1. PRODUCT IDENTIFICATION

Product identifier on label: OPTIGARD® COCKROACH GEL BAIT
Product No.: A15276C
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: Not Applicable
Signal Word (OSHA): Not Applicable
Hazard Statements: Not Applicable

Precautionary Statements: Not Applicable
Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other ingredients</td>
<td>Other ingredients</td>
<td>Trade Secret</td>
<td>99.9%</td>
</tr>
<tr>
<td>Avermectin B1, 4''-deoxy-4''-</td>
<td>Emamectin Benzoate</td>
<td>155569-91-8</td>
<td>0.1%</td>
</tr>
<tr>
<td>(methylamino)-(4''R)-, benzoate (salt)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

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 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.
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:**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other ingredients</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Emamectin Benzoate</td>
<td>Not Established</td>
<td>Not Established</td>
<td>0.02 mg/m³ TWA</td>
<td>Syngenta</td>
</tr>
</tbody>
</table>

**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. 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, natural rubber, polyethylene, 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 a NIOSH certified respirator 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:** Light brown to dark brown solid

**Odor:** Peanut-like

**Odor Threshold:** Not Available

**pH:** 3 - 7 (1% in deionized water)

**Melting point/freezing point:** Not Applicable

**Initial boiling point and boiling range:** Not Available

**Flash Point (Test Method):** Not Available

**Flammable Limits (% in Air):** Not Available

**Flammability:** Not Available
**OPTIGARD® COCKROACH GEL BAIT**

Date: 4/12/2017  
Replaces: 3/31/2017

- **Vapor Pressure:** Emamectin Benzoate 3 x 10(-8) mmHg @ 70°F (21°C)
- **Vapor Density:** Not Available
- **Relative Density:** 1.097 g/cm³ @ 77°F (25°C)
- **Solubility (ies):** Emamectin Benzoate 30 - 50 ppm (pH 7)
- **Partition coefficient: n-octanol/water:**
  - Emamectin Benzoate: 1.097 g/cm³ @ 77°F (25°C)
- **Other:**
  - **Autoignition Temperature:** Not Available
  - **Decomposition Temperature:** Not Available
  - **Viscosity:** 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:** None known.  
**Incompatible materials:** None known.  
**Hazardous Decomposition Products:** None known.

**11. TOXICOLOGICAL INFORMATION**

**Likely routes of exposure:** Dermal, Inhalation

**Symptoms of exposure:** Not Applicable

**Delayed, immediate and chronic effects of exposure:** Not Applicable

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

- **Ingestion:** Oral (LD50 Female Rat) > 5000 mg/kg body weight (based on a substantially similar formulation)
- **Dermal:** Dermal (LD50 Rat) > 5050 mg/kg body weight (based on a substantially similar formulation)
- **Inhalation:** Inhalation (LC50 Female Rat) > 5 mg/l air - 4 hours (based on a substantially similar formulation)
- **Eye Contact:** Moderately Irritating (Rabbit) (based on a substantially similar formulation)
- **Skin Contact:** Practically Non-Irritating (Rabbit) (based on a substantially similar formulation)
- **Skin Sensitization:** Not a Sensitizer (Guinea Pig) (based on a substantially similar formulation)
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
--- | ---
Emamectin Benzoate | None
Avermectin B1, 4"-deoxy-4¨-(methylamino)-,(4"R)-, benzoate (salt) | None

Other Toxicity Information
Toxicity of Other Components
Other ingredients: Not Established

Target Organs
Active Ingredients
Emamectin Benzoate: Central nervous system, bladder

Inert Ingredients
Other ingredients: Not Established

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
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: UN 3077
Packing Group: PG III

Air Transport
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Emamectin Benzoate)
Hazard Class: Class 9
Identification Number: UN 3077
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: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

EPA Registration Number(s):
100-1290

EPCRA SARA Title III Classification:
Section 311/312 Hazard Classes: Acute Health Hazard
Section 313 Toxic Chemicals: None

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  HMIS Hazard Ratings
Health: 1  Health: 1
Flammability: 1  Flammability: 1
Instability: 0  Physical Hazard: 0

Syngenta Hazard Category: A

For non-emergency questions about this product call:
1-800-334-9481

Original Issued Date: 5/18/2011
Revision Date: 4/12/2017  Replaces: 3/31/2017
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.