



ENERVATE™ 4 SC

SAFETY DATA SHEET

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

1. IDENTIFICATION

PRODUCT NAME: Enervate 4 SC
DESCRIPTION: A liquid miticide/acaricide
EPA REG. NO.: 91234-20
COMPANY IDENTIFICATION: Atticus, LLC
940 NW Cary Parkway, Suite 200
Cary, NC 27513

2. HAZARD IDENTIFICATION

WARNING

May cause an allergic reaction (H317)

Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Skin Sensitization	1B	None	--
Environmental Hazards		Category	
Hazardous to the Aquatic Environment – Acute (short-term)		1	
Hazardous to the Aquatic Environment – Chronic (long-term)		1	

HAZARDS NOT REQUIRING CLASSIFICATION

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

PRECAUTIONARY STATEMENTS

Avoid breathing mist / vapors / spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. (P261+P272+280)

IF ON SKIN: Wash with plenty of water. **If skin irritation occurs:** Get medical advice / attention. Specific treatment. (See Section 4 for additional medical information). Take off contaminated clothing and wash it before reuse (P302+P352+P333+P313+P321+P362+P364)

Avoid release to the environment not in accordance with the product label. Collect spillage (P273+P391)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Bifenazate	Hydrazine carboxylic acid, 2-(4-methoxy[1,1'-biphenyl]-3-yl)-, 1-methylethyl ester	149877-41-8	43.2%

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

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: Take of contaminated clothing and wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

5. FIREFIGHTING MEASURES

Flash Point: N/A

Fire and Explosion Hazards: Not information available.

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. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

Hazardous Combustion Products: Oxides of carbon and nitrogen.

NFPA Ratings: Health – 2 / Flammability – 1 / 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: Dike spill using suitable absorbent or impervious materials such as earth, sand, or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.

7. HANDLING AND STORAGE

Handling: Avoid breathing spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Keep out of reach of children and domestic animals.

Storage: Do not contaminate water, food or feed by storage or disposal. Store in a dry location.

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 long-sleeved shirt and long pants, shoes plus socks. For mixing and loading activities when not using a closed system, wear an apron and waterproof gloves made of barrier laminate, polyethylene, butyl rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), neoprene rubber (≥ 14 mils), natural rubber (≥ 14 mils), polyvinyl chloride (≥ 14 mils), or Viton (≥ 14 mils).

General: Follow manufacturer's instructions for cleaning and maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	off-white opaque liquid
Odor:	mildly sour
Melting/freezing point:	not determined
Boiling point/Boiling range:	not determined
Flammability:	not determined
Flammability limits (upper/lower):	not determined
Flash point:	$> 110^{\circ}\text{C}$ ($> 230^{\circ}\text{F}$)
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH:	6-7 (corrected to 25°C) 1% aq.
Kinematic viscosity:	not determined
Solubility:	soluble
Partition coefficient:	not determined
Vapor pressure:	not determined
Density:	1.12 g/cm ³ (9.35 lbs./gal.) @ 25°C
Relative vapor density:	not determined
Particle characteristics:	not determined

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Extreme temperatures, heat or open flame, direct sunlight.

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

INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizing agents, strong acids, strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: This product is chemically stable and no hazardous reactions should occur if stored and handled as prescribed / indicated. Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (rat LD₅₀): $> 5,000$ mg/kg (male), $> 2,000$ mg/kg (female)

DERMAL TOXICITY (rat LD₅₀): $> 5,000$ mg/kg

INHALATION TOXICITY (rat LC₅₀): > 1.94 mg/L (4-hour)

EYE IRRITATION: Rabbit – non-irritating

SKIN IRRITATION: Rabbit – non-irritating

SKIN SENSITIZATION: Guinea Pig – May cause sensitization by skin contact.

CARCINOGENICITY:

EPA: Not Listed

ACGIH: Not Listed

NTP: Not Listed

IARC: Not Listed

OSHA: Not Listed

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

REPRODUCTIVE TOXICITY: Not known to cause reproductive or birth defects at normal exposure levels.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to birds, estuarine/marine invertebrates and fish. This product is toxic to bees exposed to direct treatment.

The following information is the best available for this material:

AQUATIC TOXICITY

Rainbow Trout (96-hour LC₅₀): 1.4 mg/L

Daphnia (48-hour EC₅₀): 1.4 mg/L

Green Algae (72-hour EC₅₀): 0.043 mg/L

The following information is for the active ingredient, Bifenazate:

AQUATIC TOXICITY

Bluegill (96-hr LC₅₀): 0.58 mg/L

Rainbow Trout (NOAEC): 0.017 mg/L

Daphnia (48-hr EC₅₀): 0.5 mg/L; (NOAEC): 0.15 mg/L

Green Algae (96-hour EC₅₀): 0.9 mg/L

AVIAN TOXICITY

Bobwhite Quail (acute LD₅₀): 1142 mg/kg

Bobwhite Quail (dietary LC₅₀): 2298 mg/kg

Mallard Duck (dietary LC₅₀): 726 mg/kg

OTHER TOXICITY

Bees (48-hr oral LD₅₀): $> 100\mu\text{g}/\text{bee}$

Bees (contact): $8.5\mu\text{g}/\text{bee}$

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:

Not regulated

IMDG:

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

Not regulated

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

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

IATA:

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

Not regulated

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

Shipments by air: UN3082, Environmentally hazardous substance, liquid, N.O.S. (contains bifentazate), 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. Harmful if swallowed. Harmful if inhaled. Avoid breathing spray mist. Prolonged or repeated skin contact may cause allergic reaction in some individuals.

Environmental Hazards

This pesticide is toxic to birds, estuarine/marine invertebrates and fish. 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 contaminate water when disposing of equipment wash waters or rinsate. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are foraging the treatment area.

Physical or Chemical Hazards

Do not use or store near heat or open flame. Do not mix or allow to come into 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

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

None

CERCLA Reportable Quantity (RQ) -

None

CALIFORNIA PROP 65 STATUS -

This product does not contain any chemicals known to the state of California to cause cancer or reproductive harm.

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.

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SDS Version: 1.2

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