



# DEFIANCE™

## 0.86 EC

### SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

#### 1. IDENTIFICATION

**PRODUCT NAME:** Defiance 0.86 EC  
**DESCRIPTION:** Insect Growth Regulator  
**EPA REG. NO.:** 91234-58  
**COMPANY IDENTIFICATION:** Atticus, LLC  
940 NW Cary Parkway, Suite 200  
Cary, NC 27513

#### 2. HAZARD IDENTIFICATION

##### WARNING

Harmful if inhaled (H332)  
Causes skin and eye irritation (H315+H320)  
May be harmful if swallowed and enters airways (H305)  
Suspected of causing cancer (H351)  
Combustible liquid (H227)



##### HAZARD CLASSIFICATION

Health Hazard	Category	Other Hazards	Category
Acute Toxicity - Inhalation	4	Aspiration Hazard	2
Carcinogenicity	2	Flammable Liquids	4
Skin Damage / Irritation	2		
Eye Damage / Irritation	2B		

##### HAZARDS NOT REQUIRING CLASSIFICATION

None

##### PRECAUTIONARY STATEMENTS

Do not handle until all safety precautions have been read and understood. Avoid breathing fumes / mist/ spray. Wear protective gloves and clothing (see Section 8 for specific personal protective equipment (PPE) instructions). Use only outdoors or in a well-ventilated area. (P202+P261+P280+P271)

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. (P264+P270)

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell. (P304+P340+P312)

**IF IN EYES:** Rinse eyes cautiously with water for several minutes, remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. (P305+P351+P338+P337+P313)

**IF ON SKIN:** Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash it before re-use. (P302+P352+P332+P313+P362+P364)

If exposed or concerned: Get medical advice/attention. (P308+P313)

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. (P210)

Store locked up in a well-ventilated place. (P405+P403)

Dispose of contents / container in accordance with local regulations. Refer to the product label for specific disposal instructions. (P501)

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Pyriproxyfen	(2-[1-methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine)	95737-68-1	11-12%
Heavy Aromatic Solvent Naphtha	--	64742-94-5	45-50%
Naphthalene	--	91-20-3	4-5%

#### 4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call SafetyCall®: **1-844-685-9173**. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: **1-800-424-9300**.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**IF IN EYES:** Rinse eyes cautiously with water for several minutes, remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Immediately call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**IF IN INHALED:** Remove person to fresh air and keep comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** If ingested, probable mucosal damage may contraindicate the use of gastric lavage. This product contains a light hydrocarbon liquid; ingestion or subsequent vomiting can result in aspiration of this product, which can cause pneumonitis.

#### 5. FIREFIGHTING MEASURES

**Flash Point:** 75.5°C (167.9°F)

**Flammable Limits (LFL-UFL):** No data available.

**Fire and Explosion Hazards:** Liquid may evaporate and form vapors (fumes) that can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be ignited by sources such as pilot lights, welding equipment, electric motors and switches.

**Extinguishing Medium:** Water fog, foam, dry chemical, or carbon dioxide (CO<sub>2</sub>).

**Fire Fighting Equipment:** Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

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## 5. FIREFIGHTING MEASURES (cont.)

**Fire Fighting Instructions:** Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Use foam or dry chemical fire extinguishing systems to prevent environmental damage from excessive water runoff. Decontaminate fire fighting gear and personal protective equipment before reuse.

**Hazardous Combustion Products:** Combustion forms carbon dioxide, water vapor and may produce oxides of nitrogen. Incomplete combustion can produce carbon monoxide.

**NFPA Ratings:** Health – 2 / Flammability – 2 / Reactivity - 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Isolate area and keep unnecessary and un-protected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain.

**Spill Cleanup:** Absorb spill with suitable material such as clay, sand, or dirt. Shovel (plastic or aluminum) or sweep up and collect in suitable container for disposal. Wash area with soap and water, collect wash liquid with additional absorbent and place in container for disposal.

## 7. HANDLING AND STORAGE

**Handling:** Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

**Storage:** Store in a cool, dry place. Keep pesticide in original container. Keep container closed when not in use. Do not put concentrate or dilute into food or drink containers. Not for use or storage in or around the home.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

**Protective Clothing:** Applicators, and other handlers must wear: Coveralls over long-sleeved shirt and short pants or long-sleeved shirt and long pants; Chemical-resistant gloves such as barrier laminate or Viton  $\geq$  14mils; Chemical-resistant footwear plus socks; Chemical-resistant headgear for overhead exposure; Chemical-resistant apron when cleaning equipment, mixing, or loading.

**General:** Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	pale yellow liquid
<b>Odor:</b>	mild aromatic
<b>Melting/freezing point:</b>	not available
<b>Boiling point/Boiling range:</b>	not available
<b>Flammability:</b>	combustible powder
<b>Flammability limits (upper/lower):</b>	not available
<b>Flash point:</b>	75.5°C (167.9°F)
<b>Auto-ignition temperature:</b>	not available

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## 9. PHYSICAL AND CHEMICAL PROPERTIES (cont.)

