PLANT HEALTH technologies Folo Spray 12-5-40

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : PLANT HEALTH technologies Folo Spray 12-5-40

Product code : M77008

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

JR Simplot Company

P.O. Box 70013

Boise, ID 83707

T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Oxidizing solids Category 3	H272	May intensify fire; oxidizer
Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Serious eye damage/eye irritation Category 2B	H320	Causes eye irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H320 - Causes eye irritation

Precautionary statements (GHS-US) : P210 - Keep away from heat. - No smoking
P220 - Keep/Store away from clothing and other combustible materials
P221 - Take any precaution to avoid mixing with combustible materials
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves, eye protection, face protection
P301+P312 - If swallowed: Call poison control center or doctor for treatment advice if you feel unwell
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use chemical type foam, carbon dioxide, dry chemical, water fog or spray to extinguish to extinguish
P501 - Dispose of contents/container to ... in accordance with Federal, state, and local regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
potassium nitrate	(CAS No) 7757-79-1		Eye Irrit. 2B, H320
Monoammonium Phosphate	(CAS No) 7722-76-1		Eye Irrit. 2B, H320 STOT SE 3, H335
Monopotassium phosphate	(CAS No) 7778-77-0		Not classified
Zinc EDTA	(CAS No) 14025-21-9		Not classified
edta iron(iii) sodium salt	(CAS No) 15708-41-5		Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Magnesium EDTA	(CAS No) 15708-48-2		Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Sand. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Reactivity : Product is an oxidizer.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Recover mechanically the product. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Store in a well-ventilated place. Keep cool.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

potassium nitrate (7757-79-1)

Not applicable

Monoammonium Phosphate (7722-76-1)

Not applicable

Monopotassium phosphate (7778-77-0)

Not applicable

Zinc EDTA (14025-21-9)

Not applicable

edta iron(iii) sodium salt (15708-41-5)

ACGIH	ACGIH TWA (mg/m³)	1 mg/m³

Magnesium EDTA (15708-48-2)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses. Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Granule.
Color	:	Colorless
Odor	:	characteristic
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	Not applicable
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosion limits	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Product is an oxidizer.

10.2. Chemical stability

Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Excessive heat and open flame. Strong acids or strong oxidizers. Oxidizing Agent. Reducing agents. Ammonia. Combustible meterials. Chlorine compounds. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Nitrates are incompatible with strong alkalis and reducing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Sulfur oxides. Nitrogen oxides. fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

PLANT HEALTH technologies Folo Spray 12-5-40	
LD50 oral rat	1926 mg/kg
ATE US (oral)	1926 mg/kg body weight

potassium nitrate (7757-79-1)	
LD50 oral rat	3750 mg/kg (Rat)
LD50 dermal rat	> 5000 mg/kg
ATE US (oral)	3750 mg/kg body weight

Monoammonium Phosphate (7722-76-1)	
LD50 oral rat	5750 mg/kg (Rat)
LD50 dermal rat	> mg/kg
LD50 dermal rabbit	> 7940 mg/kg (Rabbit)
ATE US (oral)	5750 mg/kg body weight

Monopotassium phosphate (7778-77-0)	
LD50 oral rat	7100 mg/kg (Rat)
LD50 dermal rabbit	> 4640 mg/kg (Rabbit)
ATE US (oral)	7100 mg/kg body weight

edta iron(iii) sodium salt (15708-41-5)	
LD50 oral rat	5000 mg/kg (Rat)
ATE US (oral)	5000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Causes eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Based on available data, the classification criteria are not met

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

potassium nitrate (7757-79-1)	
LC50 fish 1	162 mg/l (96 h; Pisces; Lethal)
LC50 other aquatic organisms 1	39 mg/l (96 h; Daphnia magna)
EC50 other aquatic organisms 1	200 - 1000 mg/l (Plankton; Nocivity test)

potassium nitrate (7757-79-1)	
LC50 fish 2	1378 mg/l (Poecilia reticulata)
LC50 other aquatic organisms 2	490 mg/l (48 h; Daphnia magna)
TLM fish 1	3000 mg/l (96 h; Lepomis macrochirus)
TLM fish 2	162 mg/l (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	39 mg/l (96 h; Daphnia magna)
Threshold limit other aquatic organisms 2	490 mg/l (48 h; Daphnia magna)

