

Safety Data Sheet according to OSHA-GHS (29 CFR part 1910.1200 HCS 2012)

**1. PRODUCT AND COMPANY IDENTIFICATION****Product Name:** 21-7-7**Date of issue:** February 2016

**Product identifier:** 21-7-7 Soluble Fertilizer  
**Recommended uses:** Fertilizer end-use, preparation of fertilizers mixtures.  
Dry fertilizer for mixing with water for foliar and soil applications.  
**Restrictions on uses:** None  
**Manufacturer:** Southern Agricultural Insecticides, Inc.  
P.O. Box 218  
Palmetto, FL 34220  
**Company Telephone/Fax:** (941) 722-3285/(941) 723-2974  
**Emergency Telephone Number:** (800) 424-9300 (CHEMTREC)

**2. HAZARDS IDENTIFICATION****Classification of the mixture:** Not Classified

**Hazard Statements** May be harmful if swallowed in large quantities  
Causes eye irritation. Not expected to present eye irritation under conditions of normal use.

**Label elements**  
**Hazard pictograms**



**Signal word** Warning

**Precautionary Statements**

Wear protective gloves / protective clothing / eye protection. Wash hands and face thoroughly after handling.

**IF IN EYES:** 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:** Rinse mouth. If you feel unwell or concerned, get medical advice/attention.

Store locked up

Dispose of contents/container according to local/state/federal regulations.

**Other hazards:** None

**Classification of the relevant ingredients of the mixture in accordance with 29CFR §1910.1200. This classification is based on each material at 100%. The actual concentrations of ingredients in this mixture are listed in section 3**

|                                   |  |
|-----------------------------------|--|
| Potassium nitrate                 | Oxidizing solid, Cat. 3  |
| Ammonium sulfate                  | Acute Toxicity 4 (Oral)  |
| Urea                              | Not classified   |
| MAP -<br>(Monoammonium Phosphate) | Acute Toxicity Oral Category 5<br>Skin Irritant Category 2<br>Eye Irritant Category 2B |

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

This product is to be considered as a mixture/preparation

| <b>Substance name</b> | <b>CAS No</b> | <b>EC No</b> | <b>Concentration</b> |
|-----------------------|---------------|--------------|----------------------|
| Potassium nitrate     | 7757-79-1     | 231-818-8    | 15 %                 |
| Ammonium sulfate      | 7783-20-2     |              | 57 %                 |
| Urea                  | 57-13-6       |              | 12 %                 |
| MAP                   | 7722-76-1     |              | 11 %                 |

#### **4. FIRST AID MEASURES**

##### **Description of first aid measures**

###### **General information**

Remove contaminated clothing. In case of persisting adverse effects consult a physician. Never give anything by mouth to an unconscious person or a person with cramps.

###### **In case of inhalation**

Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention for any breathing difficulty.

###### **In case of skin contact**

Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

###### **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.

###### **In case of ingestion**

Rinse mouth and drink plenty of water. Do not induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

###### **Most important symptoms and effects, both acute and delayed**

The following symptoms may occur:

|                        |                                       |                                 |
|------------------------|---------------------------------------|---------------------------------|
| In case of inhalation  | Irritation to respiratory tract       |                                 |
|                        | In case of skin contact               | May cause redness or irritation |
| In case of eye contact | May cause eye irritation              |                                 |
| In case of ingestion   | Ingestion of large amounts may cause: |                                 |
|                        | gastrointestinal disturbances         |                                 |

###### **Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

#### **5. FIRE FIGHTING MEASURES**

##### **Extinguishing media**

Suitable extinguishing media: Use any suitable means for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.

Unsuitable material: None, but attention should be paid to compatibility with surrounding chemicals.

##### **Specific hazards arising from the chemical**

Contact with combustible materials will not cause spontaneous ignition, however, this product may enhance an existing fire.

Thermal decomposition can lead to the escape of toxic/corrosive gases and vapors.