<b>Decomposition temperature:</b>	not available
<b>pH:</b>	5-7
<b>Dynamic viscosity:</b>	18.5 cps
<b>Solubility:</b>	emulsifies
<b>Partition coefficient:</b>	not available
<b>Vapor pressure:</b>	not available
<b>Density:</b>	7.6 lbs/gal (0.91 g/cm <sup>3</sup> )
<b>Relative vapor density:</b>	not available
<b>Particle characteristics:</b>	not available

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Keep away extreme temperatures and direct sunlight.

**CHEMICAL STABILITY:** Stable under normal use and storage conditions.

**INCOMPATIBILITY WITH OTHER MATERIALS:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** No data available.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**ORAL TOXICITY (rat LD<sub>50</sub>):** 4,733 mg/kg

**DERMAL TOXICITY (rat LD<sub>50</sub>):** > 2,000 mg/kg

**INHALATION TOXICITY (rat LC<sub>50</sub>):** > 3.1 mg/L (4-hour)

**EYE IRRITATION:** Brief and/or minor irritation

**SKIN IRRITATION:** Moderately irritating

**SKIN SENSITIZATION:** Not a contact sensitizer

**CARCINOGENICITY:**

**NTP:** Suspected (Naphthalene)

**IARC:** Group 2B (Naphthalene)

**EPA:** Carcinogenic potential cannot be determined (Naphthalene)

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects.

**REPRODUCTIVE TOXICITY:** Animal testing showed no reproductive toxicity.

**TERATOGENICITY:** Animal testing showed effects on embryo-fetal development at all levels equal to or above those causing maternal toxicity.

## 12. ECOLOGICAL INFORMATION

This pesticide is toxic to aquatic organisms (fish and invertebrates) and practically non-toxic to birds and bees.

**The following information is for the active ingredient, pyriproxyfen:**

Rainbow Trout (96-hour LC<sub>50</sub>): > 325 µg/L

Bluegill Sunfish (96-hour LC<sub>50</sub>): > 270 µg/L

Carp (96-hour LC<sub>50</sub>): 450 µg/L

Daphnia (48-hour EC<sub>50</sub>): 400 mg/L

Mallard Duck (Oral LD<sub>50</sub>): > 2,000 mg/kg

Bobwhite Quail (Oral LD<sub>50</sub>): > 2,000 mg/kg

Bees (Contact LC<sub>50</sub>): > 100 µg/bee

## 13. DISPOSAL CONSIDERATIONS

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

## 14. TRANSPORT INFORMATION

### US-DOT:

#### Containers ≤ 119 gal. (450 L) in strong outer packaging:

Not regulated

#### Containers > 119 gal. (450 L) shipped "ground only":

Shipping Description: NA1993, Combustible liquid, N.O.S. (naphthalene), 9, PG III,  
Hazardous Substance RQ: 100 lbs. (approximately 263 gallons of product)

Emergency Guide: 128

### IMDG:

#### Containers ≤ 1.3 gal. (5 L) in strong outer packaging:

Not regulated

#### Containers > 1.3 gal. (5 L):

Shipped internationally by vessel: UN3082, Environmentally hazardous substance, liquid, N.O.S. (contains pyriproxyfen), 9, PG III, Marine Pollutant

### IATA:

#### Containers ≤ 1.3 gal. (5 L) in strong out packaging:

Not regulated

#### Containers > 1.3 gal. (5 L) or containers not in strong outer packaging:

Shipped internationally by air: UN3082, Environmentally hazardous substance, liquid, N.O.S. (contains pyriproxyfen), 9, PG III, Marine Pollutant

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

### FIFRA –

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. The following is the hazard information as required on the pesticide label:

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION** Causes skin and eye irritation. Do not get on skin, in eyes or on clothing. Harmful if inhaled, swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by disposing of equipment washwaters or rinsate. Avoid direct application and/or spray drift to bee hives.

#### When shipped in containers > 50 lbs., the following statement is also required:

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## 15. REGULATORY INFORMATION (cont.)

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

### SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

### SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed, Fire

### SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

### SARA Title III – Section 313 Reportable Ingredients

Naphthalene (CAS No. 91-20-3): 4-5%

### CERCLA Reportable Quantity (RQ) –

Naphthalene (CAS No. 91-20-3): RQ 100 lbs. (263 gallons of product)

### CALIFORNIA PROP 65 STATUS –

**WARNING:** This product can expose you to naphthalene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## 16. OTHER INFORMATION

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

To the extent consistent with applicable law, neither Atticus, LLC nor Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ATTICUS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ATTICUS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SDS Version: 1.2

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