

## ARDENT 0.15 EC MITICIDE/INSECTICIDE

Date: 7/9/2015  
 Replaces: 3/31/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **ARDENT 0.15 EC MITICIDE/INSECTICIDE**

Product No.: A8612A  
 Use: MITICIDE/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: Single Category 1  
 Dermal: Category 4  
 Inhalation: Category 4  
 Skin Sensitizer: Category 1B  
 Specific Target Organ Toxicity: Respiratory Irritation Category 3  
 Flammable Liquid: Category 4  
 Eye Damage/Irritation: Category 2B  
 Reproductive Toxicity: Category 1B  
 Specific Target Organ Toxicity: Repeated Category 1  
 Oral: Category 3

Signal Word (OSHA): Danger

Hazard Statements: Combustible liquid  
 Toxic if swallowed  
 Harmful in contact with skin  
 Causes skin irritation  
 May cause an allergic skin reaction  
 Causes eye irritation  
 Harmful if inhaled  
 May cause respiratory irritation  
 May damage fertility or the unborn child  
 Causes damage to organs  
 Causes damage to organs through prolonged or repeated exposure

Hazard Symbols:



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**Precautionary Statements:**

- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- Do not breathe mist, vapors, spray.
- Wash hands and face thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves, protective clothing, eye protection.
- If swallowed: Immediately call a poison center, doctor or Syngenta. Rinse mouth.
- If on skin: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical advice.
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- If exposed or concerned: Call a poison center, doctor or Syngenta.
- Get medical advice if you feel unwell.
- See Section 4 First Aid Measures.
- Take off immediately all contaminated clothing and wash it before reuse.
- In case of fire: Use dry chemical, foam or CO2 for extinction.
- Store in a well-ventilated place. Keep cool.
- Store locked up.
- Dispose of contents and container in accordance with local regulations.

**Other Hazard Statements:** None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common Name	CAS Number	Concentration
Mineral Oil	Mineral Oil	8042-47-5	Trade Secret
Butylated Hydroxytoluene (BHT)	Butylated Hydroxytoluene (BHT)	128-37-0	Trade Secret
n-Methylpyrrolidone	n-Methylpyrrolidone	872-50-4	< 30.0%
n-Hexyl alcohol	n-Hexyl alcohol	111-27-3	Trade Secret
Other ingredients	Other ingredients	Trade Secret	68.0%
Abamectin	Abamectin	71751-41-2	2.0%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

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### 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
- Allergic skin reaction
- Respiratory irritation

Indication of immediate medical attention and special treatment needed:

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

Recommendations for Medical Treatment for Abamectin Acute Toxicity: Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Toxicity following accidental ingestion of the technical product can be minimized by vomiting within one-half hour of exposure; 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 abamectin 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 abamectin exposure.

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### 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.

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## 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. 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:

Store locked up.

## 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 inhalable	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
n-Methylpyrrolidone	Not Established	Not Established	10 ppm TWA, Skin	AIHA
n-Hexyl alcohol	Not Established	Not Established	40 ppm TWA	AIHA
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Abamectin	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.

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### Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate or butyl rubber), coveralls, socks and chemical-resistant footwear.

### Inhalation:

A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

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: Yellow to red brown liquid

Odor: Not determined

Odor Threshold: Not Available

pH: 2.6 - 3.6 (1% in deionized water)

Melting point/freezing point: Not Applicable

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): 161°F

Flammable Limits (% in Air): Not Available

Flammability: Combustible liquid

Vapor Pressure: Abamectin 7.5 x 10<sup>-8</sup> mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 0.94 - 0.98 g/ml

Solubility (ies): Abamectin 0.007 - 0.01 mg/l @ 68°F (20°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

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: None known.

Incompatible materials: None known.

Hazardous Decomposition Products: None known.

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## 11. TOXICOLOGICAL INFORMATION

### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Skin irritation, Respiratory irritation

Delayed, immediate and chronic effects of exposure: Eye irritation, Skin irritation, Allergic skin reaction, Respiratory irritation

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

Ingestion:	Oral (LD50 Rat) :	300 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 1800 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	3.5 mg/l air - 4 hours
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	Sensitizing (Guinea Pig)	

### Reproductive/Developmental Effects

Abamectin: Experiments have shown reproductive toxicity effects on laboratory animals.

### Chronic/Subchronic Toxicity Studies

Abamectin: Central nervous system effects in chronic/subchronic animal tests.

### Carcinogenicity

Abamectin: Did not show carcinogenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Mineral Oil	No
Butylated Hydroxytoluene (BHT)	IARC Group 3
n-Methylpyrrolidone	No
n-Hexyl alcohol	No
Other ingredients	No
Abamectin	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.

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Other ingredients  
 Not Applicable

n-Hexyl alcohol  
 Causes mild skin and eye irritation. May cause dermatitis, nausea, dizziness, headache, narcosis.

n-Methylpyrrolidone  
 Harmful if absorbed through the skin. May cause respiratory tract irritation. Repeated or prolonged exposure may cause drying and cracking of the skin.  
 Possible developmental hazard.

### Target Organs

#### Active Ingredients

Abamectin: Skin, eye, CNS

#### Inert Ingredients

Butylated Hydroxytoluene (BHT): Eye, skin, respiratory tract

Mineral Oil: Respiratory tract

Other ingredients: Not Applicable

n-Hexyl alcohol: kidneys, liver

n-Methylpyrrolidone: Eye, skin

## 12. ECOLOGICAL INFORMATION

### Eco-Acute Toxicity

#### Abamectin:

- Fish (Rainbow Trout) 96-hour LC50 3.6 ppb
- Bird (Bobwhite Quail) LD50 Oral > 2000 mg/kg
- Invertebrate (Water Flea) 48-hour EC50 0.34 ppb
- Green Algae 9-day EC50 > 100 ppm
- Bee (Contact) 48-hour LD50 0.41 ug/bee

### Environmental Fate

#### Abamectin:

The information presented here is for the active ingredient, abamectin.  
 Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil. Mixes 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

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**14. TRANSPORT INFORMATION**

## DOT Classification

Ground Transport - NAFTA

Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Abamectin solution)

Hazard Class: Class 6.1

Identification Number: UN 2902

Packing Group: PG III

## Comments

Water Transport - International

Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Abamectin solution), Marine Pollutant

Hazard Class: Class 6.1

Identification Number: UN 2902

Packing Group: PG III

Air Transport

Proper Shipping Name: Pesticides, Liquid, Toxic, N.O.S. (Abamectin solution)

Hazard Class: Class 6.1

Identification Number: UN 2902

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:

Warning: May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as goggles, face shield or safety glasses. Harmful if inhaled or absorbed through the skin. Avoid contact with skin. Prolonged or frequently repeated exposure may cause allergic skin reactions in some individuals. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

## EPA Registration Number(s):

100-896

## EPCRA SARA Title III Classification:

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

Section 313 Toxic Chemicals: n-Methylpyrrolidone < 30.0% (CAS No. 872-50-4)

## California Proposition 65:

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

## CERCLA/SARA 304 Reportable Quantity (RQ):

None

## RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

## TSCA Status:



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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

Syngenta Hazard Category: D,S

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

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 5/16/2005

Revision Date: 7/9/2015

Replaces: 3/31/2015

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.