

MATERIAL SAFETY DATA SHEET NO. 445

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME First Choice® Foliar Plus

Chemical Name None

Common Name, Synonyms 12-4-12 foliar fertilizer

MANUFACTURED FOR Western Farm Service, Inc.

EMERGENCY TELEPHONE NUMBERS Information (559) 436-2800 8am-5pm PST M-F
CHEMTREC (800) 424-9300 24 hours every day

2. COMPOSITION/INFORMATION ON INGREDIENTS

Nutrients derived from the following **INGREDIENTS**

<u>Chemical Name</u>	<u>CAS#</u>	
Mono ammonium phosphate	7722-76-1	Refer to Section 8 for exposure guidelines
Potassium nitrate	7757-79-1	
Magnesium nitrate	10377-60-3	
Ammonium nitrate	6484-52-2	
Calcium nitrate	10124-37-5	
Iron EDTA	15708-41-5	
Manganese EDTA	15375-84-5	
Zinc EDTA	15954-98-0	
Calcium silicate	1344-95-2	
Water	7732-18-5	

Also contains 2% seaweed concentrate, a non plant food ingredient

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Brownish yellow, free flowing suspension.
No distinctive odor

CAUTION! May irritate eyes, skin.
May cause mucous membrane irritation

OSHA HAZARD CATEGORY - IRRITANT

3. HAZARDS IDENTIFICATION (con't)

PRIMARY ROUTE(S) OF ENTRY	Skin or eye contact is the most likely exposure. Ingestion is possible. Contact with or inhalation of sprays made from fertilizer suspensions may cause irritation to eyes and throat.
TARGET ORGANS	Eyes, skin, respiratory tract
POTENTIAL HEALTH EFFECTS	
Eyes	May cause irritation to eyes
Skin	Prolonged contact may cause irritation
Inhalation	Spray may cause irritation to nose, throat, mucous membranes; coughing, or difficulty in breathing
Ingestion	Large doses of this suspension may cause nausea, vomiting, and stomach pain or cramps
SYMPTOMS OF OVEREXPOSURE	
Acute	Nausea, vertigo, vomiting, abdominal pain, rapid heartbeat, rapid breathing, coma, and convulsion may result from ingestion of large amounts of nitrates. Ingestion of some phosphates may cause a shock-like state, a fall in blood pressure, slow pulse, bluish skin color (cyanosis), coma, and painful muscular spasms (tetany).
Chronic	Small repeated doses of nitrates may lead to weakness, general depression, headache, and mental impairment. Repeated or prolonged contact with irritants may cause conjunctivitis or dermatitis.
Notes to Physician	Average or large doses of nitrates may cause nausea and vomiting. Acidosis may occur in presence of impaired renal function; also during prolonged use in persons with normal kidney function. Nitrite formation in intestines may cause methemoglobinemia.

4. FIRST AID MEASURES

Eyes	Flush gently but thoroughly for 15 minutes with large amounts of clean water, occasionally lifting upper and lower lids. Seek medical attention.
Skin	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If redness or rash develops and persists, seek medical attention. Wash or clean contaminated clothing and shoes before wearing again.
Inhalation	If respiratory symptoms develop, remove person to fresh air immediately. Seek medical attention if discomfort persists. Begin artificial respiration or CPR (cardiopulmonary resuscitation) if required and seek medical attention immediately.
Ingestion	Seek medical attention immediately. If immediate help is not available, and person is conscious, give 8 ounces or more of water or milk to drink. Do not force an unconscious person to drink or vomit.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION DATA

Flashpoint	Not flammable
Flammable Limits	Not flammable

Ammonia may evolve from this suspension at high temperatures.
Flammable limits of ammonia gas in air (by volume) are Lower 16%, Upper 25%.

Autoignition Temperature	Not applicable
Extinguishing Media	Water

SPECIAL FIRE FIGHTING PROCEDURES EVACUATE AREA DO NOT CONFINE FIRE

Fire fighting procedures are based on possible ammonium nitrate crystallization in fire conditions. Keep unauthorized personnel away. Stay upwind. Wear full protective clothing and self-contained breathing apparatus. Carefully apply large volumes of low pressure water to cool affected containers and to avoid eruptive scattering and spread of fire. Do not attempt to smother or add steam. Fight fire from greatest possible distance to protect from steam eruptions, toxic fumes, and possible explosion. Apply water spray to knock down and absorb ammonia vapors. Control runoff waters. Ventilate closed spaces before entering. Always stay away from the ends of tanks.

UNUSUAL FIRE AND EXPLOSION HAZARDS

First Choice Foliar Plus will not burn. However, high temperatures can evaporate product to dryness, leaving crystals of ammonium and other nitrates, other metal salts. Ammonium nitrate may explode if confined at elevated temperatures in the presence of an oxidizable substance. Ammonium nitrate does not require atmospheric oxygen for combustion.

At high temperatures First Choice Foliar Plus may release toxic fumes of ammonia; carbon monoxide; fluorides; nitrogen, phosphorus and other oxides; and various metals.

NFPA RATING		NFPA SCALE
Health Hazard	1	0 Least 1 Slight
Flammability	0	2 Moderate 3 High
Reactivity	1	4 Extreme

6. ACCIDENTAL RELEASE MEASURES

First Choice Foliar Plus is a plant food. However, large spills could possibly damage vegetation or cause illness in animals. Contamination of waterways could possibly cause fish kills. Dike spill area to prevent spread and runoff into drains, storm sewers, and ditches that lead to waterways. Precaution should be taken to prevent movement of nitrate to groundwater. Keep children, animals, and unauthorized personnel away from spills.

