SAFETY DATA SHEET

Section 1: Identification

Product Name: Ferti-Maxx Starter
Product Use: Dry fertilizer mixture
Not recommended for: No available information

EZ-FLO Fertilizing Systems
3640 Cincinnati Ave., #C
Rocklin, CA 95765
www.ezfloinjection.com
Emergency Phone: (866) 393-5601
Fax: (916) 652-5754

FOR CHEMICAL EMERGENCY:
Call CHEMTREC, day/night
(800) 424-9300
(703) 527-3887, International

Section 2: Hazard(s) Identification

GHS Ratings:

GHS Hazards

GHS Precautions
Wash hands and face thoroughly after handling.
Dispose of contents/container according to local/state/federal regulations.

Signal word:
Not classified as hazardous

Section 3: Composition/Information on Ingredients

This product is to be considered as a mixture/preparation

Chemical Name	CAS Number	Weight Concentration %
Potassium Nitrate	7757-79-1	1.00% – 45.00%
Perchlorate		<45 ppm
Iodate		<25 ppm

Section 4: 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. 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 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	May cause redness or 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.

Section 5: Fire-Fighting Measures

Extinguishing media
Suitable extinguishing media: Use any suitable mean for extinguishing surrounding fire.
Unsuitable material: None, but attention should be paid to compatibility with chemicals surrounding.

Specific hazards arising from the chemical
Thermal decomposition can lead to the escape of toxic/corrosive gases and vapours.
Thermal decomposition products: Nitrous oxides (NOx), nitrites, phosphorus oxides, ammonia and metallic oxides.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and chemical protective clothing.

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 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.
Unsuitable material for containment/taking up: None specified

Other information
None

Section 7: Handling and Storage

Precautions for Safe Handling
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.

Conditions for safe storage, including any incompatibilities
Keep/store only in original container. Store in a well-ventilated place. Keep container tightly closed.

Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and Section 15 for more information regarding California State regulations.

Section 8: Exposure Controls / Personal Protection

Exposure Guidelines

Occupational exposure limits

		Potassium nitrate
OSHA	PEL	Not Established
	STEL/ceiling	Not Established
ACGIH (2012 TLVs® and BEIs®)		
	TWA	Not Established
	STEL/ceiling	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 mg/m3 (systemic)

Derived No-Effect Level (DNEL) is the level of exposure to the substance above which humans should not be exposed.

Engineering controls
Use exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protective Equipment

Eye/face protection	Chemical goggles recommended.
Skin Protection	Nitrile rubber gloves, recommended.
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. 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
Colour	white to pale blue
Odour	Odourless
Odour Threshold	No applicable
pH value	No data available
Melting point / freezing range	No data available
Boiling temperature / boiling range	Not applicable
Flash point	Not applicable
Vapourisation rate / Evaporation rate	No data available
Flammable solids	Not flammable
Explosion limits (LEL, UEL)	Not applicable
Vapour pressure	No data available
Vapour density	No data available
Relative Density	No data available
Solubility	> 100 g/L at 20°C/68°F (water)
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
Oxidising properties	Not 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
None identified

Incompatible materials
None identified

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

Symptoms related to the physical, chemical and toxicological characteristics
May be irritant to the respiratory tract. May cause redness or irritation to the skin and eyes. 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	>2000 mg/kg bw	(additivity formula)
Potassium nitrate	>2000 mg/kg bw	

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

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

Irritation to eyes	Result	Method
Potassium nitrate	Not-irritating	OECD Guideline 405

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

Respiratory or skin sensitization

Skin sensitization	Result	Method

Potassium nitrate	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

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

Specific target organ toxicity (single exposure)

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

	Practical experience / human evidence
Potassium nitrate	No relevant effect has been observed after single exposure to potassium nitrate.
Assessment / classification:	Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure)

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

	Organs affected:	Effects	Guideline
Potassium nitrate	None	No effects (NOAEL >1500 mg/kg bw)	OECD 422

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 potencial carcinogen by OSHA.
California Proposition 65	No component of this product present at levels ≥0.1% is identified as carcinogen by California Prop.65.
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

This product contains trace amounts of naturally-occurring perchlorate and iodate. Like other goitrogenic substances, perchlorate may affect iodine uptake by thyroid under specific 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
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 as 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 (RCRA) 40 CFR 261.
Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and Section 15 for more information regarding California State regulations.

Section 14: Transportation Information

US DOT (49CFR part 172)

UN-No.	Non dangerous good
UN Proper Shipping Name	Not applicable
Hazard class	Not applicable
Packing group	Not applicable
Hazard label(s)	Not applicable
Special marking	No
Special Provision	No

International Maritime Organization (IMDG Code)

UN-No.	Non dangerous good
UN Proper Shipping Name	Not applicable
Hazard class	Not applicable
Packing group	Not applicable
Marine pollutant	No
Hazard label(s)	Not applicable
Special marking	No

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

UN-No.	Non dangerous good
UN Proper Shipping Name	Not applicable
Hazard class	Not applicable
Packing group	Not applicable
Hazard label(s)	Not applicable
Special marking	No

Special handling procedure
None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Other special precautions
None

Section 15: Regulatory Information

US Federal

SARA Title III Rules

Section 311/312 Hazard Classes

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
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 ingredient is listed.

NFPA 704/2012: National Fire Protection Association

Health	1
Fire	0
Reactivity	0
Special	None

US State Regulations

California Proposition 65	None ingredient is listed.
California Code of Regulations Title 22 (Health & Safety Code), Chapter 33	See http://www.dtsc.ca.gov/hazardouswaste/perchlorate/

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

NON-WARRANTY. The information presented in this publication is based upon the research and experience of EZ-FLO Fertilizer Systems. No representation or warranty is made, however, concerning the accuracy or completeness of express or implied, including without limitation any warranty of merchantability or fitness for any particular purposes, and no warranty or representation shall be implied by law or otherwise. Any products sold by EZ-FLO Fertilizer Systems are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. EZ-FLO Fertilizer Systems assumes no responsibility for the section of products suitable to the

particular purposes of any particular buyer. EZ-FLO Fertilizer Systems shall in no way be liable for any special, incidental, or consequential damages.