

ENFOLD Insecticide

Date: 7/21/2014
Replaces: 6/20/2014

1. PRODUCT IDENTIFICATION

Product identifier on label: **ENFOLD Insecticide**
 Product No.: A10324A
 Use: Insecticide
 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: Oral: Category 4
 Specific Target Organ Toxicity: Repeated Category 2
 Signal Word (OSHA): Warning
 Hazard Statements: Harmful if swallowed
 May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Do not breathe dust.
 Wash hands and face thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 If swallowed: Immediately call a poison center, doctor or Syngenta. Rinse mouth.
 Get medical advice if you feel unwell.
 Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Other ingredients	Other ingredients	Trade Secret	95.0%
Avermectin B1, 4"-deoxy-4"- (methylamino)-,(4"R)-, benzoate (salt)	Emamectin Benzoate	155569-91-8	5.0%

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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. 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.

Most important symptoms/effects:

Lack of coordination, tremors, dilated pupils.

Indication of immediate medical attention and special treatment needed:

Early signs of intoxication include dilation of pupils, muscular incoordination and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (<15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

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 outlined in Section 8. Sweep

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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

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:

Not Applicable

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
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Emamectin Benzoate	Not Established	Not Established	0.02 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 dust-proof chemical goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, 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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to tan granules
Odor: Not determined
Odor Threshold: Not Available
pH: 4 - 8 (1% w/w dilution in deionized water)
Melting point/freezing point: Not Available
Initial boiling point and boiling range: Not Applicable
Flash Point (Test Method): Not Applicable
Flammable Limits (% in Air): Not Available
Flammability: Not Applicable
Vapor Pressure: Emamectin Benzoate 3 x 10⁽⁻⁸⁾ mmHg @ 70°F (21°C)
Vapor Density: Not Available
Relative Density: 0.601 g/cm³
Solubility (ies): Emamectin Benzoate 30 - 50 ppm (pH 7)
Partition coefficient: n-octanol/water: Not Available
Autoignition Temperature: Not Available
Decomposition Temperature: Not Available
Viscosity: Not Available
Other: Not Available

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: Heat and light.
Incompatible materials: None known.
Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Lack of coordination, tremors, dilated pupils.

Delayed, immediate and chronic effects of exposure: Central and peripheral nervous system damage.

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

Ingestion: Oral (LD50 Rat) : 1516 mg/kg body weight

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Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 6.28 mg/l air - 4 hours
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Emamectin Benzoate: Developmental and reproductive toxicity observed in dosages that are toxic to mature animals.

Chronic/Subchronic Toxicity Studies

Emamectin Benzoate: Tremors and nerve lesions observed at lowest dose tested in rabbits. Bladder changes reported in rats.

Carcinogenicity

Emamectin Benzoate: None observed.

Chemical Name	NTP/IARC/OSHA Carcinogen
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Other ingredients	No
Avermectin B1, 4"-deoxy-4"-(methylamino)-, (4"R)-, benzoate (salt)	No

Other Toxicity Information

None

Toxicity of Other Components

Other ingredients
 Not Applicable

Target Organs

Active Ingredients

Emamectin Benzoate: Central nervous system, bladder

Inert Ingredients

Other ingredients: Not Applicable

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Emamectin Benzoate:

- Fish (Rainbow Trout) 96-hour LC50 174 ppb
- Green Algae 5-day EC50 > 3.9 ppb
- Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 1.0 ppb
- Bird (Mallard Duck) 14-day LD50 46 mg/kg

Environmental Fate

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Emamectin Benzoate:

The information presented here is for the active ingredient, emamectin benzoate.

Low bioaccumulation potential. Persistent in soil. Stable in 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: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Not regulated

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Emamectin Benzoate), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN3077

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Emamectin Benzoate)

Hazard Class: Class 9

Identification Number: UN3077

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 swallowed, inhaled, or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Avoid breathing dust or spray mist. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

EPA Registration Number(s):

100-1411

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: None

California Proposition 65:

This product does not contain chemicals known to the State of California to cause cancer and birth defects or other

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reproductive harm.

CERCLA/SARA 304 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

Health: 2
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1*
Flammability: 1
Reactivity: 0

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

Syngenta Hazard Category: B

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 8/18/2011

Revision Date: 7/21/2014

Replaces: 6/20/2014

Section(s) Revised: 2

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.