

# MATERIAL SAFETY DATA SHEET

# VOLTAGE ENDURX

1. **CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**  
ALTITUDE CROP INNOVATIONS LLC  
4850 Hahns Peak Drive, Suite 200  
Loveland, CO 80538

**PRODUCT NAME:** VOLTAGE ENDURX **EPA REG. NO.:** 89168-20-91395  
**CHEMICAL NAME:** Chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyrinyl) phosphorothioate  
Bifenthrin: (2 methyl[1,1 -biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylate\* - \*Cis isomers 97% minimum, trans isomers 3% maximum.  
**CHEMICAL FAMILY:** Insecticide  
**Hotline Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night**  
**Within USA and Canada: 1-800-424-9300      Outside USA and Canada: +1 703-527-3887 (collect calls accepted)**

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – WARNING:** May be fatal if swallowed. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Chlorpyrifos	28.6	2921-88-2	0.2mg/m3 TWA
Bifenthrin	9.0	82657-04-3	Not listed
Inert Ingredients, including			
Aromatic Hydrocarbons, contains	62.4	64742-94-5	100 mg/m3
Naphthalene (from aromatic hydrocarbons)		91-20-3	50 mg/m3

## 4. FIRST AID MEASURES

**If Swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by the 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 Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 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 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 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 advice.

### NOTES TO PHYSICIAN:

Contains petroleum distillates. Vomiting may cause aspiration pneumonia. This product contains bifenthrin, a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Digestible fats, oils, or alcohol may increase absorption and should be avoided. Chlorpyrifos is a cholinesterase inhibitor. Treatment is symptomatic and supportive. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT** have the product container or label with you when calling a poison control center or doctor. For emergency medical assistance call 1-800-424-9300.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT** (°F/Test Method): 172°F

**FLAMMABLE LIMITS** (LFL & UFL): Not established

**EXTINGUISHING MEDIA:** Use foam, dry chemical, carbon dioxide, water spray or fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Toxic fumes may be emitted in a fire situation.

**SPECIAL FIRE FIGHTING PROCEDURES:** Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Moderately Combustible Liquid. Can form explosive mixtures at temperatures at or above the flashpoint. Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

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**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).

**HAZARDOUS COMBUSTION PRODUCTS:** Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur, nitrogen and toxic chlorine compounds. Incomplete combustion can produce carbon monoxide.

## 6. ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:** In case of leak or spill, contain material and dispose as waste. Do not contaminate any body of water. Pick up spilled liquid with absorbent material and sweep up for disposal. Place it and damaged unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state and federal regulations for proper disposal. **NOTE:** Prevent spilled material from flowing onto adjacent land, or into municipal sewers and open bodies of water. Always wear proper protective equipment when working with the product.

## 7. HANDLING AND STORAGE

**HANDLING:** Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Do not freeze. Do not store below 40F. If crystals are observed warm material to above 60F by placing container in a warm location. Shake or roll container periodically to re-dissolve solids. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**RESPIRATORY PROTECTION:** Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

**EYE PROTECTION:** Wear chemical goggles or shielded safety glasses when handling and mixing product.

**SKIN PROTECTION:** Wear protective clothing: long-sleeved shirts and pants, shoes plus socks and chemical-resistant gloves. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

**Personal Protective Equipment (PPE):** Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR:** Light yellow liquid, mild aromatic

**SPECIFIC GRAVITY** (Water=1): 0.98 – 1.02 g/ml

**VAPOR PRESSURE:** Not established

**PERCENT VOLATILE** (by volume): Not established

**Note:** These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**SOLUBILITY:** Emulsifies

**pH:** 4.21 (1%)

**BULK DENSITY:** 8.17 – 8.50 lbs/gal.

**BOILING POINT:** Not established

**EVAPORATION RATE:** Not established

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**IMCOMPATIBILITY:** None Known

**HAZARDOUS DECOMPOSITION PRODUCTS:** May emit toxic fumes as it burns.

**CONDITIONS TO AVOID:** Excessive heat and fire.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute Oral LD<sub>50</sub>:** >50, <500 mg/kg

**Eye Irritation:** Causes substantial but temporary eye injury

**Inhalation LC<sub>50</sub>:** >2.0 mg/L

**Carcinogenic Potential:** None listed in OSHA, NTP, IARC, or ACGIH

**Acute Dermal LD<sub>50</sub>:** >2,000 mg/kg

**Skin Irritation:** May cause irritation

**Skin sensitization:** Sensitizer

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL SUMMARY:** This pesticide is extremely toxic to fish, aquatic invertebrates, small mammals and birds. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make any applications when weather conditions favor

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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 or rinsate.

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 visiting the treatment area.

The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

## 13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state and federal regulations.

## 14. TRANSPORT INFORMATION

**DOT Shipping Description:** RQ, UN 2902, PESTICIDES, LIQUID, TOXIC (CHLORPYRIFOS, BIFENTHRIN), 6.1, PG III, ERG GUIDE 151 (RQ-Chlorpyrifos)

**DOT HAZARD CLASS:** Toxic 6.1

**UN NUMBER:** UN 2902 **DOT PACKING GROUP:** PG III

**DOT PRIMARY/SECONDARY LABEL:** Toxic 6.1

**DOT PRIMARY/SECONDARY PLACARD:**

## 15. REGULATORY INFORMATION

**NFPA RATINGS:** Least = 0      Slight = 1      Moderate = 2      High = 3      Severe = 4  
**Ratings for this product:** Health – 3      Flammability – 2      Instability – 0      Special Hazards – None Specified

<b>SARA Title III Hazard Category:</b>	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** Chlorpyrifos (CAS No. 2921-88-2), 1 lb.; Napthalene (CAS No. 91-20-3), 100 lbs.

**SARA, Title III, Section 313:** Bifenthrin (CAS No. 82657-04-3); Napthalene <4% (CAS No. 91-20-3); 1,2,4 Trimethylbenzene <1% (CAS No. 95-63-6)

**CA Proposition 65:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

## 16. OTHER

Date of Issue: 01/12/15      Supersedes: 01/24/13

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