Monoammonium Phosphate (7722-76-1)	
LC50 fish 1	155 ppm (96 h; Pimephales promelas)

Monopotassium phosphate (7778-77-0)	
LC50 fish 1	> 900 mg/l (48 h; Leuciscus idus)
EC50 other aquatic organisms 1	2 ppm (672 h; Potamogeton sp.; O2 evolution)
Threshold limit other aquatic organisms 1	1 ppm (672 h; Potamogeton sp.; O2 evolution)
Threshold limit algae 1	1 ppm (672 h; Elodea sp.; O2 evolution)
Threshold limit algae 2	> 5 ppm (672 h; Elodea sp.; O2 evolution)

edta iron(iii) sodium salt (15708-41-5)	
LC50 fish 1	2592 mg/l (96 h; Pisces)

12.2. Persistence and degradability

PLANT HEALTH technologies Folo Spray 12-5-40	
Persistence and degradability	Not established.

potassium nitrate (7757-79-1)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Monoammonium Phosphate (7722-76-1)	
Persistence and degradability	Biodegradability in water: no data available. Not established.

Monopotassium phosphate (7778-77-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Zinc EDTA (14025-21-9)	
Persistence and degradability	Non degradable in the soil. Adsorbs into the soil. Not established.

edta iron(iii) sodium salt (15708-41-5)	
Persistence and degradability	Biodegradable in water. Not established.

Magnesium EDTA (15708-48-2)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

PLANT HEALTH technologies Folo Spray 12-5-40	
Bioaccumulative potential	Not established.

potassium nitrate (7757-79-1)	
Bioaccumulative potential	No bioaccumulation data available. Not established.

Monoammonium Phosphate (7722-76-1)	
Bioaccumulative potential	Not bioaccumulative. Not established.

Monopotassium phosphate (7778-77-0)	
Bioaccumulative potential	No bioaccumulation data available.

Zinc EDTA (14025-21-9)	
Bioaccumulative potential	No bioaccumulation data available. Not established.

edta iron(iii) sodium salt (15708-41-5)	
Log Pow	-10.6
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

Magnesium EDTA (15708-48-2)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1479 Oxidizing solid, n.o.s., 5.1, II

UN-No.(DOT) : UN1479

Proper Shipping Name (DOT) : Oxidizing solid, n.o.s.

Class (DOT) : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 5.1 - Oxidizer

DOT Packaging Non Bulk (49 CFR 173.xxx) : 212

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102)	:	62 - Oxygen generators (see §171.8 of this subchapter) are not authorized for transportation under this entry. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle. IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner. T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	152
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	25 kg
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Transport/Additional information	:	56 - Stow ‘‘separated from’’ ammonium compounds,58 - Stow ‘‘separated from’’ cyanides,106 - Stow ‘‘separated from’’ powdered metal
Emergency Response Guide (ERG) Number	:	140
Other information	:	No supplementary information available.

TDG

Transport by sea

Transport document description (IMDG)	:	UN 1479 OXIDIZING SOLID, N.O.S., 5.1, II
UN-No. (IMDG)	:	1479
Proper Shipping Name (IMDG)	:	OXIDIZING SOLID, N.O.S.
Class (IMDG)	:	5.1 - Oxidizer
Packing group (IMDG)	:	II - substances presenting medium danger
Limited quantities (IMDG)	:	1 kg

Air transport

Transport document description (IATA)	:	UN 1479 Oxidizing solid, n.o.s., 5.1, II
UN-No. (IATA)	:	1479
Proper Shipping Name (IATA)	:	Oxidizing solid, n.o.s.
Class (IATA)	:	5.1 - Oxidizing Substances
Packing group (IATA)	:	II - Medium Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

PLANT HEALTH technologies Folo Spray 12-5-40
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

potassium nitrate (7757-79-1)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases:

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

SDS US (GHS HazCom 2012)