SAFETY DATA SHEET

1. Identification

Product identifier: UFLEXX™ Stabilized Nitrogen Fertilizer

Other means of identification:
- SDS Number: KAS_UFLEXX_US_EN
- Synonyms: UFLEXX™; UFLEXX™ Stabilized Nitrogen Fertilizer 46-0-0; * UFLEXX™ Stabilized Nitrogen Fertilizer 46-0-0 Mini

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
kochmads@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): None known.

Supplemental information: Not applicable.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Non hazardous dye</td>
<td>Proprietary</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>Dicyandiamide</td>
<td>461-58-5</td>
<td>0.5-1.5</td>
</tr>
</tbody>
</table>

UFLEXX™ Stabilized Nitrogen Fertilizer

915976 Version #: 02 Revision date: 02- May-2016 Issue date: 08-January-2014
4. First-aid measures

Inhalation
Move to fresh air. Get medical attention if any discomfort continues.

Skin contact
Wash contact areas with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Dust in the eyes: Do not rub eyes. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

Ingestion
Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed
Eye contact: Symptoms can include irritation, redness, scratching of the cornea, and tearing.
Skin contact: May cause mild skin irritation.
Dust may irritate throat and respiratory system and cause coughing.

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
Urea is non-combustible under most conditions. However, during a fire, irritating/toxic gases may be generated. The dust can be ignited at very high temperatures, but not expected to explode (minimum ignition temperature (cloud) = 900 deg C).

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 must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do it without risk. Use water spray to prevent dust formation, absorb heat, keep containers cool and protect fire-exposed material.

General fire hazards
Bulk material is non-combustible.

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.

Environmental precautions
Never return spills to original containers for re-use.

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)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust (CAS -)</td>
<td>PEL</td>
<td>5 mg/m^3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m^3</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust (CAS -)</td>
<td>TWA</td>
<td>5 mg/m^3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m^3</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 mppcf</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mppcf</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust (CAS -)</td>
<td>TWA</td>
<td>3 mg/m^3</td>
<td>Respirable particles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m^3</td>
<td>Inhalable particles.</td>
</tr>
</tbody>
</table>

US. Workplace Environmental Exposure Level (WEEL) Guides

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

Biological limit values

ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone (CAS 872-50-4)</td>
<td>100 mg/l</td>
<td>5-Hydroxy-N-methyl-2-pyrrolidone</td>
<td>Urine</td>
<td>*</td>
</tr>
</tbody>
</table>

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

Exposure guidelines

US - California OELs: Skin designation

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

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.

Skin protection

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.
9. Physical and chemical properties

Appearance: Blue. Granules.

Physical state: Solid.

Form: Granules.

Color: Blue.

Odor: Slight sulfurous

Odor threshold: Not available.

pH: 7.2 (10% in water)

Melting point/freezing point: 275 °F (135 °C) Decomposes.

Initial boiling point and boiling range: Not applicable.

Flash point: Not available.

Evaporation rate: Not applicable.

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%): Not applicable.

Flammability limit - upper (%): Not applicable.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Relative density: 1.32

Solubility(ies)

Solubility (water): Soluble.

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

Other information

Density: 47.00 lb/ft³

Explosive properties: Not explosive.

Oxidizing properties: Not oxidizing.

10. Stability and reactivity

Reactivity Chemical stability Possibility of hazardous reactions

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

Stable under normal temperature conditions.

Hazardous polymerization does not occur.

Conditions to avoid

Extreme temperatures.

Incompatible materials


Hazardous decomposition products


11. Toxicological information

Information on likely routes of exposure

Inhalation: High concentrations of dust may irritate throat and respiratory system and cause coughing.

Skin contact: Dust may irritate skin.

Eye contact: Dust may irritate the eyes.
Ingestion
May cause discomfort if swallowed.

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 cause discomfort if swallowed.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyandiamide (CAS 461-58-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>New Zealand white rabbit</td>
<td>&gt; 2000 mg/kg, 24 hours</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Wistar rat</td>
<td>&gt; 259 mg/m3, 4 hours</td>
</tr>
<tr>
<td>Oral</td>
<td>Wistar rat</td>
<td>&gt; 10000 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 7000 mg/kg</td>
</tr>
<tr>
<td>N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Wistar rat</td>
<td>&gt; 2.1 mg/l, 4 hours</td>
</tr>
<tr>
<td>Oral</td>
<td>Wistar rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone (CAS 872-50-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>&gt; 5.1 mg/l</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>3605 mg/kg</td>
</tr>
<tr>
<td>Urea (CAS 57-13-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>14300 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
May cause irritation through mechanical abrasion.

Irritation Corrosion - Skin
N-Methyl-2-pyrrolidone (CAS 872-50-4) Result: Slightly irritating
Species: Rabbit

Serious eye damage/eye irritation
May cause irritation through mechanical abrasion.

Eye
N-Methyl-2-pyrrolidone (CAS 872-50-4) Result: Moderately irritating
Species: Rabbit
Observation Period: 14 days

Respiratory or skin sensitization

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

Skin sensitization
Not a skin sensitizer.

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

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.
NTP Report on Carcinogens
Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

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

Specific target organ toxicity - single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Further information
No other specific acute or chronic health impact noted.

12. Ecological information

Ecotoxicity
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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyandiamide (CAS 461-58-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Selenastrum capricornutum (Pseudokirchnerella subcapitata)</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Lepomis macrochirus</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Oncorhynchus mykiss</td>
</tr>
<tr>
<td>Chronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>LC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Oryzias latipes</td>
</tr>
<tr>
<td>N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Selenastrum capricornutum</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Daphnia</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Lepomis macrochirus</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone (CAS 872-50-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>NOEC</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>Scenedesmus subspicatus</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Palaemonetes vulgaris</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Oncorhynchus mykiss</td>
</tr>
<tr>
<td>Chronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>LC50</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>Urea (CAS 57-13-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Leuciscus idus</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Partition coefficient n-octanol / water (log Kow)
N-Methyl-2-pyrrolidone (CAS 872-50-4) -0.54
Partition coefficient n-octanol / water (log Kow)  
Urea (CAS 57-13-6) -2.11

Mobility in soil  
This product is water soluble and may disperse in soil.

Other adverse effects  
No data available.

13. Disposal considerations

Disposal instructions  
Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Hazardous waste code  
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products  
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.

Contaminated packaging  
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT  
Not regulated as dangerous goods.

IATA  
Not regulated as dangerous goods.

IMDG  
Not regulated as dangerous goods.

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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)  
Not regulated.

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  
Not listed.

SARA 311/312 Hazardous chemical  
Yes

SARA 313 (TRI reporting)  

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>&lt; 0.1</td>
</tr>
</tbody>
</table>

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.

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)

US. Pennsylvania Worker and Community Right-to-Know Law
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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*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 #: 03

HMIS® ratings
Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

List of abbreviations
EC50: Effective Concentration, 50%.

LC50: Lethal Concentration, 50%.

References
EPA: Acquire database
HSDB® - Hazardous Substances Data Bank

Disclaimer
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.