - Substance List

N-Methyl-2-pyrrolidone (CAS 872-50-4)

#### US. New Jersey Worker and Community Right-to-Know Act

N-Methyl-2-pyrrolidone (CAS 872-50-4) 500 lbs

#### US. Pennsylvania RTK - Hazardous Substances

N-Methyl-2-pyrrolidone (CAS 872-50-4)

#### US. Rhode Island RTK

N-Methyl-2-pyrrolidone (CAS 872-50-4)

#### US. California Proposition 65

##### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

N-Methyl-2-pyrrolidone (CAS 872-50-4)

### International Inventories

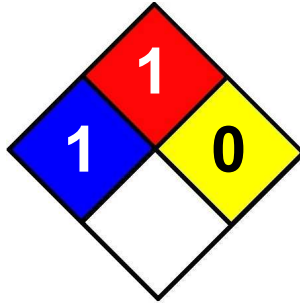
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 08-January-2014  
**Revision date** -  
**Version #** 01  
**NFPA Ratings**



**List of abbreviations** EC50: Effective concentration, 50%.  
LD50: Lethal Dose, 50%.

**References** EPA: Acquire database  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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