



SERPENT™ 1 EC

SAFETY DATA SHEET EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

1. IDENTIFICATION

PRODUCT NAME: Serpent 1 EC
DESCRIPTION: Agricultural Insecticide
EPA Reg. No.: 91234-55
COMPANY IDENTIFICATION:
Atticus, LLC
 5000 CentreGreen Way, Suite 100
 Cary, NC 27513

2. HAZARD IDENTIFICATION

DANGER

Toxic if swallowed (H301)
 Causes skin and eye irritation (H315+H320)
 Suspected of causing cancer (H351)
 May be fatal if swallowed and enters airways (H304)
 Combustible liquid (H227)
 May cause respiratory irritation (H335)
 May cause drowsiness or dizziness (H336)
 May cause damage to organs through prolonged or repeated exposure
 Very toxic to aquatic life with long lasting effects (H410)



HAZARD CLASSIFICATION

Health Hazard

	Category
Skin corrosion/irritation	2
Acute toxicity, oral	3
Eye damage/irritation	2B
Aspiration hazard	1
Carcinogenicity	2
Specific Target Organ Toxicity – Single exposure	3
Specific Target Organ Toxicity – Repeated exposure	2

Other Hazards

	Category
Flammable liquids	4
Hazardous to the aquatic environment, acute	1
Hazardous to the aquatic environment, long-term	1

HAZARDS NOT REQUIRING CLASSIFICATION

Do not mix or allow this product to come in contact with an oxidizing agent such as potassium permanganate. Hazardous chemical reaction may occur.

PRECAUTIONARY STATEMENTS

Do not breath mist/spray. (P260)
 Use only outdoors or in a well-ventilated area. (P271)
 Obtain special instructions before use. (P201)
 Do not handle until all safety precautions have been read and understood. (P202)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Wear protective clothing as described in Section 8 of this document. (P280)
 Wash hands and skin thoroughly after handling. (P264)
 Do not eat, drink or smoke when using this product. (P270)
IF SWALLOWED: Immediately call a POISON CENTER / doctor. Do not induce vomiting unless told to do so by a poison center or doctor. Do not give anything by mouth to an unconscious person. Rinse mouth. (P301+P310+P321+P330)
IF ON SKIN: Wash with plenty of water. Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. (P302+P352+P321)
 If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
 Take off contaminated clothing and wash it before reuse. (P362+P364)
IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340)
 Specific treatment (see Section 4 of this SDS). (P321)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
 If eye irritation persists: Get medical advice/attention. (P337+P313)
 If exposed or concerned: Get medical advice/attention. (P308+P313)
 Avoid release to the environment. (P273)
 Collect spillage. (P391)
 Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
 Store locked up. (P405)
 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
Lambda-cyhalothrin	[1 α (S*),3 α (Z)]-(\pm)-cyano (3-phenoxyphenyl)methyl 3- (2-chloro-3,3,3-trifluoro-1-propenyl)- 2,2-dimethylcyclopropanecarboxylate	91465-08-6	13.1%
Naphthalene	-	91-20-3	< 8.0%
1,2,4-trimethylbenzene	-	95-63-6	< 2.0%

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 treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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

IF INHALED: Move person to fresh air. 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 treatment.

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

5. FIREFIGHTING MEASURES

Flash Point: 65°C (150°F)

Flammable Limits (LFL-UFL): N/A

Fire and Explosion Hazards: Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Containers will burst from internal pressure under extreme fire conditions.

Extinguishing Medium: Water fog, foam, dry chemical or carbon dioxide (CO₂).

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

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.

Hazardous Combustion Products: Oxides of carbon and nitrogen, hydrogen fluoride, and hydrogen chloride

NFPA Ratings: Health – 4 / Flammability – 2 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area and keep unnecessary and unprotected 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. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Spill Cleanup: Absorb spill with suitable material such as clay, sand, or dirt. Sweep up and collect in suitable container for disposal. Pump any free liquid into an appropriate closed container. Large spills may necessitate the removal of topsoil. Decontaminate tools and equipment following cleanup.

7. HANDLING AND STORAGE

Handling: Do not get in eyes on skin or clothing. Do not breathe vapor or spray mist. Wear protective clothing, gloves, eyewear (goggles, face shield, or safety glasses) and respirator as indicated in Section 8 of this document. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Storage: Store in a cool, dry place and away from open flame and extreme heat. Store in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If container is leaking, invert container to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spill material to prevent runoff.

