

Material Safety Data Sheet

Effective Date: 04-MAR-2004
Product: HARDBALL

I. IDENTIFICATION

Chemical Name: 2,4-D Acid
Chemical Family: Chlorophenoxy Herbicide
Formula: Not applicable, formulated mixture.
Synonyms: None
CAS Number: Not applicable, formulated mixture.
EPA Number: 5905-549

II. PHYSICAL DATA

Boiling Point: >212 Degrees F.
Freezing Point: <32 Degrees F.
Spec Gravity: 1.063 gms/cc
Vapor Pressure: Not determined
Vapor Density: Not determined
Solubility: Emulsifiable
Volatiles: 50% (est.)
Evaporation: Not determined
Melting Point: Not determined
Appearance: Amber liquid with surfactant odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Proprietary blend of 2,4-Dichlorophenoxyacetic Acid, surfactants and solvents.		100.00	10 mg/m3	Mild skin and severe eye irritant.

IV. FIRE AND EXPLOSION HAZARD

Flash Point: >200 Degrees F.
Autoignition Temp: Not determined
Flammable Limit: Not determined
Extinguishing Media: Foam, water spray, dry chemical or carbon dioxide.
Special Fire Fight Proc: Wear self-contained breathing apparatus and full protective clothing. Contain and dispose of fire control water later.
Fire and Expl Hazard: Under fire conditions, toxic and corrosive fumes are emitted.

Material Safety Data Sheet

Effective Date: 04-MAR-2004
Product: HARDBALL

V. HEALTH HAZARD

Carcinogen Information: Not listed

ACUTE EFFECTS OF OVER EXPOSURE

- Swallowing: Harmful if ingested. May cause nausea, vomiting, abdominal pain or decreased blood pressure. Aspiration of the swallowed or vomited product can cause pulmonary complications.
- Skin Absorption: Slightly irritating. Harmful if absorbed through skin. May cause decreased blood pressure, muscle weakness or muscle spasms. Acute Dermal LD50 >5,000 mg/kg.
- Inhalation: Harmful if inhaled. May cause muscle weakness, muscle spasms or decreased blood pressure. Acute Inhalation LC50 is between 0.54 and 2.04 mg/L.
- Skin contact: May cause skin irritation with repeated or prolonged contact.
- Eye Contact: Causes corneal opacity and irreversible eye damage. Contact with vapors or mists can cause eye irritation.
- Chronic Effects: Nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness and muscle spasms.
- Other Hazard: Prolonged contact can cause liver damage, kidney damage and chronic muscle damage. Product is a skin sensitizer.

EMERGENCY AND FIRST AID PROCEDURES

- Swallowing: Give 2-3 glasses of water to drink. Do not induce vomiting. Seek medical attention immediately. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
- Skin: Immediately wash skin with soap and water. Seek medical attention if irritation develops or persists.
- Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If victim is not breathing, administer CPR. Seek immediate medical attention.
- Eyes: Flush eyes with water for at least 15 minutes, holding eyelids open. Seek immediate medical attention, preferably an ophthalmologist.

Material Safety Data Sheet

Effective Date: 04-MAR-2004
Product: HARDBALL

Notes to Physician: There is no specific antidote for this product. All treatment should be based on observed signs and symptoms of distress in the patient. This product contains a phenoxy herbicide. Myotoxic effects may include muscle fibrillations, myotonia and muscular weakness. Ingestion of massive doses may result in persistent fall of blood pressure. Myoglobin and hemoglobin may be found in urine. Elevations of lactate dehydrogenase (LDH), GOT, SGPT and aldolase indicate the extent of muscle damage. If large amounts have been ingested, the stomach should be evacuated by gastric intubation with the aid of a cuffed endotracheal tube to prevent exposure of the esophagus.

VI. REACTIVITY

Stability: Stable
Conditions to Avoid: Extreme heat, open flames, sparks or static electricity.
Polymerization: Will Not Occur
Conditions to Avoid: None currently known.
Incompatibility material: Strong oxidizing agents.
Hazardous Combustion: Hydrogen chloride and oxides of carbon under fire conditions.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: Contain spill using absorbent or impervious materials such as earth, sand or clay. Collect and place in plastic recovery drums for proper disposal.
Waste Disposal Method: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: When respirators are required, use NIOSH-approved equipment based on actual or potential airborne concentrations.
Ventilation: Local exhaust (mechanical) normally sufficient.
Gloves: Impervious

Material Safety Data Sheet

Effective Date: 04-MAR-2004

Product: HARDBALL

Eyes: Chemical workers' goggles.
Other: Eyewash station, emergency shower, impervious
apron and footwear.

IX. SPECIAL PRECAUTIONS

Special precaution: Keep out of reach of children. Do not store
with food, feed or other material to be used or
consumed by humans or animals. Do not
contaminate water supplies, lakes, streams or
ponds.

Other precaution: Do not breathe vapors and mists. Do not get on
skin or in eyes. Do not ingest. Use handling,
storage and disposal procedures that will
prevent contamination of water, food or feed.
Store in an area away from ignition sources,
food, feedstuffs, fertilizers and seed.

X. SHIPPING INFORMATION

Shipping name: Not regulated by DOT in containers less than 57
gallons.

Hazard Class: None

Identification No: None

Labels Required: None required (<57 gallons)

Placarding: None

Freight Class: Compound, Weed Killing, Liquid (2,4-D
Herbicide), N.O.I. (NMFC Item 50320, Class 60)

Chemical Name

Equivalent R.Q.

2,4-D Acid

100 lbs/45.4 kg

TRANSPORTATION NOTE:

If containers > or = 57 gallons, ship as follows:

RQ, Environmentally Hazardous Substances, Liquid, n.o.s. (2,4-D Acid), 9,
UN3082, PG III "ERG # 171"

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:

(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

Health: 3

Fire: 1

Reactivity: 0

Helena Chemical Company
PH: 901-761-0050
CHEMTREC: 800-424-9300

04-MAR-2004 15:06:51
Page 5 Of 5

Material Safety Data Sheet

Effective Date: 04-MAR-2004
Product: HARDBALL

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

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

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017
Helena Chemical Company believes that the data contained herein is factual.
This data is not to be taken as a warranty or representation of legal
responsibility. It is offered solely for your consideration, investigation
and verification.