

# **SAFETY DATA SHEET**

### **Rainbow® Plant Food Tobacco 8-4-24**

## Section 1. Identification

GHS product identifier	:	Rainbow® Plant Food Tobacco 8-4-24
Other means of	:	Product code(s): I000140; I000141; I000142
identification		
Product type	:	Granular solid.

### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Fertilizer.	
Uses advised against	Reason
Not applicable.	Risk assessment.

Supplier's details	: Rainbow Fertilizer LLC ( a Division of Timac Agro USA) 1011 Oak Avenue Americus, GA 31709
	Company phone number: 1-800-403-2861 (Customer Service)
	www.rainbowplantfoodproducts.com
Emergency telephone number (with hours of	: USA POISON CONTROL CENTER (24h/7d) 1-800-222-1222

Section 2. Hazar	ds identification
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
GHS label elements	
Hazard pictograms	Not Applicable.
	No Aplicable.
	Non applicable.
Signal word	: Warning
Hazard statements	: Causes eye irritation.
Precautionary statement	<u>s</u>
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Wear eye or face protection. Wash hands and face before breaks and immediately afte handling the product.

operation)

## Section 2. Hazards identification

Response	: 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 attention.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazards not otherwise classified	<ul> <li>Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.</li> </ul>

## Section 3. Composition/information on ingredients

Substance/mixture

: Multi-constituent substance

CAS number : Not available.			
Ingredient name	%	CAS number	
Potassium nitrate	25	7757-79-1	
Potassium sulfate	19	7778-80-5	
Potassium magnesium sulfate	18	14977-37-8	
Calcium sulfate, dihydrate	15	10101-41-4	
Ammonium nitrate	5	6484-52-2	
Ammonium sulfate	3 - 12	7783-20-2	
Ammonium dihydrogen orthophosphate	3 - 7	7722-76-1	

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Causes eye irritation. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. If irritation persists, get medical attention.
Inhalation	: Non-hazardous in case of inhalation. No known significant effects or critical hazards. Get medical attention if symptoms occur. In a fire, hazardous decomposition products may be produced. If any ill effects are felt, proceed as follows. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
Skin contact	: No known effect after skin contact. Rinse with water for a few minutes.
Ingestion	: Ingestion may cause gastrointestinal irritation and diarrhea. Wash out mouth with water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. For additional advice call the medical emergency number on this SDS or your poison center or doctor.

Most important symptoms/effects, acute and delayed

effects
: Causes eye irritation.
: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
: No known significant effects or critical hazards.
: May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.

Over-exposure signs/symptoms

Section 4. First a	id measures
Eye contact	: Adverse symptoms may include the following: irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: No specific data.
Ingestion	: No specific data. May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.
Indication of immediate me	dical attention and special treatment needed, if necessary
Notes to physician	: <mark>In case of inhalation of decomposition products in a fire, symptoms may be delayed.</mark> The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: No specific treatment. Treat symptomatically.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. Depending on the situation, the rescuer should wear an appropriate mask, gloves, protective clothing and a respirator or self-contained breathing apparatus. Mouth-to- mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

### Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: No specific fire or explosion hazard. The substance will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and flammable gases.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: nitrogen oxides sulfur oxides
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Remark	: Contain and collect the water used to fight the fire for later treatment and disposal.

## Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures		
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	

## Section 6. Accidental release measures

Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Will dissolve and disperse in water. Reclaiming material may not be possible. If possible, recover spilled product and place in suitable containers for recycle, reuse, or disposal. Product will promote algae growth and may degrade water quality and taste. Notify downstream water users. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).
Methods and materials for co	onta	ainment and cleaning up
Small spill	-	Move containers from spill area. Avoid dust generation. Recycle, if possible. or Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Avoid creating dusty conditions and prevent wind dispersal. Recycle to process, if possible. or Place spilled material in an appropriate container for disposal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

r rooddiono for ouro nanding	
Protective measures	: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. May form steep piles that can collapse without warning when stored in bulk. Avoid forming steep slopes when removing product. Ensure that bulk bags or smaller packaged products stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, rolling, or collapse. Use caution when opening truck or railcar doors as product may have shifted during transport.
	Must be stored in a dry location. Absorbs moisture on long-term storage under high humidity conditions. Store away from incompatible materials (see Section 10). When product is stored in sealable containers, keep container tightly closed and sealed until ready for use. Sealable containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials.

