



TROVEC™ Fertilizer Additive

Safety Data Sheet

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

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1 PRODUCT IDENTIFIERS

Product Name: TROVEC Fertilizer Additive
Product Number:
Active Ingredient (%): 25.00% Fulvic Acid
Recommended Use: Fertilizer Additive

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Uses of the Substance/Mixture: Manufacturing use for various agricultural applications

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Growmark, Inc.
1701 Towanda Ave,
Bloomington, IL 61701 USA
1-309-557-6000

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Number: CHEMTREC 1-800-424-9300
24 Hour Emergency HAZMAT Response: 1-800-229-5252
EPA National Response Center: 1-800-424-8802

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification (GHS-US): This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

2.2 LABEL ELEMENTS

None required. Not a hazardous substance or mixture.

2.3 OTHER HAZARDS NOT CLASSIFIED (HNOC) OR NOT COVERED BY GHS

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

<u>Material</u>	<u>% by Weight</u>	<u>CAS No.</u>
Fulvic Acid	25.00%	Mixture

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General information: Contact with eyes or skin may cause irritation. Seek medical attention if irritation persists.

If inhaled: Move to fresh air: Obtain medical attention immediately if breathing becomes difficult

In case of skin contact: Wash off with plenty of water. If prolonged contact occurs, rinse thoroughly with soap and water.

Eye contact: Flush eyes with water immediately with plenty of water for at least 15 minutes.

Obtain medical attention if irritation persists.

Following eye contact: Obtain medical attention if irritation persists.

If ingested: Do not induce vomiting. Obtain medical attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Symptoms/effects: None reasonably foreseeable

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes for the doctor: Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media: Use water, dry chemical, foam or CO2 extinguishing media.

Unsuitable extinguishing media: No information available.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Fire hazard: Not flammable

Hazardous combustion products: Product is non-reactive under normal conditions.

5.3 ADVICE FOR FIRE FIGHTERS

Do not attempt to take action without suitable protective equipment: self-contained breathing apparatus and complete protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

For non-emergency personnel: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with eyes or skin.

Protective equipment for emergency responders: Do not attempt to take action without suitable protective equipment. For further information, see section 8 Exposure controls/personal protection.

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid uncontrolled release into the environment.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

For containment: Store in original container.

For cleaning up: Take up liquid spill in absorbent material.

SECTION 7: HANDLING AND STORAGE

Handling: Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin or eyes. Do not ingest.

Storage: Keep out of reach of children. Do not contaminate water, food, or feed by storage or disposal. Do not store below 40°F (5°C). Keep from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

No additional information available.

8.2 EXPOSURE CONTROLS

Environmental exposure controls: Avoid uncontrolled release to the environment.

8.2.1 APPROPRIATE ENGINEERING CONTROLS

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2 PERSONAL PROTECTIVE EQUIPMENT

Hand protection: Protective gloves.

Eye protection: Safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Dark brown - black
Odor:	Slightly earthy
Vapor Pressure:	Greater than 1.0 @ 100°C
Vapor Density:	(Air = 1) N/A
pH:	6.5-7.5
Relative Density:	H ₂ O=1 1.005-1.015 @ 20°C
Melting Point:	N/A
Freezing Point:	0°C
Solubility in Water:	Complete
Solubility in alcohols:	N/A
Boiling Point:	100°C
Flash Point & Method:	Non-flammable
Evaporation Rate:	Non-volatile
Flammability:	Non-flammable
Flammable Limits:	N/A LEL: N/A UEL: N/A
Auto-ignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	N/A

9.2 OTHER INFORMATION

No other information.

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

The product is non-reactive under normal conditions of use, storage and transport.

10.2 CHEMICAL STABILITY

Stable under normal conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reactions known under normal conditions of use.

10.4 CONDITIONS TO AVOID

None under recommended storage and handling conditions (see section 7).

10.5 INCOMPATIBLE MATERIALS

None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

No additional information available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Product Information

Component information

<u>Component</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LC50 Inhalation</u>
Fulvic Acid	>5000 mg/kg (rat)	>5050 mg/kg (rabbit)	>1.67 mg/L air 4 hrs

Toxicologically Synergistic Products: No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute

Likely Routes of Exposure:	Skin, Eye, Ingestion
Acute Oral Toxicity:	Category IV. No additional information available.
Acute Dermal Toxicity:	Category IV. No additional information available.
Acute Inhalation:	Category IV. No additional information available.
Eye Irritation:	May cause irritation, stinging, tearing, itching, swelling, and/or redness
Skin Sensitization:	Contact with skin may cause irritation.

Mutagenic Potential: None observed

Reproductive Hazard Potential: None observed

Chronic/Subchronic Toxicity Studies: None observed

Carcinogenic Potential: None observed

Other Toxicity Information: Not available

Toxicity of Other Components: Not available

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Ecotoxicity: Do not empty into drains.

Persistence and Degradability: No information available

Bioaccumulation/ Accumulation: Fulvic Acids are derived from organic substances.

Accordingly, based on studies conducted on its major components, REGARD Fertilizer Additive is biodegradable with a soil DT50 likely in the range of +/- 25-30 days and is unlikely to persist under either aerobic or anaerobic aquatic conditions. Mobility: No information available.

Aquatic Organisms Toxicity:

Rainbow Trout Acute LC50: >1,000 mg/L

Daphnia magna Acute EC50: >1,000 mg/L

Avian Organisms Toxicity:

Bobwhite Quail Acute LD50: >72 mg a.i./kg body weight.

NOEL for mortality and adverse effects: >72 mg a.i./kg body weight

Bobwhite Quail Dietary LC50: >1080 mg a.i./kg feed (201.6 mg a.i./kg body wt./day),

NOEC: >1080 mg a.i./kg feed

*Based on tests conducted with 0.90% TGAI

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal: Dispose of in an approved disposal facility in accordance with all municipal, provincial, and federal regulations.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Contact the nearest State Pesticide or Environmental control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance.

SECTION 14: TRANSPORT INFORMATION

UN Number: Not regulated by DOT, IATA or IMDG

UN Proper Shipping Name: Not applicable

DOT Classification: Not applicable; no label or placard required

B/L Freight Classification: Not regulated

International Transportation: Not applicable

HAZARD CLASSIFICATION (0 minimal, 1 slight, 2 moderate, 3 serious, 4 severe)

NFPA: HEALTH 0 FIRE 0 REACTIVITY 0

SECTION 15: REGULATORY INFORMATION

15.1 US FEDERAL REGULATIONS

UN Number: Not regulated by DOT, IATA or IMDG

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NFPA: HEALTH 0 FIRE 0 REACTIVITY 0

15.2 INTERNATIONAL REGULATIONS

Canada: No additional information available.

EU Regulations: No additional information available.

15.1.2 NATIONAL REGULATIONS

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: No SARA Hazards

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know Components: No components are subject to the New Jersey Right to Know Act.

SECTION 16: OTHER INFORMATION

The directions for use of this product are believed to be adequate and must be followed carefully. The use of this product is beyond the control of the manufacturer, and, therefore, to the extent consistent with applicable law, no warranty, representation, or guarantee of any kind, expressed or implied, is made as to the effects of such use or any results obtained if not used in accordance with printed directions and established safe practice or if unusual or extraordinary weather conditions occur. To the extent consistent with applicable law, the buyer's exclusive remedy and manufacturer's or seller's exclusive liability in tort or otherwise, shall be limited, at the manufacturer's option, to replacement of, or the repayment of the purchase price for, the quantity of product with respect to which damages are claimed.

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

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