21-7-7 Soluble Fertilizer
Safety Data Sheet #64897

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 quantaties
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 -	Acute Toxicity Oral Category 5
(Monoammonium Phosphate)	Skin Irritant Category 2
	Eye Irritant Category 2B

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a mixture/preparation

Substance name	CAS No	EC No	Concentration
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 (NOx), 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, avid 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/m³ (TWA) (Inhalable.)	5 mg/m3 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 (NOx), 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 >IS00 mg/kg bw)	OECO 422
Ammonium Sulfate	None	No effects (NOAEL >IS00 mg/kg bw)	OECO 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 ≥0.1 is identified as known or anticipated carcinogen by IARC
National Toxicology Program (NTP)	No component of this product present at levels ≥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 ≥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 rng/L	Fish
48-h EC50	121.7mg/L	Daphnia magna (fresh water flea)
18d EC50	2,700 mg/L	Several algae species

MAP - (100%) May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are 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 groundwater.
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.

DOT (Land)	Not DOT regulated (Manufactured Fertilizers NOI)
IATA (Air)	Not regulated
IMO/IMDG (Vessel)	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,

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