13-2-13 Fertilizer with Minors
SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Name:	13-2-13 Fertilizer with Minors
Recommended Use:	End use fertilizer. Dry fertilizer for mixing with water
Restrictions on Use:	None
Company:	Southern Agricultural Insecticides, Inc P.O. Box 218 Palmetto, FL 34220 (941) 722-3285 Chemtrec (800) 424-9300 (24 hour transportation spill response)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the mixture
Classification of the chemical in accordance with 29 CFR §1910.1200

Hazard classes and Hazard categories	Hazard statements
Oxidizing solid, Cat. 3	May intensify fire; oxidizer
Acute toxicity 4	Harmful if swallowed
Irreversible eye effects Cat. 1	Causes serious eye damage

Label elements
Hazard pictograms

Signal word DANGER
Hazard Statements May intensify fire; Oxidizer
Harmful if swallowed
Causes serious eye damage

Precautionary Statements
Keep away from flammable / combustible / reducing materials.
Wear protective gloves / protective clothing / eye protection. Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this prod ct.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
In case of fire: use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.
IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
IF exposed 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

Potassium nitrate	Oxidizing solid, Cat. 3
Hydrated ammonium calcium nitrate double salt	Acute Tox.4 oral; Serious eye damage, cat. 1

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a mixture/preparation

Substance name	CAS No	Concentration
Potassium nitrate	7757-79-1	25 - 40%
Hydrated ammonium calcium nitrate double salt	15245-12-2	30 -70

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General information

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.

Immediately call a POISON CENTER or doctor/physician.

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 Delayed lung effects after short term exposure to thermal degradation products
In case of skin contact	May cause redness or irritation
In case of eye contact	Causes serious eye damage
In case of ingestion	Harmful if swallowed . Ingestion of large amounts may cause: gastrointestinal disturbances.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 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 chemicals surrounding.

Specific hazards arising from the chemical

Oxidizer. Contact with combustible materials will not cause spontaneous ignition, however, this product will 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 and metallic 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)).

SECTION 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 drain. 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.

Unsuitable material for containment/taking up: Do not absorb in saw-dust or other combustible absorbents.

Other information
None

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment. Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from flammable, combustible and reducing substances,
Conditions for safe storage, including any incompatibilities
Keep/store only in original container. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Do not store together with: Combustible substance, reducing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Occupational exposure limits

		Potassium nitrate	Hydrated ammonium calcium nitrate
OSHA	PEL	Not Established	Not Established
	STEL/ceiling	Not Established	Not Established
ACGIH (2012 TLVs® and BEIs®)			
	TWA	Not Established	Not Established
	STEL/ceiling	Not Established	Not Established

Derived No-Effect Level (DNEL) suggested by the manufacturer
Workers (industrial/professional):

Potassium nitrate
DNEL Human, dermal, long term (repeated): 20.8 mg/kg/day (systemic)
DNEL Human, inhalation, long term (repeated): 36.7 rng/rn" (systemic)

Hydrated ammonium calcium nitrate double salt
DNEL Human, dermal, long term (repeated): 13.9 mg/kg/day (systemic)
DNEL Human, inhalation, long term (repeated): 25.5 mg/rn" (systemic)

Engineering controls
Use exhaust ventilation to keep airborne concern rations below exposure limits.
Personal Protective Equipment

Eye/face protection	Tightly sealed safety goggles. Face protection if direct exposure occurs.
Skin Protection	Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time, are 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid, granular or crystalline powder
Color	Pale blue
Odor	Odorless
Odor Threshold	Not applicable
pH value	No data available
Melting point / freezing range	No data available. Decomposes on heating
Boiling temperature / boiling range	Not applicable
Flash point	Decomposes on heating
Evaporation rate	No data available

Flammable solids	Not flammable
Explosion limits (LEL, UEL)	Not applicable
Vapor pressure	No data available
Vapor density	No data available
Bulk Density	approx. 50 lb./ft3
Solubility	Soluble
Partition coefficient n-octanol /water	Not applicable
Auto Ignition temperature (AIT)	Not applicable
Decomposition temperature	No data available
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Oxidizer

Other information
None

SECTION 10. STABILITY AND REACTIVITY

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 substance under specific conditions.
Hazardous decomposition products
Thermal decomposition products: Nitrous oxides (NOx), nitrites, phosphorus oxides, ammonia and metallic oxides.