Thermal decomposition products: Nitrous oxides (NO<sub>x</sub>), nitrites, phosphorus oxides, ammonia oxides.

##### **Protective equipment and precautions for firefighters**

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (self contained breathing apparatus (SCBA)).

#### **6. ACCIDENTAL RELEASE MEASURES**

##### **Personal precautions**

Provide adequate ventilation. Wear personal protection equipment (Section 8).

##### **Environmental precautions**

Do not allow to enter into surface water or drains. Ensure waste is collected and contained.

##### **Methods and material for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal or recovery.

##### **Other information**

None

#### **7. HANDLING AND STORAGE**

##### **Precautions for Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. When applied as a spray, avoid breathing spray mist. Do not damage containers while handling.

##### **Conditions for safe storage, including any incompatibilities**

Do not place damaged containers into storage. Store in a well-ventilated place. Store locked up. Keep out of reach of children. Do not contaminate any body of water by cleaning equipment or disposal or waste.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

#### Occupational exposure limits

|                              | Potassium nitrate | Ammonium Sulfate | Urea                                    | MAP                                  |
|------------------------------|-------------------|------------------|---|--------------------------------------|
| OSHA PEL                     | Not Established   | Not Established  | Not Established                         | Not available                        |
| STEL/ceiling                 | Not Established   | Not Established  | Not Established                         | Not available                        |
| ACGIH (2012 TLVs® and BEIs®) |                   |                  |   |                                      |
| TWA                          | Not Established   | Not Established  | 10 mg/m <sup>3</sup> (TWA) (Inhalable.) | 5 mg/m <sup>3</sup> TWA (respirable) |
| STEL/ceiling                 | Not Established   | Not Established  | Not Established                         | Not available                        |

### Engineering controls

Use exhaust ventilation to keep airborne concentrations below exposure limits where adequate ventilation is not available. Product is intended for use outdoors..

Eye/face protection      Chemical goggles

Skin Protection            Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time, recommended.  
Overall.

Respiratory Protection    Wear respiratory protection, where airborne concentrations are expected to exceed exposure limits

### General Hygiene Considerations

Avoid contact with eyes and skin. Wash hands and face thoroughly after handling. Have eye-wash facilities immediately available. Do not eat, drink or smoke when using this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|  |                                     |
|--|-------------------------------------|
| Appearance                             | Light blue, fine crystalline powder |
| Color                                  | White to pale blue                  |
| Odor                                   | Odorless                            |
| Odor Threshold                         | Not applicable                      |
| pH value                               | No data available                   |
| Melting point / freezing range         | No data available                   |
| Boiling temperature / boiling range    | No data available                   |
| Flash point                            | No data available                   |
| Vaporization rate / Evaporation rate   | Not applicable                      |
| Flammable solids                       | Not flammable                       |
| Explosion limits (LEL, UEL)            | Not applicable                      |
| Vapor pressure                         | Not applicable                      |
| Vapor density                          | Not applicable                      |
| Relative Density                       | No data available                   |
| Solubility                             | Highly soluble                      |
| Partition coefficient n-octanol /water | Not applicable                      |
| Auto Ignition temperature {A IT)       | Not applicable                      |
| Decomposition temperature              | No data available                   |
| Viscosity                              | Not applicable                      |
| Explosive properties                   | Not applicable                      |
| Oxidizing properties                   | No data available                   |
| Other information                      |                                     |
| None                                   |                                     |

## 10. STABILITY AND REACTIVITY

Stable under normal use conditions

### Reactivity

No hazardous reaction when handled and stored according to provisions.

### Chemical stability

Stable under normal storage and temperature conditions.

### Possibility of hazardous reactions

None identified

**Conditions to avoid**

Keep away from flammable, combustible and reducing substances.

**Incompatible materials**

Flammable, combustible and reducing substances under specific conditions.

