

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name: ANTLER CLETHODIM

PCP Reg. No.: 33595

Product use: Herbicide

Supplier's name and address:

WINFIELD UNITED CANADA, ULC
101-302 WELLMAN LANE
SASKATOON, SK S7T 0J1
1.888.975.4769

Emergency Telephone #:

1-800-424-9300 (CHEMTREC)

SECTION 2 – HAZARDS IDENTIFICATION

Physical Hazards: Flammable Liquid - Category 4

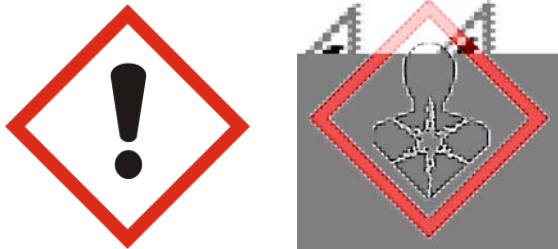
Health Hazards:

| | |
|-------------------------------|-------------|
| Aspiration hazard – | Category 1 |
| Acute Toxicity (Inhalation) – | Category 4 |
| Acute Toxicity (Oral) – | Category 4 |
| Acute Toxicity (Dermal) – | Category 5 |
| Skin Sensitizer – | Category 1 |
| Skin Irritation – | Category 2 |
| Eye Irritation– | Category 2A |

Environmental Hazards: Toxic to aquatic life.

Signal Word: DANGER

Hazard Statements: Combustible liquid. May be fatal if swallowed and enters airways. Harmful if inhaled. Harmful if swallowed. May be harmful in contact with skin. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life.



Precautionary Statements: Keep away from flames and hot surfaces. May be harmful in contact with skin. Avoid contact with skin, eyes and clothing. After use, wash hands and other exposed skin. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. Remove and wash contaminated clothing before reuse. Avoid contact with eyes. Avoid breathing spray mist.

Use only outdoors or in a well-ventilated area. Harmful if swallowed. Do not eat, drink or smoke when using this product. This product contains petroleum distillates which are toxic to aquatic organisms.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component | CAS No. | Percentage (%) |
|-----------------------------------|------------|----------------|
| Clethodim* | 99129-21-2 | 25-27 |
| Petroleum distillates (contains)* | 64742-94-5 | 65-70 |
| *Naphthalene | 91-20-3 | 5-7 |
| *Trimethylbenzene | 95-63-6 | 2-3 |

| Content Listed on Product Label |
|---------------------------------|
| Clethodim 252 g/L |

SECTION 4 – FIRST AID MEASURES

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. 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 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 centre or doctor for further treatment advice.

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 centre or doctor for treatment advice.

Take the container, label or product name and Pest Control Product Registration Number with you when calling a poison control center or doctor or going for treatment.

Do not induce vomiting. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia. Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical.

Special Firefighting Procedures: Firefighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires. Minimize and contain water runoff.

Flash Point:64.83°C (149°F)

Conditions of Flammability:Combustible liquid. May burn under fire conditions.

Hazardous Decomposition Products: ...May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: **Health: 2** **Flammability: 2** **Reactivity: 0**

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Use safety equipment and procedures appropriate to the size of the spill. Keep unnecessary people away. Avoid runoff to natural waters and sewers. Surround and absorb spills with inert material such as perlite, sawdust, clay granules, vermiculite, sand or dirt. Contain all affected material in a closed, labeled container for proper disposal. Isolate from other waste materials. Clean contaminated area such as hard surfaces with detergent and water, collecting cleaning solution for proper disposal. Large spills to soil or similar surfaces may necessitate removal of top soil.

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wash concentrate from skin or eyes immediately. After use, wash hands and other exposed skin. Wear coveralls over a long-sleeved shirt, long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. Remove and wash contaminated clothing before reuse. Avoid breathing spray mist. Do not eat, drink or smoke when using this product.

Storage: Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. Do not store below 0°C.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters:

| Component | TWA* | STEL* | Note |
|-----------------------------------|--------|-----------------------|-------------------------|
| Clethodim | NE | NE | None found |
| Petroleum distillates (contains)* | 17 ppm | 100 mg/m ³ | Supplier recommendation |
| *Naphthalene | 10 ppm | - | - |
| *Trimethylbenzene | 25 ppm | - | - |

*Time Weighted Average, 8-hour unless otherwise noted

**Short Term Exposure Level

N/E – Not Established

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment: When handling the concentrate, mixing, loading or during cleanup and repair, wear goggles or face shield, rubber apron, chemically resistant gloves, rubber boots, long sleeved shirt and long legged pants.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical data are typical values but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification. If no value is determined for the formulation, the value listed is the most relevant value of the predominate ingredients(s).

