Revision Date: January 14th, 2020

Bifender® FC

Section 1 – Identification
Product Identifier: Bifender FC
Recommended use: **Refer to product label for use instructions.**
Manufacturer/Supplier: Vive Crop Protection Inc., 6275 Northam Dr., Suite 1, Mississauga, ON L4V 1Y8, Canada
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Technical Assistance: support@vivecrop.com
Sales enquiries: sales@vivecrop.com
Phone: 1-888-760-0187
24-Hour Emergency Phone: **ChemTel Inc.**
North America: 1-800-255-3924
Outside North America: +1-813-248-0585

Section 2 – Hazard Identification
Classification: The following hazard classification is in accordance with **29 CFR 1910.1200 [OSHA HCS 2012]** in the United States of America, and **WHMIS 2015** in Canada.

Acute Oral Toxicity 3; Acute Inhalation Toxicity 4; Eye Irritation 2B; Carcinogenicity 2, STOT-Single Exposure 1, STOT-Repeated Exposure 1

Label Elements, Including Precautionary Statements:

Signal Word: Warning
Hazard Statements: H301 Toxic if swallowed; H320 Causes eye irritation; H332 Harmful if inhaled; H351 Suspected of causing cancer; H370 Causes damage to organs; H372 Causes damage to organs through prolonged or repeated exposure.
Precautionary Statements: P201 Obtain special instructions before use; P202 Do not handle until all safety precautions have been read and understood; P264 Wash thoroughly after handling; P261 Avoid breathing mist/spray; P270 Do not eat, drink or smoke when using this product; P271 Use only outdoors or in a well-ventilated area; P280 Wear protective gloves; P281 Use personal protective equipment as required.

Section 3 – Composition/Information on Ingredients

Component	CAS	Wt %
Bifenthrin	82657-04-3	19.3

Contains other ingredients not otherwise classified as hazardous or present in concentrations which warrant inclusion in this SDS.

Section 4 – First-Aid Measures

Ingestion	P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor; P330 – Rinse mouth.
Inhalation	P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing; P312 – Call a POISON CENTER or physician if you feel unwell
Eye Contact	P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; P337 + P313 – If eye irritation persists: Get medical attention
Skin Contact	P302 + P352 – IF ON SKIN: Wash with plenty of water; P332 + P313 – If skin irritation occurs: Get medical attention; P362 + P364 – Take off contaminated clothing and wash it before reuse

Symptoms/Effects, Acute and Delayed: Ingestion or inhalation may cause incoordination, tremors, salivation, vomiting, diarrhea, and irritability to sound and touch. Dermal exposure may cause tingling sensations, rash, redness, irritation, or inflammation.

Section 5 – Fire Fighting Measures
Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Specific hazards: May produce toxic and irritant vapors
Special protective equipment: Wear self-contained breathing apparatus for fire fighting

Section 6 – Accidental Release Measures
Personal Precautions: Wear respiratory protection. Wear protective gloves/protective clothing. Do not breathe mist/spray. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environment Precautions: Do not let product enter drains. Methods and Materials for Containment and Cleaning Up: Absorb using inert materials and dispose of in accordance with local regulations. Do not let the material dry before cleaning the spill.

Section 7 – Handling and Storage
GHS Precautions for Safe Handling: P201 Obtain special instructions before use; P202 Do not handle until all safety precautions have been read and understood; P264 Wash thoroughly after handling; P261 Avoid breathing mist/spray; P270 Do not eat, drink or smoke when using this product; P271 Use only outdoors or in a well-ventilated area; P280 Wear protective gloves; P281 Use personal protective equipment as required.

Conditions for Safe Storage: P403 +P233 – Store in a well-ventilated place. Keep container tightly closed; P405 - Store locked up; Avoid extreme temperatures

Section 8 - Exposure Controls/Personal Protection:

Component	OSHA PEL	ACGIH TLV	AOEL
Bifenthrin	N/A	N/A	0.0075 mg/kg/day

Engineering Controls: This product is intended to be used outdoors. If necessary, provide local exhaust ventilation and use appropriate containment procedures to maintain airborne levels at a safe concentration.

Personal Protective Equipment: Applicators and other handlers (other than mixers and loaders) must wear: Long-sleeved shirt and long pants; Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber; Shoes plus socks. Mixers and Loaders must wear: Long-sleeved shirt and long pants; Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber or butyl rubber; Shoes plus socks; Protective eyewear.

