



Safety Data Sheet

Report Date 21-Sep-18

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1. Identification

Product Name : BARRAGE HF
Synonyms : None
Product Use : Low Volatile 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. Prolonged or repeated skin contact may cause skin irritation.
Eye Irritation : Causes serious eye irritation.
Acute Toxicity Oral : May be harmful if swallowed. Single dose oral toxicity is low.
Acute Toxicity Dermal : Harmful in contact with skin.
Hazard Categories : Oral/Dermal/Inhalation Toxicity-5/4/5; Eye/Skin Irritation-2A/3
Hazard Statement : May be harmful if swallowed
Harmful in contact with skin
Causes serious eye irritation
Causes mild skin irritation
May be harmful if inhaled

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
2-Ethylhexyl Ester of 2,4-D Acid	1928-43-4	78.1
Inert ingredients	Proprietary	21.9

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 liberate hydrogen chloride, an acidic gas, when burned.
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/m3.
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 : Light brown liquid with phenoxy odor.
Flash Point, °F : >200 Degrees F.
Boiling Point, °F : >300 Degrees F.
Melting Point(Freezing point), °C : Not specified
Vapor Pressure, mm Hg @ 20 °C : Not determined
Vapor Density : Not determined
Solubility in Water : Emulsifiable
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.085-1.105
Evaporation Rate(Butyl Acetate = 1) : Not determined
Octanol/Water Partition Coefficient : No information found
pH : 3.2-4.2 (1%)



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Flammable Limits (approximate volume % in air) : No information found
Auto-ignition Temperature : 850 Degrees F.
Decomposition temperature : No information found

10. Stability and Reactivity

Reactivity : No information found
Chemical Stability : Stable
Hazardous Decomposition Products : May produce hydrogen chloride under fire conditions.
Hazardous Polymerization : Will not occur
Conditions to Avoid : None currently known
Incompatible Materials : None currently known

11. Toxicological Information

Acute Toxicity (Oral LD50) : 1,492 mg/kg. May cause gastrointestinal irritation or ulceration.
Acute Toxicity (Dermal LD50) : 2,871 mg/kg. Single prolonged skin exposure may result in absorption in harmful amounts.
Acute Toxicity Inhalation LC50 : No LC50 available. Single exposure to vapors is not likely to be hazardous.
Likely Routes of Exposure : Eyes, skin, inhalation, ingestion
Skin Irritation : Prolonged or repeated skin contact may cause skin irritation.
Eye Irritation : Causes serious eye irritation.
Skin Sensitization : No information found.
Carcinogenic : Did not cause cancer in animal studies.
Chronic Effects : Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects.
Other Hazards : No information found on reproductive, developmental or neurological toxicity.

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.

14. Transport Information

UN Proper Shipping Name : Not regulated by DOT in single packages <21 gallons.
Transport Hazard Class : None (<21 gallons)
UN Identification Number : None (<21 gallons)
Packaging Group : None (<21 gallons)
Environmental Hazards : No information found



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Transport in Bulk : No information found
Special Precautions for Transportation : If shipped in singled package >21 gallons, ship as: RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (2,4-D Ester), 9, PG III "ERG # 171"
Freight Classification : Pesticides, NOI, Herbicides, Other than Poison (NMFC Item 155050, Sub 11, Class 70)

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 : 5905-529
FIFRA Signal Word : Caution
FIFRA Label Statement : Keep out of reach of children.
FIFRA Label Statement : Harmful if absorbed through skin.
FIFRA Label Statement : Causes moderate eye irritation.
FIFRA Label Statement : Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
FIFRA Label Statement : No additional label statements.
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16. Other Information

Data of Preparation/Revision : 21-September-2018