Safety Data Sheet

ARCHER® Insect Growth Regulator

Date: 12/8/2015
Replaces: 5/8/2015

1. PRODUCT IDENTIFICATION

Product identifier on label: ARCHER® Insect Growth Regulator
Product No.: A12861A
Use: Insect Growth Regulator
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: Drowsiness Category 3
- Specific Target Organ Toxicity: Respiratory Irritation Category 3
- Aspiration Hazard: Category 1
- Flammable Liquid: Category 4
- Eye Damage/Irritation: Category 2B

Signal Word (OSHA): Danger

Hazard Statements:
- Combustible liquid
- May be fatal if swallowed and enters airways
- Causes skin irritation
- Causes eye irritation
- May cause respiratory irritation
- May cause drowsiness or dizziness

Precautionary Statements:
- Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- Avoid breathing mist, vapors, spray.
- Wash hands and face thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, protective clothing, eye protection.
- If swallowed: Immediately call a poison center, doctor or Syngenta.
- If on skin: Wash with plenty of soap and water.
- If skin irritation occurs: Get medical advice.
If inhaled: Remove person to fresh air and keep comfortable for breathing.

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.

Call a poison center, doctor or Syngenta if you feel unwell.

See Section 4 First Aid Measures.

Do NOT induce vomiting.

Take off 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Solvent</td>
<td>Petroleum Solvent</td>
<td>Trade Secret</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>Other ingredients</td>
<td>Trade Secret</td>
<td>98.7%</td>
</tr>
<tr>
<td>2-[[1-Methyl-2-(4-phenoxyphenoxy)ethoxy] pyridine</td>
<td>Pyriproxifen</td>
<td>95737-68-1</td>
<td>1.3%</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:**
- Eye irritation
- Skin irritation
- Drowsiness or dizziness
- Respiratory irritation
Indication of immediate medical attention and special treatment needed:
- There is no specific antidote if this product is ingested.
- Treat symptomatically.
- Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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 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:

<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>Petroleum Solvent</td>
<td>Not Established</td>
<td>Not Established</td>
<td>50 mg/m³ TWA</td>
<td>Manufacturer</td>
</tr>
</tbody>
</table>
ARCHE™ Insect Growth Regulator

Date: 12/8/2015
Replaces: 5/8/2015

Other ingredients: Not Established
Pyriproxifen: Not Established

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.

Skin Contact:
Where contact is likely, wear chemical-resistant gloves (such as barrier laminate 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: Colorless liquid
Odor: Petroleum solvent
Odor Threshold: Not Available
pH: Not Available
Melting point/freezing point: Not Applicable
Initial boiling point and boiling range: Not Available
Flash Point (Test Method): 153°F (Setaflash)
Flammable Limits (% in Air): Not Available
Flammability: Combustible liquid.

Vapor Pressure: Pyriproxifen < 1.0 x 10(-7) mmHg @ 73.06°F (22.81°C)
Vapor Density: Not Available
Relative Density: 0.847 g/ml @ 68°F (20°C)
Solubility (es): Pyriproxifen 0.367 +/- 0.004 mg/l
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: Heat and acidic or alkaline conditions may cause this product to break down.
Incompatible materials: None known.
Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATION

Health effects information
Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Drowsiness or dizziness, Skin irritation, Respiratory irritation

Delayed, immediate and chronic effects of exposure: Eye irritation, Skin irritation, Drowsiness or dizziness, Respiratory irritation

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

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/ LC50 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>Oral (LD50 Rabbit) : &gt; 5000 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td>Dermal (LD50 Rabbit) : &gt; 2000 mg/kg body weight</td>
</tr>
<tr>
<td></td>
<td>Inhalation (LC50 Rat) : &gt; 7.6 mg/l air - 4 hours</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>See “Other Toxicity Information”, Sec. 11</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>See “Other Toxicity Information”, Sec. 11</td>
</tr>
<tr>
<td>Skin Sensitization</td>
<td>Not a skin sensitizer.</td>
</tr>
</tbody>
</table>

Reproductive/Developmental Effects

Pyriproxifen: No test article related reproductive effects were observed. NOEL for systemic toxicity was 1000 ppm. The NOEL for reproductive effects was 5000 ppm.

No test article related teratogenic effects were observed.
Teratology (rat): No Observable Effect Level (NOEL), Dams-100 mg/kg/day, Fetuses-100 mg/kg/day, Offspring-1000 mg/kg/day. Not a reproductive toxin.
Teratology (rabbit): No Observable Effect Level (NOEL), Dams-100 mg/kg/day, Fetuses-100 mg/kg/day. Not a reproductive toxin.
Gene Mutation: Negative.
Chromosomal Aberration: Negative.
Unscheduled DNA synthesis: Negative.

Chronic/Subchronic Toxicity Studies

Pyriproxifen: None available.

Carcinogenicity
Pyriproxifen: No test article related carcinogenic effects were observed. The No Observable Effect Level was 30 mg/kg/day. No evidence of increased tumor incidence when fed in the diet at 0, 120, 600 & 6000 ppm/day. The NOEL for systemic effects was 120 ppm/day. 

No test article related oncogenic effects were observed. No evidence of increased tumor incidence when fed in the diet at 0, 120, 600 & 6000 ppm/day. The NOEL for systemic effects was 600 ppm/day for males, 120 ppm/day for females.

### Chemical Name

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Solvent</td>
<td>No</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>No</td>
</tr>
<tr>
<td>2-[1-Methyl-2-(4-phenoxyphenoxy) ethoxy] pyridine</td>
<td>No</td>
</tr>
</tbody>
</table>

### Other Toxicity Information

- Eye contact can cause temporary irritation, tearing and blurred vision.
- Repeated and/or prolonged skin contact may cause irritation and dermatitis.

### Toxicity of Other Components

**Other ingredients**: Not Established

**Petroleum Solvent**

Inhalation of vapors at high concentrations can cause central nervous system effects (dizziness, headache), irritation to eyes or respiratory tract.

### Target Organs

**Active Ingredients**

- Pyriproxifen: Not available

**Inert Ingredients**

- Other ingredients: Not Established
- Petroleum Solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, skin

### 12. ECOLOGICAL INFORMATION

#### Eco-Acute Toxicity

**Pyriproxifen**

- Fish (Rainbow Trout) 96-hour LC50 >0.325 mg/L
- Bird (Bobwhite Quail) LD50 Oral >2000 mg/kg
- Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.40 mg/L
- Algae 72-hour EC50 0.064 mg/L

#### Environmental Fate

**Pyriproxifen**

- Not available

### 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.
14. TRANSPORT INFORMATION

DOT Classification
- Ground Transport - NAFTA
  - < 119 gallons: Not regulated
  - > 119 gallons:
    - Proper Shipping Name: Combustible Liquid, N.O.S. (Petroleum Distillates)
    - 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. (Pyriproxifen), 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. (Pyriproxifen)
    - Hazard Class: Class 9
    - Identification Number: UN 3082
    - 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. Harmful if absorbed through skin, swallowed, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before

EPA Registration Number(s):
100-1111

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

CERCLA/SARA 304 Reportable Quantity (RQ):
None

RCRA Hazardous Waste Classification (40 CFR 261):
Not Applicable
16. OTHER INFORMATION

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

Syngenta Hazard Category: B

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 8/19/1998
Revision Date: 12/8/2015
Section(s) Revised: 15

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.