## Section 8. Exposure controls/personal protection

#### Control parameters

Occupational exposure limits					
Ingredient name		Exposure limits			
Potassium nitrate			OSHA (United States): Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 15 mg/m <sup>3</sup> ; Respirable fraction: 5 mg/m <sup>3</sup> .		
Potassium sulfate			<b>OSHA (United States):</b> Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 15 mg/m <sup>3</sup> ; Respirable fraction: 5 mg/m <sup>3</sup> .		
Potassium magnesium sulfate			<b>OSHA (United States):</b> Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 15 mg/m <sup>3</sup> ; Respirable fraction: 5 mg/m <sup>3</sup> .		
Calcium sulfate, dihydrate		ACGIH TLV (United States, 4/2014).			
Date of issue/Date of revision	: 3/15/2022	Date of previous issue	:5/2/2019 Version :1.8 4/1		

## Section 8. Exposure controls/personal protection

	TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
Ammonium nitrate	OSHA (United States):
	Particulates not otherwise regulated (PNOR)
	TWA (8 hours), Total dust: 15 mg/m <sup>3</sup> ; Respirable fraction: 5 mg/m <sup>3</sup> .
Ammonium sulfate	OSHA (United States):
	Particulates not otherwise regulated (PNOR)
	TWA (8 hours), Total dust: 15 mg/m³;
	Respirable fraction: 5 mg/m <sup>3</sup> .
Ammonium dihydrogen orthophosphate	OSHA (United States):
	Particulates not otherwise regulated (PNOR)
	TWA (8 hours), Total dust: 15 mg/m <sup>3</sup> ; Respirable fraction: 5 mg/m <sup>3</sup> .

Appropriate engineering controls	: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental experies	Emissions from ventilation or work process equipment should be checked to ensure they

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measure	es es
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Skin protection	
Hand protection	: The personal protective equipment required varies, depending upon your risk assessment. No special protection is required. For prolonged or repeated handling, use the following type of gloves: leather work gloves
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or cotton/synthetic overalls or coveralls are normally suitable.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. No special measures are typically indicated.
Respiratory protection	: A respirator is not needed under normal and intended conditions of product use. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose. For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 requirements is in place.

### Section 9. Physical and chemical properties

Appearance	
Physical state	: Granular solid.
Color	: Gray.
Odor	: Odorless.
Odor threshold	: Not applicable.
рН	: 6 [Conc. (% w/w): 10%]
Melting point	: Not available.
Boiling point	: Decomposes.

Date of issue/Date of revision

5/12

## Section 9. Physical and chemical properties

•		
Flash point	Product does not sustain combustion.]	
Evaporation rate	ot applicable.	
Flammability (solid, gas)	ot applicable. The substance will not burn. Undergoes thermal decompo evated temperatures to release toxic and flammable gases.	sition at
Lower and upper explosive (flammable) limits	ot applicable.	
Vapor pressure	ot applicable.	
Vapor density	ot applicable.	
Relative density	ot available.	
Solubility	usily soluble in the following materials: hot water. Iuble in the following materials: cold water.	
Solubility in water	ater soluble.	
Partition coefficient: n- octanol/water	ot available.	
Auto-ignition temperature	ot applicable.	
Decomposition temperature	ot available.	
Viscosity	ot applicable.	
Aerosol product		

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Absorbs moisture on long-term storage under high humidity conditions. Store in a well- ventilated, dry place. Protect from moisture.
Incompatible materials	: Incompatible with halogens. Incompatible with copper alloys. Contact your sales representative or a metallurgical specialist to ensure compatability with your equipment.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Potassium nitrate	LD50 Oral	Rat	3540 mg/kg	-
	LD50 Oral	Rat	3750 mg/kg	-
Potassium sulfate	LD50 Oral	Rat	6600 mg/kg	-
Potassium magnesium sulfate	LD50 Oral	Rat	3 g/kg	-
Calcium sulfate, dihydrate	LC50 Inhalation Dusts and mists	Rat - Male,	>3.26 mg/l	4 hours
		Female	CaSO4.2H2O	
	LD50 Oral	Rat - Male,	>1581 mg/kg	-
		Female		
Ammonium sulfate	LD50 Oral	Mouse - Male,	3040 mg/kg	-
		Female	•••	
	LD50 Oral	Rat	2840 mg/kg	-
	LD50 Oral	Rat - Male,	>2000 mg/kg	-
		Female		
Ammonium nitrate	LD50 Oral	Rat	2217 mg/kg	-
	LD50 Oral	Rat - Male,	2950 mg/kg	-
		Female		
Ammonium dihydrogen	LD50 Oral	Rat - Male,	>2000 mg/kg	-
orthophosphate		Female		
ate of issue/Date of revision	: 3/15/2022 Date of previous issue	: 5/2/2019	Versio	on :1.8 6/

