

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

1. PRODUCT IDENTIFICATION

Product identifier on label: **FUSILADE® II TURF AND ORNAMENTAL HERBICIDE**

Product No.: A12460A

Use: Herbicide

Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419

Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Skin Sensitizer: Category 1B
Carcinogenicity: Category 2
Reproductive Toxicity: Category 2
Aspiration Hazard: Category 1
Inhalation: Category 2

Signal Word (OSHA): Danger

Hazard Statements: May be fatal if swallowed and enters airways
May cause an allergic skin reaction
Fatal if inhaled
Suspected of causing cancer
Suspected of damaging fertility or the unborn child

Hazard Symbols:



Precautionary Statements: Do not breathe mist, vapors, spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
In case of inadequate ventilation wear respiratory protection. See Section 8 Exposure Control/Personal Protection.
If on skin: Wash with plenty of soap and water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a poison center, doctor or Syngenta.
Specific treatment is urgent (see Section 4 First Aid Measures).

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016
Replaces: 6/9/2016

If skin irritation or rash occurs: Get medical advice.
Wash contaminated clothing before reuse.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
If exposed or concerned: Get medical advice/attention.
Wear protective gloves, protective clothing, eye protection.
If swallowed: Immediately call a poison center, doctor or Syngenta.
Do NOT induce vomiting.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Petroleum distillates, light paraffinic	Petroleum distillates, light paraffinic	64741-89-5	<40.0%
Other ingredients	Other ingredients	Trade Secret	>5.5%
Solvent Naptha (Petroleum), Heavy Aromatic	Aromatic Solvent	64742-94-5	<30.0%
Butyl(RS)-2-[4-[[5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoate	Fluazifop-P-Butyl	79241-46-6	24.5%

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 Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), 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 800-888-8372 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 Syngenta (800-888-8372), 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 Syngenta (800-888-8372), 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 Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Allergic skin reaction

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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 in Protective Equipment Section. 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.

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
Petroleum distillates, light paraffinic	Not Established	Not Established	Not Established	Not Applicable
Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Aromatic Solvent	Not Established	Not Established	50 mg/m3 (8 ppm) TWA	Manufacturer

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016
 Replaces: 6/9/2016

Fluazifop-P-Butyl	Not Established	Not Established	0.5 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, nitrile rubber, neoprene rubber or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown liquid, free of sediment

Odor: Aromatic

Odor Threshold: Not Available

pH: 6.2 (1% w/w dilution in deionized water)

Melting point/freezing point: Not Applicable

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): > 212°F (TCC)

Flammable Limits (% in Air): Not Available

Flammability: Not Applicable

Vapor Pressure: Fluazifop-P-Butyl 4.5 x 10⁻⁷ mmHg @ 68°F (20°C)

Vapor Density: Not Available

Relative Density: 0.981 g/cm³

Solubility (ies): Fluazifop-P-Butyl Almost insoluble in water (1 mg/l @ pH 5 - 6.5)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

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: None known.
- Incompatible materials: None known.
- Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Rash, redness or itching

Delayed, immediate and chronic effects of exposure: Developmental toxicity, Possible carcinogenicity, Allergic skin reaction

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

- Ingestion: Oral (LD50 Rat) : > 5000 mg/kg body weight
- Dermal: Dermal (LD50 Rabbit) : > 2000 mg/kg body weight
- Inhalation: Inhalation (LC50 Animal Not Available) : 0.54 mg/l air - 4 hours
- Eye Contact: Slightly Irritating (Rabbit)
- Skin Contact: Moderately Irritating (Rabbit)
- Skin Sensitization: See "Other Toxicity Information", Sec. 11

Reproductive/Developmental Effects

Fluazifop-P-Butyl : Embryo/foetoxic effects have been reported in rats. Did not show teratogenic effects in animal experiments.

Chronic/Subchronic Toxicity Studies

Fluazifop-P-Butyl : Effects on red cells, bone marrow, liver and spleen observed in long-term high dose feeding tests in dogs. No adverse health effects are expected in humans at airborne levels below the occupational exposure limit.

Carcinogenicity

Fluazifop-P-Butyl : Did not show mutagenic effects in animal experiments. Did not show carcinogenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Petroleum distillates, light paraffinic	No
Other ingredients	No

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

Solvent Naptha (Petroleum), Heavy Aromatic No
 Butyl(RS)-2-[4-[[5-(trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoate No

Other Toxicity Information

Repeated and/or prolonged contact may cause skin sensitization.

Toxicity of Other Components

Aromatic Solvent

May cause irritation to the eyes, skin and respiratory system.
 May cause dizziness or drowsiness. Aspiration hazard.

Other ingredients

Not Established

Petroleum distillates, light paraffinic

May cause respiratory tract irritation. Harmful if swallowed. Pulmonary aspiration hazard.

Target Organs

Active Ingredients

Fluazifop-P-Butyl : Blood, bone marrow, liver, spleen

Inert Ingredients

Aromatic Solvent: Eye, skin, respiratory system, nervous system

Other ingredients: Not Established

Petroleum distillates, light paraffinic: Respiratory tract

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Fluazifop-P-Butyl :

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 6.02 ppm

Green Algae 4-day EC50 > 1.8 ppm

Bird (Mallard Duck) 14-day LD50 > 3528 mg/kg

Environmental Fate

Fluazifop-P-Butyl :

The information presented here is for the active ingredient, fluazifop-p-butyl.
 Not persistent in soil or water.

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

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

< 300 gallons: Not regulated

> 300 gallons:

Proper Shipping Name: Other Regulated Substances, Liquid, N.O.S. (RQ - Naphthalene)

Hazard Class: Class 9

Identification Number: NA 3082

Packing Group: PG III

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fluazifop), 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. (Fluazifop)

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 absorbed through skin or inhaled. Causes eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist.

EPA Registration Number(s):

100-1084

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard

Section 313 Toxic Chemicals: Aromatic Solvent <30.0% (CAS No. 64742-94-5)

California Proposition 65:

This product contains a chemical(s) known to the state of California to cause cancer and birth defects or other reproductive harm.

CERCLA/SARA 304 Reportable Quantity (RQ):

Report product spills > 305 gal. (based on naphthalene [RQ = 100 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

FUSILADE® II TURF AND ORNAMENTAL HERBICIDE

Date: 6/24/2016

Replaces: 6/9/2016

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 2
Flammability: 1
Physical Hazard: 0

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

Syngenta Hazard Category: D,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 11/25/1998

Revision Date: 6/24/2016

Replaces: 6/9/2016

Section(s) Revised: 2, 11, 16

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.