

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: DAKOTA
Description: A liquid herbicide.
EPA Reg. No.: 9468-37-83979

Manufactured by: Ritter Chemical LLC
P.O. Box 430974
Houston, TX 77243
Phone: 713-463-5407

Distributed by: ROTAM NORTH AMERICA, INC
4900 Koger Blvd.
Suite 140
Greensboro, 27407
Phone: 866-927-6826

Emergency number for spills and cleanup: CHEMTREC: 1-800-424-9300

Section 2. Composition/Information on Ingredients

Ingredient	Chemical Name	Chemical Formula	CAS Number	Composition
Clethodim	(E)-2-[1-[[[(3-chloro-2-propenyl)oxy]imino] propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one]	C ₁₇ H ₂₆ ClNO ₃ S	99129-21-1	26.4%
Aromatic Hydrocarbon	Solvent Naphtha (Petroleum), Heavy Aromatic		64742-94-5	58-62%
Naphthalene	Naphthalene	C ₁₀ H ₈	91-20-3	< 6%
Pseudocumene	1,2,4-Trimethylbenzene	C ₆ H ₃ (CH ₃) ₃	95-63-6	< 1%

Section 3. Hazards Identification

HAZARDS TO HUMANS AND DOMESTIC ANIMALS: Causes substantial but temporary eye irritation. Harmful if swallowed or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS: The use of this product may pose a hazard to the federally designated endangered species of Solano Grass and Wild Rice. Refer to the product label for additional information.

PHYSICAL HAZARDS: Combustible liquid.

Section 4. First Aid Measures

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as DAKOTA, EPA Reg. No. 9468-37-83979. For information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378, Monday through Friday, 9 a.m. to 5 p.m. After 5:00 p.m. call your poison control center at 1-800-222-1222.

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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

IF ON SKIN OR CLOTHING: 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Contains petroleum distillate. Vomiting may cause aspiration pneumonia. If ingested, probable mucosal damage may contraindicate the use of gastric lavage.

Section 5. Fire Fighting Measures

Flash point (Closed Cup): 149°F (65°C)

Flammable Limits (LFL-UFL): Unknown.

Fire and Explosion Hazards: Combustible liquid. Can form explosive mixtures at temperatures at or above the flashpoint. In fire can burn and form explosive vapors from ruptured containers.

Means of Extinction: Water fog, foam, dry chemical or CO₂

Fire Fighting Instructions: Evacuate nonessential personnel to prevent exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area and equipment until decontaminated. Dike and collect any runoff to prevent entry to drains or water bodies.

Firefighting Equipment: Self-contained breathing apparatus and full bunker gear.

Hazardous Combustion Products: Thermal decomposition will produce nitrogen oxides, sulfur oxides and may produce toxic chlorine compounds.

NFPA Ratings: Health – 2 / Flammability – 2 / Instability – 0

Section 6. Accidental Release Measures

Clean up spills immediately observing the precautions in Section 8 of this MSDS. Isolate hazard area and keep unnecessary and/or unprotected personnel from entering the spill area.

Small Spills: Absorb small spills with sand, vermiculite or other inert absorbent material. Place contaminated material in a container for disposal.

Large Spills: Control spill at the source and prevent material from entering soil, sewers, waterways or low areas. Dike large spills using absorbent or impervious material such as clay or sand. Recover materials for reuse or disposal. After removal, clean contaminated area thoroughly with water being sure to recover the wash liquid with additional absorbent material and place in a container for disposal.

Section 7. Handling and Storage

Keep out of reach of children. Avoid contact with skin. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum using tobacco, or using the toilet.

Section 8. Exposure Controls/Personal Protection

Engineering Controls: Handle only with adequate ventilation. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Personal Protective Equipment: Wear long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves and protective eyewear.

General: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash clothing and other absorbent materials that have been exposed to this product. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Section 9. Physical and Chemical Properties

Appearance	Dark Amber Liquid
Odor	Mild Aromatic
pH	4.0 – 4.5
Solubility	Emulsifies
Specific Gravity	0.93 – 0.98 g/ml (7.8 – 8.2 lbs/gal)

Section 10. Stability and Reactivity

CONDITIONS TO AVOID: Heat, flame and extreme temperatures.

CHEMICAL STABILITY: Stable under normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May release nitrogen oxide, sulfur oxides, carbon oxides (CO and CO₂) and aniline when thermally decomposed.

INCOMPATIBILITY WITH OTHER MATERIALS: None Known.

POLYMERIZATION: Will not occur.

Section 11. Toxicological Information

ACUTE ORAL TOXICITY: Oral LD₅₀ (rat): > 5,000 mg/kg

ACUTE DERMAL TOXICITY: Dermal LD₅₀ (rat): > 5,000 mg/kg

ACUTE INHALATION TOXICITY: Inhalation LC₅₀ (rat): > 2.0 mg/L (4-hour)

EYE IRRITATION: Rabbit – Moderately irritating

SKIN IRRITATION: Rabbit – Moderately irritating

SENSITIZATION: Guinea Pig – Not a contact sensitizer

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Exposure to vapors may increase tendency to respiratory or bronchial infections.

CARCINOGENICITY:

ACGIH: Not listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

MUTAGENIC DATA: No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

ADDITIONAL DATA: Not known to cause reproductive or birth defects at normal exposure levels.

Section 12. Ecological Information

The following information is for the active ingredient, Clethodim:

AQUATIC TOXICITY

Bluegill Sunfish (96hr LC₅₀): 120 mg/L

Rainbow Trout (96hr LC₅₀): 65 mg/L

AVIAN TOXICITY

Bobwhite Quail (LD₅₀): > 6,000 ppm

Mallard (LD₅₀): > 6,000 ppm

OTHER

Bees (LD₅₀): >100µg/bee

Section 13. Disposal Considerations

PESTICIDE DISPOSAL: Wastes of this product may be dangerous. Improper disposal of excess pesticide or rinse is a violation of Federal Law. If these wastes cannot be disposed of according to the label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Section 14. Transport Information

DOT PROPER SHIPPING NAME: Not Regulated by DOT - Shipping Class 60
MARINE POLLUTANT: No

Section 15. Regulatory Information

FIFRA-

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

SARA Title III- Section 302 Extremely Hazardous Substances

Not Listed

SARA Title III- Section 311/312 Hazard Categories

Immediate, Delayed, Fire

SARA Title III- Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III- Section 313 Reportable Ingredients

Naphthalene (<6%) – CAS No. 91-20-3

CERCLA-

Reportable Quantity: Naphthalene (CAS 91-20-3) – 180 gal. of product

CALIFORNIA PROP 65 STATUS-

This product contains a chemical (naphthalene) known to the state of California to cause cancer.

Section 16. Other Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

DISCLAIMER:

Rotam North America, Inc. warrants that this product conforms to the chemical description on the label, and is reasonably fit for the purposes set forth in the "Complete Directions for Use" booklet labeling, when used in accordance with those Complete Directions for Use, under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

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