**Hazardous decomposition products**

Thermal decomposition products: Nitrous oxides (NO<sub>x</sub>), nitrites, phosphorus oxides, ammonia oxides.

**11. TOXICOLOGICAL INFORMATION**

The following information mostly refers to the major component of the product.

**Likely routes of exposure (inhalation, ingestion, skin and eye contact)**

Eye contact, skin contact and inhalation. Exposure by ingestion is not expected to occur through normal industrial or agricultural use.

**Symptoms related to the physical, chemical and toxicological characteristics**

May be irritant to the respiratory tract. Causes serious eye irritation. May cause redness or irritation to the skin. Ingestion of large amounts may cause gastrointestinal disturbances. May cause delayed lung effects after short term exposure to thermal degradation products.

**Information on toxicological effects from short and long term exposure**

There is no data for the mixture itself.

**Acute toxicity**

|   |                           |
|---|---------------------------|
| Acute toxicity                          | LD50:                     |
| Acute Toxicity Estimate for the mixture | No data available         |
| Potassium nitrate                       | >2000 mg/kg bw            |
| Ammonium Sulfate                        | >2000 mg/kg (rat, dermal) |
| MAP                                     | (rat, oral) > 2000 mg/kg  |

Assessment / classification: Based on available data for the ingredients of the mixture, the classification criteria are not met.

**Irritant and corrosive effects****Irritation to the skin**

|                   | Result                     | Method                                   |
|-------------------|----------------------------|--|
| Potassium nitrate | non-irritant.              | Equivalent/similar to OECD guideline 404 |
| Ammonium sulfate  | non-irritant.              | Equivalent/similar to OECD guideline 404 |
| MAP               | (rat, dermal) > 5000 mg/kg |  |

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

**Irritation to eyes**

|                   | Result            | Method             |
|-------------------|-------------------|--------------------|
| Potassium nitrate | Not-irritating    | OECD Guideline 405 |
| Ammonium Sulfate  | Not-irritating    | OECD Guideline 405 |
| MAP               | No data available |                    |

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

**Respiratory or skin sensitisation****Skin sensitization**

|                   | Result            | Method             |
|-------------------|-------------------|--------------------|
| Potassium nitrate | not sensitizing.  | OECD Guideline 429 |
| Ammonium sulfate  | not sensitizing.  | OECD Guideline 429 |
| MAP               | No data available |                    |

Not hazardous by OSHA/WHMIS criteria

Respiratory sensitisation: No information available.

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

**Genetic effects**

The product has not been tested.

|                   | Bacterial (Ames Test) | Chromosomal aberrations | Mutation in mammalian cell: |
|-------------------|-----------------------|-------------------------|-----------------------------|
| Potassium nitrate | negative              | negative                | negative                    |
| Ammonium Sulfate  | No data available     | No data available       | No data available           |
| MAP               | No data available     | No data available       |                             |

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

## Reproductive toxicity

### Adverse effects on sexual function and fertility/developmental toxicity

This product has not been tested. Based on individual components, and data available, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

The product does not contain relevant ingredients classified as Target Organ Toxicant after single exposure.

|                   |   |
|-------------------|---|
| Ammonium sulfate  | Not available   |
| Potassium nitrate | No relevant effect have been observed after single exposure to potassium nitrate. |
| MAP               | Not available   |

Assessment / classification: Based on available data, the classification criteria are not met

### Specific target organ toxicity (repeated exposure)

|                   | Organs affected:         | Effects                           | Guideline |
|-------------------|--------------------------|-----------------------------------|-----------|
| Potassium nitrate | None                     | No effects (NOAEL > 100 mg/kg bw) | OECD 422  |
| Ammonium Sulfate  | None                     | No effects (NOAEL > 100 mg/kg bw) | OECD 422  |
| MAP               | No information available |                                   |           |

## Aspiration hazard

Physicochemical data and toxicological information does not indicate an aspiration hazard.

