



## Safety Data Sheet

Report Date 03-Jul-23

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### 1. Identification

**Product Name** : BARRAGE EVO  
**Synonyms** : None  
**Product Use** : 2-Ethylhexyl Ester of 2,4-D Herbicide  
**Manufacturer/Supplier** : Helena Agri-Enterprises, LLC  
**Address** : 225 Schilling Blvd. Collierville, TN 38017  
**General Information** : 901-761-0050  
**Transportation Emergency Number** : CHEMTREC:800-424-9300

### 2. Hazard Identification



**Signal Word** : Warning  
**Skin Irritation** : Causes mild skin irritation.  
**Eye Irritation** : Causes serious eye irritation.  
**Acute Toxicity Oral** : LD50=896 mg/kg (rats)  
**Acute Toxicity Dermal** : LD50>2,000 mg/kg (rabbits)  
  
**Hazard Categories** : Oral/Dermal/Inhalation Toxicity-4/5/5; Eye/Skin Irritation-2A/3; Skin Sensitizer-1A  
  
**Hazard Statement** : Harmful if swallowed  
May be harmful in contact with skin  
May be harmful if inhaled  
Causes serious eye irritation  
Causes mild skin irritation  
May cause an allergic skin reaction

### 3. Composition / Information on Ingredients

Component	CAS Number	Weight %
2-Ethylhexyl Ester of 2,4-D Acid	25168-26-7	78.10
Proprietary ingredients	Proprietary	21.90

### 4. First Aid Measures

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

**Skin** : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**Inhalation** : 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 a poison control center or doctor for further treatment advice.

**Ingestion** : Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water. Do not induce vomiting. Do not give anything by mouth if unconscious.

**Indication of Immediate Medical Attention and Special Treatment Needed** : There is no specific antidote. Treat symptomatically and provide supportive care.

### 5. Fire Fighting Measures



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- Extinguishing Media** : Use dry chemicals or carbon dioxide. Use water or foam should be discouraged to prevent spreading of material.
- Specific Hazards Arising from the Chemical** : May emit carbon monoxide, carbon dioxide and hydrogen chloride under fire conditions.
- Special Fire Fight Proc** : Wear self-contained breathing apparatus and full protective clothing.

### 6. Accidental Release Measures

- Personal Precautions** : Keep unprotected and unnecessary personnel out of spill area.
- Protective Equipment** : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Use NIOSH-approved respirator if TLV is exceeded. Eyewash and emergency shower should be available in work area.
- Emergency Procedures** : Do not contaminate water supplies, lakes, streams, ponds or drains. Contain spills to prevent spreading.
- Methods and Materials for Containment and Cleanup** : Remove as much material as possible. Cover spilled material with inert absorbent. Scoop or shovel up then transfer to recovery drums for proper disposal. Do not use vacuum to recover.

### 7. Handling and Storage

- Precautions for Safe Handling** : Keep out of reach of children. Do not contaminate water, food or feed by storage, handling or disposal. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.
- Conditions for Safe Storage** : Store in original container only. Do not store under conditions which might adversely affect the container or its ability to function properly. This product can be stored in an unheated building. Do not store at temperatures below 0 Degrees F. If frozen, warm to 40 Degrees F. and redissolve before using by rolling or shaking container.

### 8. Exposure Controls / Personal Protection

- TLV/PEL** : 2,4-D TLV = 10 mg/m<sup>3</sup>.
- Appropriate Engineering Controls** : Good general ventilation is sufficient.
- Personal Protective Equipment** : Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Use NIOSH-approved respirator if TLV is exceeded. Eyewash and emergency shower should be available in work area.

