

Material Safety Data Sheet

Effective Date: 16-DEC-2000

Product: OPTI-AMINE (2,4-D AMINE HERBICIDE)

I. IDENTIFICATION

Chemical Name: DIMETHYLAMINE SALT OF 2,4-D ACID
Chemical Family: CHLORINATED PHENOXY HERBICIDE
Formula: NOT APPLICABLE, FORMULATED MIXTURE.
Synonyms: 2,4-D, DIMETHYLAMINE SALT
CAS Number: 2008-39-1
EPA Number: 5905-501

II. PHYSICAL DATA

Boiling Point: 230 DEGREES F.
Freezing Point: <32 DEGREES F.
Spec Gravity: 1.188 GMS/CC
Vapor Pressure: NOT ESTABLISHED
Vapor Density: NOT ESTABLISHED
Solubility: MISCIBLE
Volatiles: <3.9%
Evaporation: NOT ESTABLISHED
Melting Point: NOT ESTABLISHED
Appearance: BROWN/BLACK LIQUID, WITH PHENOLIC ODOR.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
DIMETHYLAMINE SALT OF 2,4-DICHLOROPHENOXYACETIC ACID (EQUIVALENT TO 38.8% 2,4-D OR 3.8 LBS/GAL)		46.70	10 MG/M3	SKIN & EYE IRRITANT
WATER AND INERT FORMULATION AIDS		53.30	NOT APPLICABLE	NOT APPLICABLE

IV. FIRE AND EXPLOSION HAZARD

Flash Point: AQUEOUS PRODUCT
Autoignition Temp: NOT APPLICABLE
Flammable Limit: NOT APPLICABLE
Extinguishing Media: USE APPROPRIATE EXTINGUISHING MEDIA FOR UNDERLYING CAUSE OF FIRE.
Special Fire Fight Proc: WEAR POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. DIKE AREA TO PREVENT CHEMICAL RUNOFF. STAY UPWIND AND FIGHT FIRE AT A SAFE DISTANCE.

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Fire and Expl Hazard: THERMAL DECOMPOSITION PRODUCTS MAY BE HARMFUL.
THESE MAY INCLUDE HYDROGEN CHLORIDE AND
NITROGEN OXIDE.

V. HEALTH HAZARD

Carcinogen Information: NONE CURRENTLY KNOWN.

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing: ACUTE ORAL LD50 (RAT) = 1,150 MG/KG BODY
WEIGHT. HARMFUL IF SWALLOWED.
Skin Absorption: ACUTE DERMAL LD50 (RABBIT) = >2000 MG/KG. MAY
BE FATAL IF ABSORBED THROUGH THE SKIN.
Inhalation: NO SPECIFIC INFORMATION AVAILABLE, BUT VAPORS
OR SPRAYS (MISTS) MAY BE HARMFUL IF INHALED
AND CAUSE IRRITATION TO NOSE/THROAT.
Skin contact: MILD SKIN IRRITANT (RABBITS). MAY CAUSE SKIN
IRRITATION.
Eye Contact: CORROSIVE, MAY CAUSE IRREVERSIBLE EYE DAMAGE,
SEEN AS CORNEAL OPACITY. VAPORS OR SPRAYS
(MISTS) ARE IRRITATING TO EYES.
Chronic Effects: EXCESSIVE EXPOSURE MAY CAUSE LIVER, KIDNEY,
MUSCULAR, AND GASTROINTESTINAL EFFECTS. SIGNS
AND SYMPTOMS OF EXCESSIVE EXPOSURE MAY BE
NAUSEA, VOMITING, ABDOMINAL CRAMPS AND
DIARRHEA.
Other Hazard: INHALATION OF PRODUCT MAY AGGRAVATE EXISTING
CHRONIC RESPIRATORY PROBLEMS SUCH AS ASTHMA,
EMPHYSEMA OR BRONCHITIS. SKIN CONTACT MAY
AGGRAVATE EXISTING SKIN DISEASE.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing: IF INGESTED, DO NOT INDUCE VOMITING. DRINK
PROMPTLY A LARGE QUANTITY OF MILK, EGG WHITES,
GELATIN SOLUTION OR WATER. CALL A PHYSICIAN OR
POISON CONTROL CENTER IMMEDIATELY.
Skin: WASH SKIN THOROUGHLY WITH SOAP AND WATER. IF
IRRITATION DEVELOPS, CONSULT A PHYSICIAN.
REMOVE CLOTHING AND WASH BEFORE REUSE.
Inhalation: MOVE PERSON TO FRESH AIR. IF BREATHING BECOMES
DIFFICULT, OBTAIN MEDICAL ATTENTION
IMMEDIATELY.
Eyes: IT IS IMPERATIVE TO FLUSH EYES WITH WATER FOR
AT LEAST 15 MINUTES HOLDING EYELIDS OPEN.
PROMPT MEDICAL ATTENTION IS ESSENTIAL.
Notes to Physician: PROVIDE SUPPORTIVE CARE. TREATMENT SHOULD BE

