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: **DEMON EC** Product No.: A7134C

EPA Signal Word: Warning

Active Ingredient(%): Cypermethrin Technical (25.3%) CAS No.: 52315-07-8

Chemical Name: a-cyano-(3-phenoxyphenyl)methyl-cis, trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate

Chemical Class: A pyrethroid insecticide

EPA Registration Number(s): 100-1004 **Section(s) Revised: 13**

2. 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
Naphthalene (<= 0.2%)	10 ppm TWA	10 ppm TWA (skin)	10 ppm TWA**	See "Toxicity", Sec. 11
Cypermethrin Technical (25.3%)	Not Established	Not Established	0.5 mg/m³ TWA ***	No

** recommended by NIOSH

*** 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

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Harmful if inhaled, swallowed or absorbed through the skin. Causes eye and skin irritation. May cause sensitization by skin contact.
Exposure to high vapor levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects.
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: Dark brown viscous liquid

Odor: Slight hydrocarbon

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.
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. 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.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

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

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

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	160°F	
Flammable Limits (% in Air):	Lower: % Not Applicable	Upper: % Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Combustible Liquid	

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use appropriate extinguishing media for combustibles in the area. 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. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
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).
Inhalation:	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark brown viscous liquid
Odor:	Slight hydrocarbon
Melting Point:	Not Applicable
Boiling Point:	Not Available
Specific Gravity/Density:	0.98 g/ml @ 77°F (25°C)
pH:	4.81% w/v @ 68° F (20° C)

Solubility in H2O

Cypermethrin Technical:	0.004 mg/l (pH 7)

Vapor Pressure

Cypermethrin Technical:	ca 7.5 x 10(-10) mmHg @ 68°F (20°C) (by extrapolation)

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

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Moderately Toxic	
	Oral (LD50 Rat) :	= 173 mg/kg body weight
Dermal:	Slightly Toxic	
	Dermal (LD50 Rat) :	> 2,000 mg/kg body weight
Inhalation:	Slightly Toxic	
	Inhalation (LC50 Rat) :	> 0.764 mg/l air - 4 hours
Eye Contact:	Severely Irritating (Rabbit)	

Skin Contact: Moderately Irritating (Rabbit)

Skin Sensitization: A weak skin sensitizer.

Reproductive/Developmental Effects

Cypermethrin Technical: There were no cypermethrin-induced effects in fertility in two separate two-litter three (filial) generation studies in the rat.

Chronic/Subchronic Toxicity Studies

Cypermethrin Technical: NOEL (2-yr) for dogs 5 mg/kg, rats 7.5 mg/kg.
Nervous system effects typical of pyrethroids (motor incoordination, gait abnormalities) in a range of repeated dose studies (dog and rat). Possible nerve fiber degeneration in 14-day study in rats.

Carcinogenicity

Cypermethrin Technical: Two separate 2-year feeding studies in the rat revealed no evidence of carcinogenicity that could be attributable to cypermethrin.

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

Naphthalene (<= 0.2%)

Test results reported in Section 11 for the final product take into account any acute hazards related to the naphthalene in the formulation.
Chronic overexposure to naphthalene can affect the liver, kidney, respiratory tract and blood.
Carcinogen Status:
NTP: Anticipated Carcinogen
IARC: Group 2B Possible Human Carcinogen

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

Cypermethrin Technical: CNS, eye, liver, skin

Inert Ingredients

Naphthalene: Liver, kidney, respiratory tract, blood

Propylene Glycol: CNS, kidney, liver

12. ECOLOGICAL INFORMATION

Summary of Effects

Cypermethrin Technical:

Highly toxic to fish and invertebrates. Practically non-toxic to birds and bees.

Eco-Acute Toxicity

Cypermethrin Technical:
Bees LC50/EC50 0.037 ug/bee
Invertebrates (Water Flea) LC50/EC50 0.00125 ppm
Fish (Trout) LC50/EC50 0.00092 ppm
Fish (Bluegill) LC50/EC50 0.0018 ppm
Birds (8-day dietary - Bobwhite Quail) LC50/EC50 > 20,000 ppm
Birds (8-day dietary - Mallard Duck) LC50/EC50 > 20,000 ppm

Eco-Chronic Toxicity

Cypermethrin Technical: Not Available

Environmental Fate

Cypermethrin Technical:

The information presented here is for the active ingredient, cypermethrin.
Not persistent in soil or water. Immobile 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: Contains Naphthalene - U165

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Cypermethrin)
Hazard Class or Division: Class 6.1
Identification Number: UN 2902
Packing Group: PG III
Note: 1 gallon and smaller containers are eligible for consumer commodity exception per 49 CFR 173.153

Air Transport - NAFTA
Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Cypermethrin)
Hazard Class or Division: Class 6.1
Identification Number: UN 2902
Packing Group: PG III
Packing Auth.: Passenger - 611
Cargo Aircraft Only - 618
Note: 611 Max inner pkg. 2.5 liters, Max. single pkg. 60 liters
618 Max inner pkg. 5 liters, Max. single pkg. 220 liters

B/L Freight Classification

Insecticides, NOI, Poison

Comments

Water Transport - International
Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Cypermethrin), Marine Pollutant
Hazard Class or Division: Class 6.1
Identification Number: UN 2902
Packing Group: PG III
IMDG EMS #: F-A, S-A

Air Transport - International
Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Cypermethrin)
Hazard Class or Division: Class 6.1
Identification Number: UN 2902
Packing Group: PG III
Packing Auth.: Passenger - 611
Cargo Aircraft Only - 618
Note: 611 Max inner pkg. 2.5 liters, Max. single pkg. 60 liters
618 Max inner pkg. 5 liters, Max. single pkg. 220 liters

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

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

Section 313 Toxic Chemicals: Naphthalene (<= 0.2%) (CAS No. 91-20-3)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 7,500 gal. (based on naphthalene [RQ = 100 lbs.] content in the formulation)

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:	3	Health:	3
Flammability:	2	Flammability:	2
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: 12/30/1997
Revision Date: 12/15/2005 Replaces: 10/13/2005

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-955-00323H

End of MSDS