

UpShot Soybean Seed Treatment

Date: 6/9/2015

Reason for Revision: Initial Release

1. PRODUCT IDENTIFICATION

Product identifier on label: **UpShot Soybean Seed Treatment**

Product No.: 003-ST-A

Use: Insecticide with Fungicides

Manufacturer: FMC Corporation
1735 Market Street
Philadelphia, PA 19103
msdsinfo@fmc.com (E-Mail General Information)

Manufacturer Phone: 1-215-299-6000 (General Information)

Medical Emergency: 1-800-331-3148 (PROSAR - USA & Canada)

Leak, Fire, spill, or accident emergencies: 1-800-424-9300 (CHEMTREC - USA); 1-703-527-3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classifications: Not Applicable

Signal Word (OSHA): Not Applicable

Hazard Statements: Not Applicable

Hazard Symbols:

Precautionary Statements: Not Applicable

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Glycerin	Glycerin	56-81-5	Trade Secret
1,2-Propanediol	Propylene Glycol	57-55-6	Trade Secret
Other ingredients	Other ingredients	Trade Secret	72.29%
(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester	Mefenoxam	70630-17-0 & 69516-34-3	3.46%
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	1.15%
3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine	Thiamethoxam	153719-23-4	23.10%

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Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling FMC Corporation (215-299-6000), a poison control center or doctor, or going for treatment.

- Ingestion:** If swallowed: Call FMC Corporation (215-299-6000), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 215-299-6000 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call FMC Corporation (215-299-6000), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call FMC Corporation (215-299-6000), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call FMC Corporation (215-299-6000), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Not Applicable

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

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7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Glycerin	15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)	Not Established	Not Established	Not Applicable
Propylene Glycol	Not Established	Not Established	10 mg/m ³ TWA	AIHA
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Mefenoxam	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Fludioxonil	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Thiamethoxam	Not Established	Not Established	3 mg/m ³ TWA	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use chemical splash goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light beige opaque liquid

Odor: Faint aromatic

Odor Threshold: Not Available

pH: 5.0 - 6.0 (neat @ 68 - 77°F (20 - 25°C))

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Not Available

Flammability: Not Available

Vapor Pressure: Fludioxonil 2.9 x 10⁽⁻⁹⁾ mmHg @ 77°F (25°C)

Mefenoxam 2.5 x 10⁽⁻⁵⁾ mmHg @ 77°F (25°C)

Thiamethoxam 2 x 10⁽⁻¹¹⁾ mmHg @ 68°F (20°C)

Vapor Density: Not Available

Relative Density: 1.13 g/ml ; 9.40 lbs/gal

Solubility (ies): Fludioxonil 1.8 mg/l @ 77°F (25°C)

Mefenoxam 26 g/l @ 77°F (25°C)

Thiamethoxam 4.1 g/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: Not Available

Incompatible materials: None known.

Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Not Applicable

Delayed, immediate and chronic effects of exposure: Not Applicable

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Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion: Oral (LD50 Female Rat) : 5000 mg/kg body weight
 Dermal: Dermal (LD50 Rat) : > 5000 mg/kg body weight
 Inhalation: Inhalation (LC50 Rat) : > 2.52 mg/l air - 4 hours
 Eye Contact: Practically Non-Irritating (Rabbit)
 Skin Contact: Slightly Irritating (Rabbit)
 Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Fludioxonil: Delayed development at doses causing maternal toxicity.

Mefenoxam: None observed.

Thiamethoxam: Developmental: Not teratogenic in rats or rabbits.

Reproductive: No effects on reproduction. Minor increase in a common testis effect in rats at high doses, which did not affect reproduction.

Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

Mefenoxam: Liver effects at high dose animal tests.

Thiamethoxam: Subchronic: Liver effects occurred in rodents only at high dose levels. Not neurotoxic after high acute and subchronic exposure in rats.

Carcinogenicity

Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).

Mefenoxam: None observed.

Thiamethoxam: Classified as "not likely to be carcinogenic in humans" based on lifetime studies in mice and rats.

Chemical Name	NTP/IARC/OSHA Carcinogen
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Glycerin	No
1,2-Propanediol	No
Other ingredients	No
(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester	No
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No
3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine	No

Other Toxicity Information

None

Toxicity of Other Components

Glycerin

Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

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Other ingredients
 Not Applicable

Propylene Glycol
 Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea. Also, eye irritation may occur with lacrimation but no residual discomfort or injury. Prolonged contact to skin may cause mild to moderate irritation and possible allergic reactions. Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs

Active Ingredients

Fludioxonil:	Liver, kidney
Mefenoxam:	Liver
Thiamethoxam:	Liver

Inert Ingredients

Glycerin:	Skin
Other ingredients:	Not Applicable
Propylene Glycol:	CNS, kidney, liver

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Mefenoxam:
 Fish (Rainbow Trout) 96-hour LC50 > 121 ppm
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 113 ppm
 Bird (Bobwhite Quail) 14-day LD50 981 mg/kg

Fludioxonil:
 Fish (Rainbow Trout) 96-hour LC50 0.47 ppm
 Green Algae 5-day EC50 0.087 ppm
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.9 ppm
 Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Thiamethoxam:
 Fish (Rainbow Trout) 96-hour LC50 > 100 ppm
 Bird (Mallard Duck) LD50 Oral 576 mg/kg
 Invertebrate (Daphnia Magna) 48-hour EC50 > 106 ppm
 Green Algae 4-day EC50 > 97 ppm

Environmental Fate

Fludioxonil:
 The information presented here is for the active ingredient, fludioxonil.
 Does not bioaccumulate. Persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

Mefenoxam:
 The information presented here is for the active ingredient, mefenoxam.
 Does not bioaccumulate. Not persistent in soil or water. Moderate mobility in soil. Mixes/sinks (after 24 h).

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Thiamethoxam:

The information presented here is for the active ingredient, thiamethoxam.
Not persistent in soil. Stable in water. Moderate mobility in soil. Floats in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Not regulated

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil, Thiamethoxam), Marine Pollutant
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil, Thiamethoxam)
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet.

EPA Registration Number(s):

100-1427-279

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

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CERCLA/SARA 304 Reportable Quantity (RQ):

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

For non-emergency questions about this product call:
1-215-299-6000
(FMC Corporation General Information)

Original Issued Date: 6/9/2015

Revision Date: 6/9/2015

Reason for Revision: Initial Release

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.