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 long pants; chemical-resistant gloves (barrier laminate, nitrile rubber, neoprene rubber or viton \geq 14 mils); chemical-resistant footwear plus socks; protective eyewear; chemical-resistant headgear for overhead exposure, chemical-resistant apron (when cleaning equipment, mixing or loading); for exposure in enclosed areas, use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter; for exposures outdoors, use a NIOSH approved respirator with any R, P or HE filter

General: Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 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

Physical State: amber liquid

Odor: aromatic

Flashpoint: 65°C (150°F)

pH: 6.0-7.5 (1% aq.)

Density: 0.84-0.86 g/mL

Solubility: emulsifiable



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10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid elevated temperatures, open flame, spark and static electricity.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers, acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products can include and are not limited to: hydrogen chloride, hydrogen fluoride, and oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Information provided for a similar formulation:

ORAL TOXICITY (rat LD₅₀): 92.9 mg/kg

DERMAL TOXICITY (rat LD₅₀): > 2,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): > 0.55 mg/L (4-hour)

EYE IRRITATION: Mildly irritating (rabbit)

SKIN IRRITATION: Moderately irritating (rabbit)

SKIN SENSITIZATION: Not a sensitizer (Guinea Pig)

CARCINOGENICITY:

ACGIH: A3 (naphthalene) **NTP:** Reasonably anticipated to be human carcinogen (naphthalene)

IARC: 2B (naphthalene)

MUTAGENIC TOXICITY: No evidence of mutagenic effects during in vivo and in vitro assays.

TERATOGENICITY: No evidence of teratogenicity.

REPRODUCTIVE TOXICITY: No evidence of reproductive toxicity.

OTHER TOXICITY: In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The effect may result from splash, aerosol, or hot vapor contact, or transfer to the face from contaminated gloves and hands. The symptoms normally disappear within 24 hours. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as "subjective facial sensation" or SFS.

Repeated exposure to petroleum solvent may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat and lungs. May cause central nervous system depression.

12. ECOLOGICAL INFORMATION

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds.

The following information is for the active ingredient, lambda-cyhalothrin:

AQUATIC TOXICITY

Rainbow Trout (96-hour LC₅₀): 0.36 µg/L

Bluegill (96-hr LC₅₀): 0.21 µg/L

Fathead minnow (NOAEC): 0.031 µg/L

Daphnia (48-hour EC₅₀): 0.36 µg/L

Algae (96-hr EC₅₀): > 1000 µg/L

AVIAN TOXICITY

Mallard ducks (oral LD₅₀): > 3950 mg/kg

Bobwhite quail (dietary LC₅₀): > 5300 mg/kg

OTHER TOXICITY

Bees: 36 ng/bee (contact)

The following information is for the minor component, naphthalene:

AQUATIC TOXICITY

Rainbow Trout (96-hour LC₅₀): 2.0 mg/L

Rainbow Trout (NOAEC): 0.86 mg/L

Daphnia (48-hour EC₅₀): 1.6 mg/L

Daphnia (NOAEC): 0.48 mg/L

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous.

Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

14. TRANSPORT INFORMATION

UN Number: UN3352

Proper Shipping Name: Pyrethroid Pesticide, Liquid Toxic

Transport Hazard Class: 6.1

Packing Group: III

Hazard Zone: A

Marine Pollutant: Yes¹

Hazardous Substance RQ: Naphthalene 100 lbs. (178 gallons of product)

Labels / Placards: US-DOT: Class 6.1 Poisonous Material²

IMDG, IATA: Class 6.1 Toxic Substance³

Emergency Guide: 151 (NAERG – North American Emergency Response Guide)

¹ **Marine Pollutant Note:** Ground-only shipments are excluded from Marine Pollutant labeling requires as per 49CFR172.101 Appendix B(4). For any shipments involving all or part of the transport by vessel, the shipment must be classified as a Marine Pollutant unless a limited quantity exemption applies (see note 3 below).

² **US-DOT Note:** Not regulated when shipped in single or inner packaging ≤1.32 gal. (5 L).

³ **IMDG Note:** Not regulated when shipped in single or inner packaging ≤1.32 gal. (5 L).

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.



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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

DANGER/PELIGRO. Corrosive. Causes skin burns. May be fatal if swallowed or inhaled. Causes substantial but temporary eye injury. Do not get in eyes on skin or clothing. Do not breathe vapor or spray mist. Harmful if absorbed through skin. Wear protective clothing, gloves, eyewear (goggles, face shield, or safety glasses) and respirator as indicated under Personal Protective Equipment. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet.. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2 to 30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife.

For terrestrial use: do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Combustible liquid. Do not use or store near heat or open flame. Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

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) (<8%)

1,2,4-trimethylbenzene (CAS No. 95-63-6) (<2%)

CERCLA Reportable Quantity (RQ) -

Naphthalene (CAS No. 91-20-3) (<8%): RQ 100 lbs. (178 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.

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.

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