



MATERIAL SAFETY DATA SHEET

I. COMPANY/PRODUCT IDENTIFICATION

Agriliance
P.O. Box 64089
St. Paul, MN 55164-0089

In Case of Emergency Call:
(877) 424-7452 [US]
(800) 424-9300 [CHEMTREC,24 hours]

PRODUCT NAME: 2,4-D Amine 4
Product Class: Herbicide
Synonyms: 2,4-D
**Active Ingredient(s) and/
 or Primary Component(s) :** 2,4-Dichlorophenoxyacetic
 acid, dimethylamine salt

Chemical Family: Phenoxy herbicide

2. COMPOSITION/INFORMATION OF HAZARDOUS INGREDIENTS

CHEMICAL NAME (INGREDIENTS)	CAS NUMBER	HAZARD	% BY WEIGHT
2,4-Dichlorophenoxyacetic acid, dimethylamine salt	94-95-7		47.3
Inert ingredients*			52.7

**Trade secret information available as provided in 29 CFR 1910.1200 (i)*

For EXPOSURE GUIDELINES, See page 3, section 8 of this MSDS

3. HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE

ACUTE (SHORT TERM EXPOSURE):

EYE: May cause severe irritation with corneal injury and may result in permanent impairment of vision, even blindness. **SKIN CONTACT:** Prolonged exposure may cause skin irritation. **SKIN ABSORPTION:** A single prolonged skin exposure may result in the materials being absorbed in harmful amounts. **Ingestion** may cause gastrointestinal irritation. **INHALATION:** Single exposure to vapors is not likely to be hazardous.

CHRONIC (LONG TERM EXPOSURE):

Excessive exposure may cause liver, kidney, gastrointestinal and muscular effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting and abdominal cramps and/or diarrhea. Various animal cancer tests have shown no reliable positive association between 2,4-D exposure and cancer. Epidemiology studies have been both positive and negative with the majority being negative. Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother. High dietary levels of 2,4-D caused toxic effects (weight and viability reduction) in rats on a reproduction test. Has been shown to be negative in some vitro ("test tube") mutagenicity tests and positive in others. Results of mutagenicity tests in animals have been inconclusive .

GENERAL PRECAUTIONS:

Always practice good industrial hygiene; handle with care; avoid personal contact. Do not get into eyes or on skin; do not breathe mist or vapor of product. Do not swallow. Wash hands with soap and water and rinse after handling product. Shower after each shift. Wash all work clothing and completely clean all PPE (personal protective equipment) after each shift.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE:

None known

PRIMARY ROUTE OF ENTRY: **INHALATION** **INGESTION** **ABSORPTION**

4. FIRST AID MEASURES

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses after the first 5 minutes, then continue rinsing eye. Call a Poison Control Center or doctor for treatment advice.

IF ON SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

IF INHALED: 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.

IF SWALLOWED: Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person. Contains petroleum distillate – vomiting may cause aspiration hazard.

NOTE TO PHYSICIAN: (ANTIDOTE) N/E

5. FIRE FIGHTING MEASURES

FLASH POINT	FLAMMABLE LIMITS	LOWER EXPLOSIVE LIMIT (LEL)	UPPER EXPLOSIVE LIMIT (UEL)
N/E	N/E	N/E	N/E

EXTINGUISHING MEDIA:

FOAM CO₂ DRY CHEMICAL WATER SPRAY OTHER (SPECIFY):

SPECIAL FIRE FIGHTING PROCEDURES:

If water is used, use a soft fog to avoid spreading contamination. Use self-contained breathing apparatus and full protective gear in confined areas of buildings. Contain water to prevent entry into water supplies.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Noxious vapors under high temperature conditions.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Absorb spill in inert material. Dike area in case of large spills.

REPORTABLE QUANTITY (RQ) UNDER CERCLA:

For 2,4-D - 100 lbs. (Equivalent amount of this product would be 26 gallons.)

7. HANDLING AND STORAGE

STORAGE TEMPERATURES:

INDOOR OUTDOOR REFRIGERATED

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in area designated specifically for pesticides. Do not store near any material intended for use or consumption by humans or animals. Store in a cool place. Do not store in direct sunlight. Do not contaminate water, food, or feed by storage, disposal, or by cleaning of equipment. Do not reuse empty container. Open dumping is prohibited.

OTHER PRECAUTIONS: N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CHEMICAL NAME

EXPOSURE LIMITS

2,4-Dichlorophenoxyacetic acid

- OSHA PEL 10 mg/m³, ACGIH TLV – 20 mg/m³

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VALUES ARE 8-HR. TIME-WEIGHTED-AVERAGES UNLESS OTHERWISE SPECIFIED

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (cont.)

ENGINEERING CONTROLS: Local exhaust or general ventilation.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION: Safety glasses or goggles.

HAND/SKIN PROTECTION: Long-sleeved shirt and long pants. Shoes plus socks. Chemical-resistant gloves, such as neoprene or nitrile rubber or barrier laminate, or viton. Mixers and loaders who do not use a mechanical system (pump and probe or spigot) to transfer this compound must wear coveralls or a chemical-resistant apron.

RESPIRATORY PROTECTION: Not normally required during use.

WORK PRACTICES: Minimize exposure. Wear appropriate PPE to prevent the probability of exposure and personal contact. Wash with soap and rinse thoroughly

after handling material and before eating, drinking, smoking or using restroom facilities. Shower after each shift. Deluge safety shower and eye wash should be located in work area.

NOTE TO END-USERS: *The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.*

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear amber to dark brown liquid	pH (AS IS):	N/E
BOILING POINT (°F):	(212°F) 100° C	SOLUBILITY (WATER):	Infinite
BULK DENSITY:	N/E.	SPECIFIC GRAVITY:	1.157
COLOR:	Amber to dark brown	VAPOR DENSITY (Air = 1):	N/E
EVAP. RATE (BuAc=01):	N/E	VAPOR PRESSURE (mmHg):	N/E
FREEZING POINT (°F):	N/E	VISCOSITY:	N/E
ODOR:	fish phenolic odor.	% VOLATILE BY VOLUME:	N/E

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Avoid exposure to heat or flame.
INCOMPATIBILITY (MATERIALS TO AVOID):	Acids and oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS:	Hydrogen chloride, nitrogen oxide under fire conditions.
STABILITY:	<input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE
HAZARDOUS POLYMERIZATION:	<input type="checkbox"/> WILL OCCUR <input checked="" type="checkbox"/> WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

ORAL LD₅₀
Male Rat = 1492 mg/kg and
837mg/kg for Femal Rat

DERMAL LD₅₀
Rabbit = 2871 mg/kg

INHALATION LC₅₀
N/D

EFFECTS TO EYES:

May cause severe irritation with corneal injury and may result in permanent impairment of vision, even blindness.

EFFECTS TO SKIN: Prolonged exposure may cause skin irritation.

11. TOXICOLOGICAL INFORMATION (cont.)

CARCINOGENICITY REFERENCE SOURCES:

I.A.R.C.	Yes	N.T.P.	Yes	O.S.H.A.	<input type="checkbox"/> Yes
	X No		X No		<input checked="" type="checkbox"/> No

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

16. OTHER INFORMATION

HMIS RATINGS		NFPA RATING	
HEALTH	2	HEALTH	2
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	REACTIVITY	0
PERSONAL PROTECTION	B	CORROSIVENESS	0

ABBREVIATION KEY

N/A = Not Applicable	C = Ceiling Limit
STEL = Short Term Exposure Limit	N/D = Not Determined
rf = Respirable Fraction	SKIN = Skin Notation
N/E = Not Established	td = Total Dust

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