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BASED ON JUDGEMENT OF THE PHYSICIAN IN
RESPONSE TO REACTIONS OF THE PATIENT. THERE IS
NO SPECIFIC ANTIDOTE. IF VICTIM IS FULLY
ALERT, INDUCE EMESIS WITH SYRUP OF IPECAC.
FOLLOWING EMESIS, ADMINISTER 30 TO 50 GMS. OF
ACTIVATED CHARCOAL. IN SEVERE POISONING
RESULTING FROM THE INGESTION OF LARGE AMOUNTS
OF THIS PRODUCT, FORCED ALKALINE DIURESIS MAY
BE REQUIRED.

VI. REACTIVITY

Stability: Stable
Conditions to Avoid: AVOID EXCESSIVE HEAT SOURCES.
Polymerization: Will Not Occur
Conditions to Avoid: NONE CURRENTLY KNOWN.
Incompatibility material: (SPECIFIC MATERIALS TO AVOID) ACIDS AND
OXIDIZING MATERIALS.
Hazardous Combustion: PRODUCT MAY PRODUCE HYDROCHLORIC ACID, SULFUR
DIOXIDE, HYDROGEN SULFIDE, ALDEHYDES AND OXIDES
OF CARBON.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: DIKE AND CONTAIN SPILLED MATERIAL. ABSORB IN
INERT MATERIAL SUCH AS CLAY, SAND OR SAWDUST.
SWEEP UP AND PLACE MATERIAL IN A CHEMICAL WASTE
CONTAINER FOR PROPER DISPOSAL. WASH AREA WITH
WATER, DETERGENT AND AMMONIA. ABSORB AND PLACE
IN WASTE CONTAINER WITH OTHER MATERIAL.
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 RESPIRATORY PROTECTION IS REQUIRED, USE
NIOSH/MSHA AIR-PURIFYING RESPIRATOR.
Ventilation: LOCAL EXHAUST SUFFICIENT.
Gloves: IMPERVIOUS
Eyes: SPLASH PROOF GOGGLES.
Other: EMERGENCY SHOWER, EYE WASH STATION, IMPERVIOUS
APRON AND FOOTWEAR.

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

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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. DO NOT APPLY WHEN WEATHER CONDITIONS FAVOR DRIFT FROM TARGET AREA, AS THIS PRODUCT MAY INJURE COTTON, BEANS, VEGETABLES, CERTAIN LEGUMES AND ORNAMENTALS.

Other precaution: A) RCRA HAZARDOUS WASTE NUMBER: U240 - 2,4-D AMINE
B) SARA TITLE III, SECTION 313: 2,4-D (46.7%) 01/01/87
C) SARA THRESHOLD PLANNING QUANTITY: 10,000 LBS/MIXTURE
D) CERCLA REPORTABLE QUANTITY: 26 GALLONS
E) 49 CFR 172.101, APPENDIX A: HAZARDOUS SUBSTANCE
F) 49 CFR 172.101, APPENDIX B: MARINE POLLUTANT

X. SHIPPING INFORMATION

Shipping name: NOT REGULATED BY DOT IN CONTAINERS <26 GALLONS (SEE NOTE BELOW)

Hazard Class: NONE

Identification No: NONE

Labels Required: NONE REQUIRED

Placarding: NONE

Freight Class: COMPOUND, TREE OR WEED KILLING, LIQUID, NOIBN (NMFC ITEM 50320, CLASS 60)

Chemical Name	Equivalent R.Q.
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2,4-DICHLOROPHENOXYACETIC ACID	100 LB(45.4 KG)
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TRANSPORTATION NOTE: REGULATED BY DOT IN CONTAINERS OF 26 GALLONS OR MORE: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (2,4-D ACID), 9, UN 3082, PG III "ERG # 171"

XI. GENERAL PRODUCT INFORMATION

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National Fire Protection Association Rating:

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

Health: 2

Fire: 1

Reactivity: 1

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

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

Delayed (Chronic) Health: Y
Fire: N

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017
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