Pump spilled material into suitable containers for removal. Flush area with water, contain and remove cleanup liquid. Small amounts of spilled material may be absorbed using appropriate absorbent material. As conditions warrant, notify proper authorities, downstream sewer and water treatment operations, and other downstream users about potentially contaminated water.

7. HANDLING AND STORAGE

Hygienic Practices	It is advisable to wash promptly if skin becomes contaminated; before eating, drinking, using tobacco, or chewing gum; before using toilet facilities; and at the end of the work shift before leaving worksite.
Storage	Store in cool, well-ventilated areas and in frost free conditions. In handling system or in storage, avoid the formation of solid material from evaporation or salting out.
Maintenance	Use care when welding on equipment that has contained this suspension. Thoroughly flush piping and pumps with water before welding. Weld with piping and equipment open.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits	No exposure limits have been set for this suspension.
Ventilation	None required under normal conditions.
Eyes	Chemical protective goggles should be used where splashing may occur and when transferring liquid fertilizer.
Skin	Wear rubber or neoprene gloves for transfer operations or where splashing may occur. If irritation occurs, impervious clothing and gloves should be worn.
Respiratory	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES (typical)

Boiling Point	Not known
Freezing Point	Not known
Vapor Pressure	Not known
Vapor Density	Not known
Percent Volatile (by Volume)	Not known
Evaporation Rate	Not known
Solubility in Water	Complete
pH (10% solution)	5.5
Salt-out Temperature	Not applicable
Net Weight	12.85 lbs/gal
Specific Gravity (H ₂ O=1)	1.34
Appearance and Odor	Brownish yellow, free flowing suspension. No distinctive odor

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of use and storage
Hazardous Polymerization	Not known to occur
Incompatibility	Avoid mixing with oxidizable materials. Do not mix with combustible materials, wood chips, organic materials, flammable liquids, chlorides, perchlorates, sulfur. Contact with alkalis will produce ammonia and insoluble salts.
Hazardous Decomposition Products	At high temperatures may release toxic fumes of ammonia; carbon monoxide; fluorides; nitrogen, phosphorus and other oxides; and various metals.
Conditions to Avoid	Avoid excessive heating under confinement. Prevent contamination with incompatible materials

11. TOXICOLOGICAL INFORMATION

Published health information about ingredients includes the following:

Mono ammonium phosphate	A general purpose food additive
Potassium nitrate	LD50 = 1166 mg (anion)/kg (oral, rabbit) toxic effects not reported other than lethal dose value
Magnesium nitrate	No data found
Ammonium nitrate	LD50 = 4820 mg/kg (oral, rat) no toxic effect noted
Calcium nitrate	No data found
Iron EDTA	No data found
Manganese EDTA	No data found
Zinc EDTA	LD50 = 85 mg (Zn)/kg (intraperitoneal, mouse) toxic effects not reported other than lethal dose value
Calcium silicate	A nuisance dust in dry form

POTENTIAL CARCINOGEN DATA (IARC, NTP, OSHA)

None found for this suspension

FOR HEALTH EMERGENCIES CALL YOUR LOCAL POISON CENTER

12. ECOLOGICAL INFORMATION

No data found

First Choice Foliar Plus is a plant food. However, large spills could possibly damage vegetation. Contamination of waterways could possibly cause fish kills. Prevent spread and runoff into drains, storm sewers and ditches that lead to waterways.

13. DISPOSAL CONSIDERATIONS

If uncontaminated, recover and reuse as product. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods. Consult local, county, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations.

14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name	Not applicable
DOT Hazard Class	This material not regulated by DOT
Packaging Group	Not applicable
Label/Placard Required	None
UN/NA No.	Not listed

FOR TRANSPORTATION EMERGENCIES CALL CHEMTREC 1-800-424-9300

15. REGULATORY INFORMATION

Reportable Quantity - CERCLA	Statutory one pound applies to manganese and zinc compounds.
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SARA Title III (EPCRA)	Aqueous ammonia from dissociable ammonium salts, water dissociable nitrate compounds, and compounds of manganese and zinc are subject to the reporting requirements of Section 313 (40 CFR Part 372).
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<u>CAS #</u>	<u>Chemical name</u>	<u>Percent by weight</u>
7722-76-1	Mono ammonium phosphate	Percentages are proprietary information
7757-79-1	Potassium nitrate	
10377-60-3	Magnesium nitrate	
6484-52-2	Ammonium nitrate	
10124-37-5	Calcium nitrate	
15375-84-5	Manganese EDTA	
15954-98-0	Zinc EDTA	

CALIFORNIA Proposition 65:	WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.
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EPA NATIONAL RESPONSE CENTER 1-800-424-8802

MSDS NO. 445

PRODUCT First Choice Foliar Plus

16. OTHER INFORMATION

DATE PREPARED

August 16, 2000
February 16, 2001: review and update

NAME OF RESPONSIBLE PARTY

Western Farm Service, Inc.
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NOTICE

All information appearing in this document is based on data provided by third party sources and is compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.

Western Farm Service, Inc. makes no warranty of merchantability, fitness for any purpose or otherwise, express or implied, concerning this product or its uses which extend beyond the use of the product under normal conditions in accord with the statements made on the label.

First Choice® is a registered trademark of Western Farm Service, Inc.