SECTION 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 damage. May cause redness or irritation to the skin. Harmful if swallowed. 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 oral toxicity	LD50:
Acute Toxicity Estimate for the mixture	>300 and < 2000 rng/kg bw (additivity formula)
Potassium nitrate	>2000 mg/kg bw
Hydrated ammonium calcium nitrate double salt	>300 and < 2000 mg/kg bw

Assessment / classification: Based on available data for the ingredients of the mixture, this product is classified and labelled as Acute Tox. Oral cat. 4.

Irritant and corrosive effects

Irritation to the skin	Result	Method
Potassium nitrate	non-irritant.	Equivalent/similar to OECD guideline 404
Hydrated ammonium calcium nitrate double salt	non-irritant.	Equivalent/similar to OECD guideline 404

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

Irritation to eyes	Result	Method
Potassium nitrate	Not-irritating	OECD guideline 404
Hydrated ammonium calcium nitrate double salt	Irreversible effects (cat.1)	OECD Guideline 405

Assessment / classification: Based on available data for ingredients of the mixture, this product is classified and labelled as cat. 1, irreversible eye effects.

Respiratory or skin sensitisation

Skin sensitization	Result	Method
Potassium nitrate	not sensitizing.	OECD Guideline 429
Hydrated ammonium calcium nitrate double salt	not sensitizing.	OECD Guideline 429

Respiratory sensitisation: No information available.

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

Genetic effects

The product does not contain ingredients classified as germ cell mutagens.

	Bacterial (Ames Test)	Chromosomal aberrations	Mutation in mammalian cells
Potassium nitrate	negative	negative	negative
Hydrated ammonium calcium nitrate	negative	negative	negative

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

Reproductive toxicity

Adverse effects on sexual function and fertility/developmental toxicity

	OECD guideline 422.
Potassium nitrate	No adverse effects on fertility/development (NOAEL >1500 mg/kg bw).
Hydrated ammonium calcium nitrate	No adverse effects on fertility/development (NOAEL >1500 mg/kg bw).

Specific target organ toxicity (single exposure)

	Practical experience / human evidence
Potassium nitrate	No relevant effect have been observed after single exposure to potassium nitrate.
Hydrated ammonium calcium nitrate	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 >1500 mg/kg bw)	OECD 422
Hydrated ammonium calcium nitrate		<:1000 mg/kg bw (28-d, oral, rat)	OECD 407

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

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 probable, possible or confirmed human 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	No component of this product present at levels <:0.1 is identified as carcinogen by California Prop. 55.
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 are not met

Other Toxicological Information

This product contains trace amounts of naturally-occurring perchlorate and iodate. Like other goitrogenic substances, perchlorate may affect iodine uptake by thyroid under specifi conditions.

SECTION 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
Hydrated ammonium calcium nitrate			
	48-h LC50	447 mg/L	Fish (Cyprinus carpio)
	48-h LC50	> 100 mg/L	Daphnia magna (fresh water flea).
	72-h LC50	> 100 mg/L	Algae (Pseudokirchneriella subcapitata)

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

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 a part of the Nitrogen cycle.
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
Excess nitrate leaching may enrich waters leading to eutrophication.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable federal and state laws.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal method in compliance with applicable regulations.
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 (RC~A) 40 CFR 261.

SECTION 14. TRANSPORTATION INFORMATION

US DOT (49CFR part 172)

UN-No.	1477
UN Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard class	5.1
Packing group	III
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	1B8; IP3; T1; TP33

International Maritime Organization (IMDG Code)

UN-No.	1477
UN Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard class	5.1
Packing group	III
Marine pollutant	No
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	223

International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA)

UN-No.	1477
UN Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard class	5.1
Packing group	III
Hazard label	5.1 (oxidizer)
Special marking	No
Special Provision	No

Special handling procedure
None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
None

SECTION 15. REGULATORY INFORMATION

US Federal
SARA Title III Rules
Section 311/312 Hazard Classes

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes (Oxidizer)
Release of Pressure	No
Reactive Hazard	No

Section 313 Toxic Chemicals

N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution)

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

None No

US State Regulations

California Proposition 65	None ingredient is listed.

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

SECTION 16. OTHER INFORMATION

This SDS complies with 29 CFR part 1910 subpart Z (2012) and ANSI Standard Z400.1-2004

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.