## Section 11. Toxicological information

: Very low toxicity to humans or animals. No known significant effects or critical hazards. **Conclusion/Summary** 

Product/ingredient name	Result		Species	Score	Expo	euro	Observation
			-		•		
Ammonium sulfate	Skin Eyes		Rabbit Rabbit	0 0	20 ho	urs	24 hours 72 hours
Ammonium nitrate	Skin		Rabbit	0	_		72 hours
	Eyes - Edema of t	the	Rabbit	3	-		3 days
	conjunctivae						,
Conclusion/Summary				•	•		
Skin	: No known signifi	icant effe	ects or critical h	azards.			
Eyes	: Causes eye irrita	ation.					
Respiratory	: No known signifi	icant effe	ects or critical h	azards.			
Sensitization	-						
Product/ingredient name	Route of	Specie	es		Result		
i i ou dou ingi ou iont i unito	exposure	opeen					
Ammonium sulfate	Skin	Guinea	a pig		Not sensitiz	ing	
Calcium sulfate, dihydrate	Skin	Guinea			Not sensitiz		
Ammonium nitrate	Skin	Mouse			Not sensitiz		
Conclusion/Summary							
Skin	: Non-sensitizer.						
Respiratory	: No known signifi	icant effe	ects or critical h	azards.			
<u>Mutagenicity</u>							
Product/ingredient name	Test		Experiment			Resu	lt
Potassium nitrate	OECD 471 Bacter	rial	Experiment: In vitro			Nega	tive
	Reverse Mutation Test		Subject: Bacteria			_	
	OECD 479 Genetic		Experiment: In vitro Subject: Mammalian-Animal			Negative	
	Toxicology: In vitre Sister Chromatid	0	Subject: Mam	malian-Ani	mai		
	Exchange Assay i	in					
Calcium sulfate, dihydrate	Mammalian Cells OECD 476 In vitro		Experiment: Ir	n vitro		Negat	tive
Calcium sulfate, dihydrate	Mammalian Cells OECD 476 In vitro Mammalian Cell C	þ	Subject: Mam		mal	Negat	tive
	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell C Mutation Test	þ	Subject: Mam Cell: Germ	malian-Ani	mal		
	Mammalian Cells OECD 476 In vitro Mammalian Cell C	þ	Subject: Mam Cell: Germ Experiment: Ir	malian-Ani n vitro		Negat	
Calcium sulfate, dihydrate Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell C Mutation Test	þ	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam	malian-Ani n vitro			
	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell 0 Mutation Test OECD 476	þ	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic	malian-Ani n vitro malian-Ani		Negat	tive
	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell C Mutation Test	þ	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam	malian-Ani n vitro malian-Ani n vitro	mal		tive
Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473	o Gene	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Cell: Germ	malian-Ani n vitro malian-Ani n vitro malian-Ani	mal	Negat	tive tive
Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter	o Gene rial	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Cell: Germ Experiment: Ir	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro	mal	Negat	tive tive
Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation	o Gene rial Test	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Cell: Germ Experiment: Ir Subject: Bacte	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro eria	mal	Negat Negat	tive tive tive
Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation OECD 476 <i>In vitro</i>	o Gene rial Test o	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Cell: Germ Experiment: Ir Subject: Bacte Experiment: Ir	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro eria n vitro	mal mal	Negat	tive tive tive
Ammonium sulfate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation	o Gene rial Test o	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Cell: Germ Experiment: Ir Subject: Bacte	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro eria n vitro	mal mal	Negat Negat	tive tive tive
Ammonium sulfate Ammonium nitrate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation OECD 476 <i>In vitro</i> Mammalian Cell O	rial Test Sene	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Experiment: Ir Subject: Bacte Experiment: Ir Subject: Mam	malian-Ani n vitro malian-Ani n vitro n vitro malian-Ani n vitro malian-Ani	mal mal	Negat Negat	tive tive tive
Ammonium sulfate Ammonium nitrate Conclusion/Summary	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test	rial Test Sene	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Experiment: Ir Subject: Bacte Experiment: Ir Subject: Mam	malian-Ani n vitro malian-Ani n vitro n vitro malian-Ani n vitro malian-Ani	mal mal	Negat Negat	tive tive tive
Ammonium sulfate Ammonium nitrate	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test	rial Test Sene	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Experiment: Ir Subject: Bacte Experiment: Ir Subject: Mam	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro malian-Ani azards.	mal mal	Negat Negat	tive tive tive
Ammonium sulfate Ammonium nitrate Conclusion/Summary Carcinogenicity	Mammalian Cells OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test OECD 476 OECD 473 OECD 471 Bacter Reverse Mutation OECD 476 <i>In vitro</i> Mammalian Cell O Mutation Test : No known signifi	o Gene Test Gene icant effe	Subject: Mam Cell: Germ Experiment: Ir Subject: Mam Cell: Somatic Experiment: Ir Subject: Mam Experiment: Ir Subject: Bacte Experiment: Ir Subject: Mam ects or critical h	malian-Ani n vitro malian-Ani n vitro malian-Ani n vitro malian-Ani azards.	mal mal mal	Nega Nega Nega	tive tive tive

