

DiTera DF Biological Nematicide Dry Flowable

SDS# VBC-0091 Revision 0

ISSUED 09/04/15

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY**1.1 Product Identifier****MATERIAL NAME:** DiTera DF Biological Nematicide Dry Flowable**Synonyms:** None**EPA Reg No.:** 73049-67**Code Number:** 84980**List Number:** 60278**Chemical Family:** Microbial**Substance Registration Number(s)[REACH]:** N/A**1.2 Relevant Identified Uses and Uses Advised Against****Identified Uses:** Agricultural Nematicide**Uses Advised Against:** It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.**1.3 Details of the supplier of the Safety Data Sheet****Supplied By:** Valent BioSciences Corporation
870 Technology Way
Libertyville, Illinois 60048**1.4 EMERGENCY TELEPHONE NUMBERS****Emergency Health or Spill:**

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION**2.1 Classification of the Substance or Mixture**

None

2.2 Labeling Elements**Symbol(s)**

None

Signal Word

WARNING

Hazard Statement(s)

None

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Precautionary Statement:

Prevention

- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing dust
- Wash hands and face thoroughly after handling

Response

- IF IN EYES: 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.
- If eye irritation persists: Get medical advice/ attention.
- IF ON SKIN: Wash with soap and water.
- Take off contaminated clothing and wash it before reuse.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.3 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS # | Component Name | (Classification) | Percent |
|--------------|---|------------------|---------|
| | <i>Myrothecium verrucaria</i> fermentation solids | Not classified | 90.0 |
| Trade Secret | Other ingredients | Not classified | 10.0 |
| | | | |

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

GENERAL: In all cases of doubt, seek medical attention.

EYES: Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

SKIN: Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. Cover irritated skin with an emollient. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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INGESTION: Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. Give large quantities of water. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed**Acute**

None.

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES**5.1 Extinguisher Media****Suitable Extinguisher Media**

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

None known

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters**Protective Equipment and precautions for firefighters**

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

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6. ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Use in a well-ventilated area. Respiratory protection is not needed during normal product use. Wear eye protection appropriate to handling activities. Wear impervious gloves. Wear appropriate body coverings if contact may occur. Where exposure level is not known, wear respirator protection suitable for expected level of exposure, in addition to the personal protection as recommended in Section 8.

6.2 Environmental Precautions

Keep out of drains, sewers, ditches and waterways.

6.3 Methods and Materials for Containment and Cleaning Up

Ventilate area. Wear appropriate personal protective equipment. Recover product and place into appropriate container for disposal. Do not flush to sewer.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: REGULATORY INFORMATION for details on reportable quantities, if any.

7. HANDLING AND STORAGE**7.1 Precautions for Safe handling**

Ventilate. Avoid breathing dust Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping. For filling operations respiratory protection may be recommended particularly in enclosed areas.

7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Close containers of unused material. Store in a dry, cool, ventilated place, away from direct sunlight.

Incompatibilities

None Known

7.3 Specific End Use(s)

Agricultural nematicide.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None

Derived No Effect Levels (DNELs)

No DNELs available

Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls

Provide general ventilation. Where adequate general ventilation is unavailable use process enclosure, local exhaust ventilation, or other engineering controls

SKIN PROTECTION:

Wear protective clothing, including boots and gloves. Wear gloves made of impervious material. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

RESPIRATORY PROTECTION:

For filling operations if dust/mist is produced respiratory protection is recommended or where respiratory protection is warranted, use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter). Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

| | | | |
|---------------------------------|-----------------------------------|--------------------------------|----------------|
| Appearance: | Fine granule, light to dark brown | Odor: | Yeast-like |
| pH: | Not Determined | Odor Threshold: | Not determined |
| Melting Point: | Not Applicable | Boiling Point: | Not Determined |
| Specific Gravity: | Not Determined | Solubility (H ₂ O): | Not Determined |
| Octanol/H ₂ O Coeff: | Not Determined | Bulk Density: | 0.49 g/ml |
| Molecular Weight: | Not Applicable | Evaporation Rate: | Not Applicable |

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| | | | |
|----------------------|----------------|----------------------|----------------|
| Auto Ignition: | Not Determined | Decomposition Temp.: | Not Determined |
| Flash Point: | Not Determined | LFL: | Not Determined |
| Vapor Density: | Not Determined | UFL: | Not Determined |
| VOC: | Solid | Vapor Pressure: | Not Determined |
| Kinematic Viscosity: | Not Determined | Flammability Class: | Not flammable |
| | | | |

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity

Material does not pose a significant reactivity hazard.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known

10.5 Incompatible Materials

None known

10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Likely Routes of Exposure

Inhalation: Yes
 Eye Contact: Yes
 Skin Contact: Yes
 Ingestion: Not likely

Product (or TGA) where noted) Toxicology

Acute Effects

Oral Toxicity: LD₅₀ > 5,000 mg/kg (rat)
 Dermal Toxicity: LD₅₀ > 5,000 mg/kg (rabbit)
 Inhalation Toxicity: LD₅₀ > 2.04 mg/L
 Corrosiveness: Not corrosive.
 Dermal Irritation: Non-irritant

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Ocular Irritation: Mildly irritating. Cleared by 72 hrs; Not classified.
Dermal Sensitization: Not a sensitizer (guinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens.
Carcinogenicity Information: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.

Developmental/Reproductive Toxicity: This material is not teratogenic

Special Target Organ: None.

Aspiration Hazard: Not Applicable

Repeat Dose Studies: Not Applicable, Acute Toxicity testing was all negative

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity (Data for a Concentrated Technical Powder)**Fish: LC₅₀ >100 mg/L (96-H, Rainbow Trout)Bird: LD₅₀ (Bobwhite quail): >2500 mg/kg/dayLD₅₀ (Mallard Duck): >2500 mg/kg/day**12.2 Persistence and Degradability**

No data available

12.3 Bioaccumulation potential

No data available

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB assessment

Assessments not performed

12.6 Other adverse effects

None known

13. DISPOSAL CONSIDERATIONS**13.1 Waste Disposal Methods**

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:

There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

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14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

15. REGULATORY INFORMATION**15.1 Safety, Health and Environmental Regulations / Specific Legislation**

TSCA STATUS: Exempt
CERCLA STATUS: Not regulated as hazardous
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No
RCRA STATUS: Not regulated as hazardous
State Right-To-Know: Not Listed
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 EPA Pesticide Regulations

EPA Registration Number: 73049-67
EPA Pesticide Label signal word: CAUTION

Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS
CAUTION**

Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

DIRECTIONS FOR USE

Do not apply this product through any type of irrigation system unless labeling for chemigation is followed.

It is a violation to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the Agency responsible for pesticide regulations.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by improper storage or disposal.

Pesticide Storage: Keep containers tightly closed when not in use. Store in a cool, dry place. Avoid extreme temperatures.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment washwaters.

Container Disposal: Non refillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty container into applicable equipment. If recycling is not available dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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16. OTHER INFORMATION**NFPA Hazard Ratings**Health: 0
Flammability: 0
Instability: 0**HMIS Hazard Ratings**Health: 0
Flammability: 0
Instability: 00 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = ExtremeREASON FOR ISSUE: New GHS rules
APPROVAL DATE: 09/04/15
SUPERSEDES DATE: --/--/--

LEGEND: N/A = Not Applicable

N/L = Not Listed

C = Ceiling

(R) = Registered Trademark of Valent BioSciences Corp.

(TM) = Registered Trademark of Valent BioSciences Corp.

N/D = Not Determined

L = Listed

S = Short-term

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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.