Section 9 – Physical and Chemical Properties

Appearance	Light beige
Odor	Unsaturated
Odor threshold	Not available
pH	7.24 @ 22°C
Melting point	Not available
Freezing point	Not available
Initial Boiling point/Boiling Range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative Density	1.08 g/mL
Solubility	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	non-Newtonian

Section 10 –Stability and Reactivity

Reactivity	Not compatible with alkaline materials or strong oxidizers.
Chemical Stability	Relatively stable in neutral and weakly basic media .
Hazardous Reactions	When heated to decomposition, will emit toxic vapors of fluorine and chlorine.
Conditions to Avoid	High temperatures.
Incompatible Materials	Alkaline materials, strong oxidizers.

Hazardous Decomposition Products	Not available.

Section 11 – Toxicological information:

Acute Oral LD50	Rat: 175 mg/kg
Acute Dermal LD50	Rabbit: > 2000 mg/kg
Acute Inhalation LD50	4h Rat: > 2.07 mg/L
Eye Irritation / Corrosion	Rabbit: Conjunctivitis clearing by day 4. No opacity observed.
Skin Irritation / Corrosion	Rabbit: Slight erythema clearing by 48 hours. No signs of edema.
Dermal Sensitization	Guinea pig: no skin sensitization.
Germ Cell Mutagenicity	No data available.
Carcinogenicity	Bifenthrin: Not classified as carcinogenic by NTP, IARC or ACGIH. Bifenthrin is listed as possible human carcinogen (Category C) by the US-EPA HED-CPRC .
Reproductive Toxicity	Bifenthrin: Not a developmental or reproductive toxicant.
STOT-Single Exposure	Bifenthrin: Causes damage to central nervous system.
STOT-Repeated Exposure	Bifenthrin: Causes damage to central nervous system.
Aspiration Hazard	No data available.
Acute Exposure Symptoms	Bifenthrin: Causes clinical signs of neurotoxicity including tremors, impaired gait, and excessive salivation.
Chronic Exposure Symptoms	Bifenthrin: Causes clinical signs of neurotoxicity including tremors, impaired gait, and excessive salivation.
Interactions	No data available.

Section 12 – Ecological Information (bifenthrin):

Bird LD50	1800 mg/kg
Bird Dietary LD50	4450 mg/kg feed
Fish Acute 96-h	2.6 µg/L
Fish Chronic 30-d	0.12 µg/L
Aquatic Invertebrate Acute EC50	1.1 µg/L
Aquatic Crustacean Acute LC50	0.012 µg/L
Algae Acute 72-h	0.882 mg/L
Honeybee Acute 48-h	0.1 µg/bee
Earthworm Acute 14-d	> 8 mg/kg
Soil Degradation DT50	26 d
Aqueous Photolysis DT50	pH 7: 255 d
Aqueous Hydrolysis DT50	pH 5-9: stable
Bioaccumulation Potential	1703

Section 13 – Disposal: P501 – Dispose of contents/container in accordance with local/regional/national/international regulations. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA regional Office for guidance. Dangerous to the environment. Avoid all releases to sewer.

Section 14 – Transportation Information:
DOT (US) Ground – Non-Bulk (<= 119 Gallons):
UN-Number: 3352
Class: 6.1
Packing Group: III
Proper Shipping Name: Pyrethroid pesticide, liquid, toxic (Bifenthrin mixture)

DOT (US) – Marine or Bulk (> 119 Gallons):
UN-Number: 3352
Class: 6.1
Packing Group: III
Proper Shipping Name: Pyrethroid pesticide, liquid, toxic (Bifenthrin mixture)
Other: Marine Pollutant

Air Transport (IATA)
UN-Number: 3352
Class: 6.1
Packing Group: III
Proper Shipping Name: Pyrethroid pesticide, liquid, toxic (Bifenthrin mixture)
Other: Marine Pollutant

Section 15 – Regulatory Information:
FIFRA: This mixture is a pesticide product as per 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 material 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 for use.

Caution. Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Remove and wash contaminated clothing before reuse. Wear long-sleeved shirt, long pants, socks, and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

EPA Registration Number: 89118-02

Section 16 – Other Information:
LEGAL NOTICE: Vive Crop Protection, Inc. requests all users of this product to study this Material Safety Data Sheet (SDS) and become aware of all product hazards and safety information. The data in this SDS relate only to the specific product designated herein and do not relate to use of such product in combination with any other material or in any process. To promote the safe use of this product, all users should notify their employees, agents and contractors of the information in this SDS and any other product hazards and safety information.
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