Conclusion/Summary

: No known significant effects or critical hazards. Potential for nitrosamine formation if ingested. Do not ingest.

**Classification** 

Product/ingredient name	OSHA	IARC	NTP
Ammonium sulfate	None.	-	-

**Reproductive toxicity** 

## Section 11. Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure		
Potassium nitrate	Negative	Negative	Negative	Rat - Male, Female	Oral: 1500 mg/ kg	-		
Calcium sulfate, dihydrate Ammonium sulfate	Negative Negative	Negative Negative	Negative -	Rat - Male, Female Mouse - Male, Female	Oral Oral: 5000 mg/ kg	-		

Conclusion/Summary

: No known significant effects or critical hazards.

### **Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
Ammonium sulfate	0	Rat - Male, Female	1500 mg/kg	-

**Conclusion/Summary** : No known significant effects or critical hazards.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### **Aspiration hazard**

Not available.

Information on the likely	: Routes of entry anticipated: Inhalation.

### routes of exposure

Potential acute health effects

Eye contact	: Causes eye irritation.
-------------	--------------------------

Inhalation	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.

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

Eye contact	: Adverse symptoms may include the following: irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: No specific data.
Ingestion	<ul> <li>No specific data. May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.</li> </ul>

### Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure					
Potential immediate effects	or over a p	prolonged period of time. F to develop effects. Over-	Persons with anemia	ood if ingested in large quantition a, bowel diseases, or infants, an on is unlikely under normal	
Potential delayed effects	: Not availat	ole.			
Long term exposure					
Potential immediate effects	: Not availat	ble.			
Potential delayed effects	: Potential for	or nitrosamine formation if	ingested. Do not in	ngest.	
Potential chronic health effe	<u>ects</u>				
Date of issue/Date of revision	: 3/15/2022	Date of previous issue	: 5/2/2019	Version :1.8	8/12

## Section 11. Toxicological information

	•			
Product/ingredient name	Result	Species	Dose	Exposure
Ammonium sulfate	Chronic NOAEL Oral	Rat - Male, Female	256 mg/kg	52 weeks; 7 days per week
Ammonium nitrate	Chronic NOAEL Oral	Rat - Male, Female	256 mg/kg	-
Conclusion/Summary	: No known significant effects or critical hazards.			
General	: No known significant effects or critical hazards.			
Carcinogenicity	: Potential for nitrosamine formation if ingested. Do not ingest.			
Mutagenicity	: No known significant effects or critical hazards.			
Teratogenicity	: No known significant effects or critical hazards.			
Developmental effects	: No known significant effects or critical hazards.			
Fertility effects	: No known significant effects or critical hazards.			

