

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **FORCE CS INSECTICIDE** Product No.: A14974A
 EPA Signal Word: Warning
 Active Ingredient(%): Tefluthrin (23.4%) CAS No.: 79538-32-2
 Chemical Name: (2,3,5,6-tetrafluoro-4-methylphenyl)methyl-(1a,3a)-(Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate
 Chemical Class: A pyrethroid insecticide
 EPA Registration Number(s): 100-1253 **Section(s) Revised: 1**

2. HAZARDS IDENTIFICATION
Health and Environmental

Toxic if swallowed. May cause eye and skin irritation.
 May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Beige liquid
 Odor: Aromatic

Unusual Fire, Explosion and Reactivity Hazards

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Propylene Glycol	Not Established	Not Established	50 ppm TWA AIHA WEEL ****	No
Tefluthrin (23.4%)	Not Established	Not Established	0.04 mg/m ³ TWA (skin) ***	No

*** Syngenta Occupational Exposure Limit (OEL)

**** Recommended by AIHA (American Industrial Hygiene Association)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
 Syngenta Hazard Category: C, S

4. FIRST AID MEASURES

Have the product container, label or Material 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. Have the person sip a glass of water if able to swallow. 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.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	> 203°F	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	~ 788°F	
Flammability:	Not Applicable	

Unusual Fire, Explosion and Reactivity Hazards

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

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. 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. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

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.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

- 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 (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Stringent housekeeping measures are necessary to prevent translocation of the material from contaminated work surfaces to uncontaminated surfaces (railings, doors, etc.). Unprotected contact with such translocated material can result in paresthesia effects (see Section 11 of MSDS). Do not touch unprotected skin areas (face) with contaminated gloves or clothing.
- Inhalation: A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

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: Beige liquid
- Odor: Aromatic
- Melting Point: Not Applicable
- Boiling Point: Not Available
- Specific Gravity/Density: 1.07 g/cm³ @ 68°F (20°C)
- pH: 6.7 (1% in deionized H₂O @ 77°F (25°C))

Solubility in H₂O

- Tefluthrin: Insoluble

Vapor Pressure

- Tefluthrin: 6 x 10⁽⁻⁵⁾ mmHg @ 68°F (20°C)

10. STABILITY AND REACTIVITY

- Stability: Stable under normal use and storage conditions.
- Hazardous Polymerization: Will not occur.
- Conditions to Avoid: None known.
- Materials to Avoid: None known.
- Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

- Ingestion: Moderately Toxic
Oral (LD50 Female Rat) : 174 mg/kg body weight
- Dermal: Slightly Toxic
Dermal (LD50 Female Rat) : 2,000 - 5,000 mg/kg body weight
- Inhalation: Not Available
Inhalation (LC50 Rat) : Not Available
- Eye Contact: Mildly Irritating (Rabbit)
- Skin Contact: Slightly Irritating (Rabbit)
- Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Tefluthrin: No evidence in the rat or rabbit.

Chronic/Subchronic Toxicity Studies

Tefluthrin: In 90-day and 1 year studies in dogs, elicited ataxia or tremors at the highest doses tested (1.5 and 2.0 mg/kg/d respectively).

Causes SFS as with other pyrethroids.

Carcinogenicity

Tefluthrin: Not considered to be carcinogenic. Not mutagenic.

Other Toxicity Information

In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The effect may result from splash, aerosol, or hot vapor contact, or transfer to the face from contaminated gloves and hands. The symptoms normally disappear within 24 hours. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as "subjective facial sensation" or SFS.

Toxicity of Other Components

Propylene Glycol

Test results reported in Section 11 for the final product take into account any acute hazards related to the propylene glycol in the formulation.

Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea.

Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs

Active Ingredients

Tefluthrin: CNS

Inert Ingredients

Propylene Glycol: CNS, kidney, liver

12. ECOLOGICAL INFORMATION

Summary of Effects

Tefluthrin:

Highly toxic to fish, invertebrates and bees. Slightly toxic to birds.

Eco-Acute Toxicity

Tefluthrin:

Bees LC50/EC50 0.28 ug/bee

Invertebrate (Water Flea) LC50/EC50 0.00007 ppm

Fish (Trout) LC50/EC50 0.00006 ppm

Fish (Bluegill) LC50/EC50 0.00013 ppm

Bird (Bobwhite Quail) 8-day dietary LC50/EC50 > 15,000 ppm

Bird (Mallard Duck) 8-day dietary LC50/EC50 2,317 ppm

Eco-Chronic Toxicity

Tefluthrin:

Not Available

Environmental Fate

Tefluthrin:

The information presented here is for the active ingredient, tefluthrin.

Not persistent in soil. Stable in water. Low mobility in soil. Sinks 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

Proper Shipping Name: Pyrethroid Pesticides, Liquid, Toxic, (Tefluthrin)

Hazard Class or Division: Division 6.1

Identification Number: UN 3352

Packing Group: PG III

Emerg. Response #: 151

B/L Freight Classification

Insecticides, NOI, Poison

Comments

Water Transport - International

Proper Shipping Name: Pyrethroid Pesticides, Liquid, Toxic, (Tefluthrin), Marine Pollutant

Hazard Class or Division: Division 6.1

Identification Number: UN 3352

Packing Group: PG III

IMDG EMS #: F-A, S-A

Air Transport - NAFTA and International

Proper Shipping Name: Pyrethroid Pesticides, Liquid, Toxic, (Tefluthrin)

Hazard Class or Division: Division 6.1

Identification Number: UN 3352

Packing Group: PG III

Packing Instructions: Passenger: PI 611 - Max. inner package 2.5 liter, Single packaging, 60 liter Max.

Cargo: PI 618 - 5 liter. Inner packages, 220 liter single packages

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

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

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

None

RCRA Hazardous Waste Classification (40 CFR 261)

Not Available

TSCA Status

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
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 4/7/2006

Revision Date: 3/16/2007

Replaces: 1/9/2007

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.

End of MSDS