

## DENIM

Date: 4/24/2014  
Replaces: 12/13/2010

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **DENIM**  
Product No.: A10325A  
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: Skin Corrosion/Irritation: Category 2  
Specific Target Organ Toxicity: Repeated Category 2  
Eye Damage/Irritation: Category 2A  
Aspiration Hazard: Category 1  
Flammable Liquid: Category 4

Signal Word (OSHA): Warning

Hazard Statements: Combustible liquid  
May be fatal if swallowed and enters airways  
Causes skin irritation  
Causes serious eye irritation  
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Keep away from heat, sparks, open flames, hot surfaces. No smoking.  
Do not breathe mist, vapors, spray.  
Wash hands and face thoroughly after handling.  
Wear protective gloves, protective clothing, eye protection.  
If on skin: Wash with plenty of soap and water.  
Get medical advice if you feel unwell.  
See Section 4 First Aid Measures.  
If skin irritation occurs: Get medical advice.  
If eye irritation persists: Get medical advice.  
Take off contaminated clothing and wash it before reuse.

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In case of fire: Use dry chemical, foam or CO2 for extinction.  
Store in a well-ventilated place. Keep cool.  
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: 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.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name   | Common Name                    | CAS Number   | Concentration |
|---|--------------------------------|--------------|---------------|
| Mineral Oil   | Mineral Oil                    | 8042-47-5    | Trade Secret  |
| Organic Solvent   | Organic Solvent                | Trade Secret | Trade Secret  |
| Butylated Hydroxytoluene (BHT)  | Butylated Hydroxytoluene (BHT) | 128-37-0     | Trade Secret  |
| Other inert ingredients   | Other inert ingredients        | Trade Secret | Trade Secret  |
| Avermectin B1, 4"-deoxy-4"-<br>(methylamino)-,(4"R)-, benzoate (salt) | Emamectin Benzoate             | 155569-91-8  | 2.15%         |

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. 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.

Most important symptoms/effects:

Eye irritation  
Skin irritation

Indication of immediate medical attention and special treatment needed:

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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Probable mucosal damage may contraindicate the use of gastric lavage. Early signs of intoxication include dilation of pupils, muscular incoordination and muscular tremors. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral 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:

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.

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 in Protective Equipment Section. 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**

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         |
|---------------|-----------------|-------------------------|-----------------|----------------|
| Mineral Oil   | Not Established | 5 mg/m <sup>3</sup> TWA | Not Established | Not Applicable |

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|                                |                 | inhalable                           |                            | not Applicable |
|--------------------------------|-----------------|-------------------------------------|----------------------------|----------------|
| Organic Solvent                | Not Established | Not Established                     | Not Established            | Not Applicable |
| Butylated Hydroxytoluene (BHT) | Not Established | 2 mg/m <sup>3</sup> TWA (inhalable) | 10 mg/m <sup>3</sup> TWA   | NIOSH          |
| Other inert ingredients        | Not Applicable  | Not Applicable                      | Not Applicable             | Not Applicable |
| Emamectin Benzoate             | Not Established | Not Established                     | 0.02 mg/m <sup>3</sup> 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 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 gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

#### Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH certified respirator with an organic vapor (OV) cartridge or canister with any 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale yellow-green liquid

Odor: Sweet, oily

Odor Threshold: Not Available

pH: 5.58

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): 143°F

Flammable Limits (% in Air): Not Available

Flammability: Combustible liquid

Vapor Pressure: Emamectin Benzoate 3 x 10<sup>-8</sup> mmHg @ 70°F (21°C)

Vapor Density: Not Available

Relative Density: 0.9 g/ml @ 77°F (25°C)

Solubility (ies): Emamectin Benzoate 30 - 50 ppm (pH 7)

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Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: 559°F

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

### 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; light.

Incompatible materials: Strong oxidizers.

Hazardous Decomposition Products: None known.

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Lack of coordination, tremors, dilated pupils., Skin irritation

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

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

|                     |                                |                          |
|---------------------|--------------------------------|--------------------------|
| Ingestion:          | Oral (LD50 Rat) :              | 2950 mg/kg body weight   |
| Dermal:             | Dermal (LD50 Rat) :            | > 2000 mg/kg body weight |
| Inhalation:         | Inhalation (LC50 Rat) :        | 9.6 mg/l air - 4 hours   |
| Eye Contact:        | Severely 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.

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### Carcinogenicity

Emamectin Benzoate: None observed.

| Chemical Name | NTP/IARC/OSHA Carcinogen |
|---------------|--------------------------|
|---------------|--------------------------|

|  |              |
|--|--------------|
| Mineral Oil  | No           |
| Organic Solvent  | No           |
| Butylated Hydroxytoluene (BHT)                                     | IARC Group 3 |
| Other inert ingredients  | No           |
| Avermectin B1, 4"-deoxy-4"-(methylamino)-, (4"R)-, benzoate (salt) | No           |

### Other Toxicity Information

None

### Toxicity of Other Components

#### Butylated Hydroxytoluene (BHT)

Listed as an IARC (Group 3) carcinogen not classifiable as human (no data available) with limited animal evidence. Exposure may result in irritation to eyes, skin and respiratory tract. Ingestion may cause diarrhea, respiratory depression, tremors, and chronic pulmonary edema or congestion and hemorrhage.

#### Mineral Oil

May cause respiratory irritation when inhaled as a mist.

#### Organic Solvent

Exposure can cause eye irritation. Prolonged or repeated contact can defat the skin and lead to irritation and /or dermatitis.

#### Other inert ingredients

Not Applicable

### Target Organs

#### Active Ingredients

Emamectin Benzoate: Central nervous system, bladder

#### Inert Ingredients

Butylated Hydroxytoluene (BHT): Eye, skin, respiratory tract  
 Mineral Oil: Respiratory tract  
 Organic Solvent: Skin, eye  
 Other inert 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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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

&lt; 119 gal:

Not regulated.

&gt; 119 gal:

Proper Shipping Name: Combustible Liquid, N.O.S. (1-Hexanol)

Hazard Class: Combustible Liquid

Identification Number: NA 1993

Packing Group: PG III

## Comments

Water Transport - International

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

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport - International

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

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Note: This product is currently not regulated for airfreight within the NAFTA region. However, effective 01/01/2011 the above classification must be used.

**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:

Danger: Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear, goggles, or face shields. Harmful if swallowed or absorbed through the skin. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals.

## EPA Registration Number(s):

100-903

## EPCRA SARA Title III Classification:

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Section 311/312 Hazard Classes: Acute Health Hazard  
Fire 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 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: 2  
Instability: 0

HMIS Hazard Ratings

Health: 2  
Flammability: 2  
Reactivity: 0

|   |          |
|---|----------|
| 0 | Minimal  |
| 1 | Slight   |
| 2 | Moderate |
| 3 | Serious  |
| 4 | Extreme  |

Syngenta Hazard Category: C,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 2/11/1999

Revision Date: 4/24/2014

Replaces: 12/13/2010

Section(s) Revised: 1-16

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.