#### Numerical measures of toxicity

Acute toxicity estimates	
Route	ATE value
Oral Inhalation (dusts and mists)	2136 mg/kg 10.34 mg/l

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Potassium nitrate	Acute LC50 120 to 140 mg/l Marine water	Crustaceans - Portunus pelagicus - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 490 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1200000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 191000 µg/l Fresh water	Fish - Poecilia reticulata - Fry	96 hours
	Acute LC50 22500 µg/l Fresh water	Fish - Gambusia affinis - Adult	96 hours
Potassium sulfate	Acute LC50 720000 to 880000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 3550000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
Calcium sulfate, dihydrate	EC50 >79 mg/l	Algae	72 hours
,,,,	EC50 >79 mg/l	Daphnia	48 hours
	EC50 >790 mg/l	Micro-organism	3 hours
	Acute LC50 >1970 mg/l	Fish	96 hours
Ammonium sulfate	Acute LC50 2.6 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Young	48 hours
	Acute LC50 14000 µg/l Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 53 mg/l	Fish - Oncorhynchus mykis	96 hours
Ammonium nitrate	Chronic NOEC 6 to 12 mg/l Fresh water	Crustaceans - Cladocera	21 days

**Conclusion/Summary** : Practically non-toxic to aquatic organisms.

#### Persistence and degradability

Not available.

<b>Bioaccumulative potential</b>	
Not available.	
Mobility in soil	
Soil/water partition coefficient (Koc)	: Not available.
Mobility	: Not available.

Date of issue/Date of revision

## Section 12. Ecological information

Other adverse effects

: No known significant effects or critical hazards.

### Section 13. Disposal considerations

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### Section 14. Transport information

	-					
	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Section 15. Regulatory information

U.S. Federal Regulations:	al Regulations: : TSCA 8(a) CDR Exempt/Partial exemption: Not determined		
	<b>TSCA 8(b) Active inventory:</b> All components are listed or exempted.		
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	: Not listed		
Clean Air Act Section 602 Class I Substances	: Not listed		
Clean Air Act Section 602 Class II Substances	: Not listed		
DEA List I Chemicals (Precursor Chemicals)	: Not listed		
DEA List II Chemicals (Essential Chemicals)	: Not listed		
SARA 304 RQ	: Not applicable.		
<u>SARA 311/312</u>			
Classification	: Immediate (acute) health hazard		
Composition/information	on ingredients		

**Disposal methods** 

## Section 15. Regulatory information

0	<u> </u>					
Name		hazard	Sudden release of pressure		(acute) health	Delayed (chronic) health hazard.
Potassium nitrate Ammonium nitrate	-	Yes. No.	No. No.	No. No.	No. Yes.	No. No.

#### **SARA 313**

	Product name	CAS number	%
Form R - Reporting requirements	Potassium nitrate	7757-79-1	25
	Ammonium dihydrogen orthophosphate	7722-76-1	3 - 7
	Ammonium sulfate	7783-20-2	3 - 12
	Ammonium nitrate	6484-52-2	5
Supplier notification	Potassium nitrate	7757-79-1	25
	Ammonium dihydrogen orthophosphate	7722-76-1	3 - 7
	Ammonium sulfate	7783-20-2	3 - 12
	Ammonium nitrate	6484-52-2	5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

Massachusetts	: The following components are listed: Potassium nitrate; Ammonium sulfate; Ammonium nitrate
New York	: None of the components are listed.
New Jersey	<ul> <li>The following components are listed: Potassium nitrate; Nitric acid, potassium salt; Ammonium nitrate; Nitric acid, ammonium salt</li> </ul>
Pennsylvania	<ul> <li>The following components are listed: Nitric acid, potassium salt; Sulfuric acid diammonium salt; Nitric acid, ammonium salt</li> </ul>
<u>California Prop. 65</u>	

Not applicable – This product is not registered for sale into the State of California and has not been evaluated for Prop 65 notification requirements.

#### International regulations

International lists		
National inventory		
Canada	: All components are listed or exempted.	
Europe	: Not determined.	

## Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 3/15/2022
Date of previous issue	: 5/2/2019
Version	: 1.8
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

11/12

## Section 16. Other information

References	<ul> <li>Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;</li> </ul>
	Hazardous Products Act and Regulations, current revision at time of SDS preparation,
	Health Canada;
	Domestic Substances List, current revision at time of SDS preparation, Environment Canada:
	29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
	40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
	49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
	Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
	NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
	Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
	Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
	NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
	NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
	Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
	ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
	Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
	Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio;
	Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina. Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
	California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates

Indicates information that has changed from previously issued version.

#### Notice to reader

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose. FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.