



Safety Data Sheet

Report Date 17-May-15

Page 1 of 4

1. Identification

Product Name : DOUBLE-UP B+D
Synonyms : None
Product Use : 2,4-D and Bromoxynil Herbicide
Manufacturer/Supplier : Helena Chemical Company
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 : Mildly irritating in laboratory tests (rabbit).
Eye Irritation : Moderately irritating in laboratory tests (rabbit).
Acute Toxicity Oral : LD50 606 mg/kg (female rat).
Acute Toxicity Dermal : LD50 >2,000 mg/kg (rat).
Hazard Categories : Oral/Dermal/Inhalation Toxicity - 4/4/4; Eye Irritation - 2A; Skin Irritation - 3
Hazard Statement : Harmful if swallowed
Harmful in contact with skin
Causes serious eye irritation
Causes mild skin irritation
Harmful if inhaled

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Octanoic Acid Ester of Bromoxynil	1689-99-2	30.1
2,4-D Ester (Isooctyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid)	94-75-7	31.2
Inert ingredients	Proprietary	38.7

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 : In the event of an adverse response, treatment should be directed toward control of the symptoms. This product may pose an aspiration pneumonia hazard. Contains xylene range/petroleum distillates.

5. Fire Fighting Measures



Safety Data Sheet

Report Date 17-May-15

Page 2 of 4

- Extinguishing Media** : Use carbon dioxide, dry chemical or foam extinguishing agents.
Specific Hazards Arising from the Chemical : May emit toxic and corrosive fumes under fire conditions.
Special Fire Fight Proc : Wear self-contained breathing apparatus and full protective clothing. Dike area to prevent runoff.

6. Accidental Release Measures

- Personal Precautions** : Keep unprotected and unnecessary personnel out of spill area.
Protective Equipment : Splashproof goggles or face shield, impervious gloves, long-sleeved shirt and long pants, shoes plus socks. Use NIOSH-approved respirator when vapors or mists are present. Eyewash and emergency shower should be available in work area.
Emergency Procedures : Do not contaminate water supplies, lakes, streams, ponds or drains. Pump any free liquids into appropriate closed containers for disposal. Spills may be reportable to the National Response Center (NRC) or other agencies.
Methods and Materials for Containment and Cleanup : Dike spilled material using absorbent or impervious materials, such as clay, sand or sawdust. Collect and contain contaminated absorbent and diking material for disposal. Large spills to soil may require topsoil removal.

7. Handling and Storage

- Precautions for Safe Handling** : Keep locked up and out of reach of children. Do not contaminate water, food or feed by storage, handling or disposal. Keep container tightly closed. Do not allow water to be introduced into the contents of the container.
Conditions for Safe Storage : Store in original container only. Do not store near heat or open flame. Do not store with oxidizing agents or ammonium nitrate. Store at temperatures above 32 Degrees F. If allowed to freeze, remix before using.

8. Exposure Controls / Personal Protection

- TLV/PEL** : PEL and TLV for 2,4-D Ester = 10 mg/m³
Appropriate Engineering Controls : Local exhaust normally sufficient.
Personal Protective Equipment : Splashproof goggles or face shield, impervious gloves, long-sleeved shirt and long pants, shoes plus socks. Use NIOSH-approved respirator when vapors or mists are present. Eyewash and emergency shower should be available in work area.

9. Physical and Chemical Properties

- Odor/Appearance** : Clear amber liquid with aromatic odor.
Flash Point, °F : >200 Degrees F.
Boiling Point, °F : Not determined
Melting Point(Freezing point), °C : Not determined
Vapor Pressure, mm Hg @ 20 °C : Not applicable
Vapor Density : Not applicable
Solubility in Water : Emulsifiable
Molecular Formula : Not applicable, formulated mixture.
Density, g/mL @ 25 °C : 1.116-1.126
Evaporation Rate(Butyl Acetate = 1) : Not determined



Safety Data Sheet

Report Date 17-May-15

Page 3 of 4

Octanol/Water Partition Coefficient : No information found
pH : 3.3 to 3.8
Flammable Limits (approximate volume % in air) : Not determined
Auto-ignition Temperature : Not determined
Decomposition temperature : No information found

10. Stability and Reactivity

Reactivity : No information found
Chemical Stability : Stable
Hazardous Decomposition Products : May produce carbon dioxide, carbon monoxide, oxides of nitrogen and hydrogen bromine under fire conditions.
Hazardous Polymerization : Will not occur
Conditions to Avoid : Avoid heat, sources of ignition, flames, and fire conditions.
Incompatible Materials : Avoid contact with strong oxidizers or acids.

11. Toxicological Information

Acute Toxicity (Oral LD50) : 606 mg/kg (female rat). Harmful if swallowed.
Acute Toxicity (Dermal LD50) : >2,000 mg/kg (rat). Harmful in contact with skin.
Acute Toxicity Inhalation LC50 : >2.04 mg/L/4 hour (rat). Harmful if inhaled.
Likely Routes of Exposure : Skin, eyes, ingestion, inhalation.
Skin Irritation : Causes mild skin irritation.
Eye Irritation : Causes serious eye irritation.
Skin Sensitization : Not a contact sensitizer in Guinea pigs following repeated skin exposure.
Carcinogenic : Not listed by IARC, NTP or OSHA.
Chronic Effects : Repeated overexposure to phenoxy herbicides may cause liver, kidney, gastrointestinal and muscular effects.
Other Hazards : May aggravate pre-existing disorders of the central nervous system, liver and kidney.

12. Ecological Information

Ecotoxicity : Marine pollutant - Bromoxynil.
Persistence and Degradability : No information found
Bioaccumulative Potential : No information found
Mobility in Soil : No information found
Other Adverse Effects : Reportable quantity is 100 lbs (>= 31.4 gallons) for 2,4-D Ester.

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 containers <31 gallons.
Transport Hazard Class : None
UN Identification Number : None



Safety Data Sheet

Report Date 17-May-15

Page 4 of 4

Packaging Group : None
Environmental Hazards : Bromoxynil - Marine Pollutant
Transport in Bulk : If shipped in bulk packaging (>119 gallons) ship as: RQ, UN3082, Environmentally Hazardous Substance, Liquid, n.o.s., (2,4-D Ester, Bromoxynil), 9, PG III, Marine Pollutant "ERG # 171"
Special Precautions for Transportation : If shipped by air (IATA) or water (IMDG), ship as: UN2902, Pesticides, Liquid, Toxic, n.o.s., (Bromoxynil, 2,4-D Ester), 6.1, PG III, Marine Pollutant
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: 2 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 Pressure: N
Fire: Y
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 : 5905-552

FIFRA Signal Word : Caution

FIFRA Label Statement : Keep out of reach of children.

FIFRA Label Statement : Harmful if swallowed.

FIFRA Label Statement : Harmful if absorbed through skin.

FIFRA Label Statement : Causes moderate eye irritation.

FIFRA Label Statement : Avoid contact with eyes, skin or clothing.

FIFRA Label Statement : Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIFRA Label Statement : No additional label statements.

16. Other Information

Data of Preparation/Revision : 17-May-2015