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: PROCLAIM  
Product No.: A10324A

EPA Signal Word: Caution

Active Ingredient(%): Emamectin Benzoate (5.0%)  
CAS No.: 155569-91-8

Chemical Name: Avermectin B1, 4”-deoxy-4”-(methylamino)-(4”R)-(4”R), benzoate (salt)

Chemical Class: Insecticide

EPA Registration Number(s): 100-904  
Section(s) Revised: 3, 8, 11, 15

2. HAZARDS IDENTIFICATION

Health and Environmental

Harmful if swallowed. Causes eye and skin irritation.

Inhalation can cause irritation to the respiratory tract and can result in chemical pneumonitis if aspirated. Ingestion results in central nervous system effects such as muscle tremors, decreased activity, ataxia (unsteadiness or incoordination), and dilated pupils (mydriasis).

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: White to tan 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emamectin Benzoate (5.0%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>0.02 mg/m³ TWA ***</td>
<td>No</td>
</tr>
</tbody>
</table>

*** Syngenta Occupational Exposure Limit (OEL)

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.
5. **FIRE FIGHTING MEASURES**

**Fire and Explosion**

<table>
<thead>
<tr>
<th>Flash Point (Test Method):</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Limits (% in Air):</td>
<td>Lower: Not Applicable</td>
</tr>
<tr>
<td>Autoignition Temperature:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**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/PERSOAL 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 gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

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: White to tan granules
Odor: Not determined
Melting Point: Not Available
Boiling Point: Not Applicable
Specific Gravity/Density: 0.60 g/cm³
pH: 4 - 8 (1% w/w dilution in deionized water)

Solubility in H2O
Emamectin Benzoate: 30 - 50 ppm (pH 7)

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

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Heat and light.
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:
Oral (LD50 Rat) : = 1516 mg/kg body weight

Dermal:
Dermal (LD50 Rabbit) : > 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)
12. ECOLOGICAL INFORMATION

Summary of Effects
Emamectin Benzoate: Very toxic to aquatic life.

Ecotoxicity Effects
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
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
15. REGULATORY INFORMATION

**EPCRA SARA Title III Classification**
- Section 311/312 Hazard Classes: Acute 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

<table>
<thead>
<tr>
<th>NFPA Hazard Ratings</th>
<th>HMIS Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health:</td>
<td>Health:</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Flammability:</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Instability:</td>
<td>Reactivity:</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 5/5/1999
Revision Date: 3/17/2008
Replaces: 7/9/2004

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