MATERIAL SAFETY DATA SHEET

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 3G** Product No.: A12868A

EPA Signal Word: Caution

Active Ingredient(%): Tefluthrin (3.0%) 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): 100-1075 **Section(s) Revised: 2, 3, 5, 8, 12**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz	10 mg/m³/(%SiO2+2) (respirable dust)	0.05 mg/m³ (respirable silica)	0.05 mg/m³ (respirable dust)**	IARC Group 2A
Clay Granules	15 mg/m³ TWA (total); 5 mg/m³ TWA (respirable)	10 mg/m³ TWA (total); 3 mg/m³ TWA (respirable)	Not Established	No
Tefluthrin (3.0%)	Not Established	Not Established	0.04 mg/m³ TWA (skin)***	No

** recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

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

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Harmful if swallowed. Harmful by inhalation. May cause sensitization by skin contact.
May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Tan-brown solid granules

Odor: Not determined

Unusual Fire, Explosion and Reactivity Hazards

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

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison contol 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):	Not Applicable	
Flammable Limits (% in Air):	Lower: % Not Applicable	Upper: % Not Applicable
Autoignition Temperature:	Not Available	
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. Sweep up material and place in a 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).

Inhalation: A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with any 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:	Tan-brown solid granules
Odor:	Not determined
Melting Point:	Not Available
Boiling Point:	Not Applicable
Specific Gravity/Density:	Not Available
pH:	5.3 (1% w/w dilution in deionized water)

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:	Oxidizing agents.
Hazardous Decomposition Products:	Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Slightly Toxic	
	Oral (LD50 Rat) :	= 969 mg/kg body weight
Dermal:	Slightly Toxic	
	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Slightly Toxic	
	Inhalation (LC50 Rat) :	= 1.77 mg/l air - 4 hours
Eye Contact:	Slightly Irritating (Rabbit)	
Skin Contact:	Not Available	
Skin Sensitization:	A mild skin sensitizer (Rabbit)	

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

Clay Granules

Prolonged inhalation of excessive concentrations of dust may lead to lung injury.

Crystalline Silica, Quartz

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Target Organs

Active Ingredients

Tefluthrin: CNS

Inert Ingredients

Clay Granules: Respiratory tract

Crystalline Silica, Quartz: Respiratory tract

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
Invertebrates (Water Flea) LC50/EC50 0.00007 ppm
Fish (Trout) LC50/EC50 0.00006 ppm
Fish (Bluegill) LC50/EC50 0.00013 ppm
Birds (8-day dietary - Bobwhite Quail) LC50/EC50 > 15,000 ppm
Birds (8-day dietary - Mallard Duck) 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

Not regulated.

B/L Freight Classification

Insecticides, NOI, O/T Poison

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Tefluthrin), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3077
Packing Group: PG III

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 Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	2	Health:	2
Flammability:	1	Flammability:	1
Instability:	0	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: 10/21/1998
Revision Date: 01/04/2006 Replaces: 12/18/2002

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.

RSVP# : SCP-955-0034C

End of MSDS