Assessment / classification: Based on available data, the classification criteria are not met

## Carcinogenicity

|  |   |
|--|---|
| International Agency for Research on Cancer (IARC) | No component of this product present at levels $\geq 0.1$ is identified as known or anticipated carcinogen by IARC                |
| National Toxicology Program (NTP)                  | No component of this product present at levels $\geq 0.1$ is identified as known or anticipated carcinogen by NTP.                |
| 29 CFR part 1910, subpart Z                        | No component of this product present at levels $\geq 0.1$ is identified as carcinogen or potential carcinogen by OSHA.            |
| California Proposition 65                          | This product contains substances known to the State of California to cause cancer and/or birth defects or other reproductive harm |
| WHO (2003) Nitrate in drinking water               | No association between nitrate exposure in humans and the risk of cancer.   |

Assessment / classification: Based on available data, the classification criteria is not met

## Other Toxicological Information

### 12. ECOLOGICAL INFORMATION

There is no data for the mixture itself. The following information mostly refers to the major component of the product.

#### Ecotoxicity

##### Aquatic Toxicity

|                   |             |                                       |
|-------------------|-------------|---------------------------------------|
| Potassium nitrate |             |                                       |
| 96-h LC50         | 1378 mg/L   | Poecilia reticulata (freshwater fish) |
| 24-h EC50         | 490 mg/L    | Daphnia magna (fresh water flea).     |
| 10 d EC50         | > 1700 mg/L | Several algae species                 |
| Ammonium Sulfate  |             |                                       |
| 96-h LC50         | 53 mg/L     | Fish                                  |
| 48-h EC50         | 121.7mg/L   | Daphnia magna (fresh water flea)      |
| 18d EC50          | 2,700 mg/L  | Several algae species                 |

MAP - May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are (100%) considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream. Fish 96 hour LC50, OECD Guidelines 203 (rainbow trout): >86mg/L.

**Persistence and degradability**

The product contains mainly inorganic nitrate and phosphate salts. In aqueous solutions, these salts dissociate into their respective ions. Phosphate ions are finally incorporated into the Phosphorus cycle. Under anoxic conditions, denitrification occurs and nitrate is ultimately converted into molecular nitrogen as part of the Nitrogen cycle. This product has not been tested as a mixture.

**Bioaccumulative potential**

Low potential for bioaccumulation based on physicochemical properties of main components.

**Mobility in soil**

The components of this mixture have a low potential for adsorption. Portion not taken up by plants, can leach to ground-water.

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

Disposal should be in accordance with applicable federal and state laws. Product should, if possible, be used for an appropriate application.

Waste containing nitrates that exhibit the characteristic of ignitability has the EPA Hazardous Waste Number of D001 according to the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

**14. TRANSPORTATION INFORMATION****US DOT (49CFR part 172)**

The description shown may not apply to all situations. Consult 49 CFR, or appropriate dangerous goods regulations for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

|                          |  |
|--------------------------|--|
| <b>DOT (Land)</b>        | Not DOT regulated (Manufactured Fertilizers NOI) |
| <b>IATA (Air)</b>        | Not regulated                                    |
| <b>IMO/IMDG (Vessel)</b> | Not regulated                                    |

**15. REGULATORY INFORMATION****US Federal**

SARA Title III Rules

Section 311/312 Hazard Classes

Not applicable

Section 313 Toxic Chemicals

Not applicable

Section 302 Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

None ingredient is listed.

NFPA 704/2012: National Fire Protection Association

Based on Ammonium Sulfate

Health 1

Fire 0

Reactivity 0

Special

**Chemical Inventories**

United States TSCA All ingredients are listed

Canada DSL All ingredients are listed

European Union (EINECS) All ingredients are listed

Japan (METI) All ingredients are listed

**16. OTHER INFORMATION**

The information above is believed to be accurate and represents the best information currently available to us. However,

we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Southern Agricultural Insecticides, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Southern Agricultural Insecticides, Inc. has been advised of the possibility of such damages.