### 9. Physical and Chemical Properties

- Odor/Appearance** : Clear to slight hazy, light amber liquid.
- Flash Point, °F** : >200 Degrees F.
- Boiling Point, °F** : No information on mixture
- Melting Point(Freezing point), °C** : No information on mixture
- Vapor Pressure, mm Hg @ 20 °C** : No information on mixture
- Vapor Density** : No information on mixture
- Solubility in Water** : Emulsifiable
- Molecular Formula** : Not applicable, formulated mixture.
- Density, g/mL @ 25 °C** : 1.124
- Evaporation Rate(Butyl Acetate = 1)** : No information on mixture
- Octanol/Water Partition Coefficient** : No information on mixture



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pH : 6.6 (1%)  
Flammable Limits (approximate volume % in air) : No information on mixture  
Auto-ignition Temperature : No information on mixture  
Decomposition temperature : No information on mixture

### 10. Stability and Reactivity

Reactivity : Not reactive  
Chemical Stability : Stable  
Hazardous Decomposition Products : Decomposition products can include, and are not limited to: carbon monoxide, carbon dioxide, and hydrogen chloride.  
Hazardous Polymerization : Will not occur  
Conditions to Avoid : Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure to build up in closed systems. Pressure buildup can be rapid.  
Incompatible Materials : Avoid contact with acids, bases and oxidizers.

### 11. Toxicological Information

Acute Toxicity (Oral LD50) : 896 mg/kg (rats). Harmful if swallowed.  
Acute Toxicity (Dermal LD50) : >2,000 mg/kg (rabbits). May be harmful in contact with skin.  
Acute Toxicity Inhalation LC50 : No LC50 data available. May be harmful if inhaled.  
Likely Routes of Exposure : Eye, ingestion, skin, inhalation.  
Skin Irritation : Causes mild skin irritation.  
Eye Irritation : Causes serious eye irritation.  
Skin Sensitization : May cause an allergic skin reaction. Caused allergic skin reactions when tested in guinea pigs.  
Carcinogenic : Did not cause cancer in laboratory animals.  
Chronic Effects : Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.  
Other Hazards : No information found on neurotoxicity or reproductive toxicity. In vitro genetic toxicity studies were negative. The technical material has been toxic to the fetus in laboratory animals but there is no evidence these findings are relevant to humans.

### 12. Ecological Information

Ecotoxicity : 2,4-D is moderately toxic to practically non-toxic to birds. Slightly toxic to moderately toxic to fish and aquatic life.  
Persistence and Degradability : No information found  
Bioaccumulative Potential : No information found  
Mobility in Soil : No information found  
Other Adverse Effects : No information found

### 13. Disposal Considerations

Waste Disposal Method : This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act. (D016 TCLP 2,4-D and/or U240 for 2,4-D)

### 14. Transport Information



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**UN Proper Shipping Name** : Not regulated by DOT in single packages <13.25 gallons.  
**Transport Hazard Class** : None (<13.25 gal)  
**UN Identification Number** : None (<13.25 gal)  
**Packaging Group** : None (<13.25 gal)  
**Environmental Hazards** : No information found  
**Transport in Bulk** : If shipped in singled package >13.25 gallons, ship as: RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (2,4-D Ester), 9, PG III "ERG # 171"  
**Special Precautions for Transportation** : May be classified if shipped by air (IATA) or water (IMDG) as: UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (2,4-D Ester), 9, PG III, Marine Pollutant  
**Freight Classification** : Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 60)

### 15. Regulatory Information

**National Fire Protection Association Rating**

Health: 2 Fire: 1 Reactivity: 0  
Rating Level: (4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

**S.A.R.A Title III Hazard Classification (Yes/No)**

Immediate( Acute) Health: Y  
Delayed (Chronic) Health: Y  
Sudden Release of N  
Pressure:  
Fire: N  
Reactive: N

**FIFRA Information** : This Chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling 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:

**EPA Registration Number** : 5905-645  
**FIFRA Signal Word** : Danger  
**FIFRA Label Statement** : Keep out of reach of children.  
**FIFRA Label Statement** : Corrosive. Causes irreversible eye damage. Harmful if swallowed.  
**FIFRA Label Statement** : Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.  
**FIFRA Label Statement** : Do not get in eyes or on clothing.  
**FIFRA Label Statement** : Wash thoroughly with soap and water after handling and before  
**FIFRA Label Statement** : eating, drinking, chewing gum, using tobacco or using the toilet.  
**FIFRA Label Statement** : Remove and wash contaminated clothing before reuse.

### 16. Other Information

**Data of Preparation/Revision** : 03-July-2023