Physical state and appearance: Amber liquid
Odor: Mild aromatic odor
Odor Threshold: No data
pH: 3.8-4.8
Melting Point: No data
Freezing Point: No data
Boiling Point: No data

Flash Point: 65°C
Evaporation Rate: No data
Flammability: No data
Explosive Limits: No data
Vapor Pressure: $<1 \times 10^{-2}$ mPa (20°C) (Clethodim)
Vapor Density: No data
Density: 0.935-0.975 g/ml
Solubility: Emulsifies
Partition Coefficient: No data
Auto Ignition Temperature: No data
Decomposition Temperature: No data
Viscosity:..... 3.33 cSt (20°C); 2.15 cSt (40°C)

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Not reactive

Chemical Stability: Stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Excessive heat. Do not store near heat or flame

Incompatible Materials: Avoid contact with strong acidic, basic or oxidizing agents.

Hazardous Decomposition Products: Under fire conditions, may produce gases such as hydrogen chloride or phosgene.

SECTION 11 – TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals. Data obtained on similar products and on components are summarized below.

Likely Routes of Exposure: Inhalation, ingestion, skin and eye contact.

Acute oral toxicity Rat, LD50: 5,000 mg/kg

Acute dermal toxicity Rat, LD50: > 5,000 mg/kg

Acute inhalation toxicity Rat, LC50: > 2.03 mg/L

Skin irritation Rabbit: Moderately irritating

Eye irritation Rabbit: Moderately irritating

Skin sensitization Guinea Pig: Not a contact sensitizer

Mutagenicity: Not know to be mutagenic

SubChronic effects: Compound-related effects at high doses were decreased body weights, increased liver size and anemia.

Chronic effects/carcinogenicity:An impurity present in the solvent has been found to cause tumors in laboratory studies. The active ingredient, Clethodim, Is not considered carcinogenic

Toxicity to reproduction/fertility: No such effects have been observed in the absence of maternal toxicity

Developmental toxicity/teratogenicity: Developmental toxicity in rats and rabbits was observed only at maternally toxic dose levels

SECTION 12 — ECOLOGICAL INFORMATION

This section is intended for use by eco-toxicologists and other environmental specialists. Data obtained on similar products and on components are summarized below.

Ecotoxicity: (Technical)

Aquatic Toxicity:

| | | |
|-------------------------|---------------------------------------|------|
| Rainbow trout: | 96-Hour LC ₅₀ (mg/L) | 67 |
| Bluegill sunfish: | 96-Hour LC ₅₀ (mg/L) | 120 |
| Daphnia: | 48-Hour EC ₅₀ (mg/L) | 120 |
| Algae: Freshwater | EC ₅₀ (mg ae/L) | 57.8 |

Avian toxicity

| | | |
|-----------------------|--|-------|
| Bobwhite quail: | Oral LD ₅₀ (mg/kg) | >2000 |
| | Dietary LC ₅₀ (mg/kg) | >6000 |
| Mallard duck: | Dietary LC ₅₀ (mg/kg) | >6000 |

Arthropod toxicity:

| | | |
|------------------|---|------|
| Honey bee: | Oral and Contact LD ₅₀ (µg/bee)..... | >100 |
|------------------|---|------|

Soil organism toxicity, invertebrates:

Earthworm:..... No data

Persistence and Degradability: The average half-life of clethodim is 1-3 days.

Bioaccumulation Potential: Negligible.

Mobility in Soil: Not readily leached.

Other Adverse Effects: No data.

SECTION 13 — DISPOSAL CONSIDERATIONS

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial and local regulations.

Do not reuse container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact local distributor, dealer or municipality for

the location of the nearest collection site. Before taking the container to the collection site, triple or pressure rinse the empty container adding rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

SECTION 14 — TRANSPORTATION INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

CANADA:

TDG Classification – Road/Rail:

Not regulated

UNITED STATES:

DOT Classification – Ground:

≥ 119 gallons per complete package

NA 1993, Combustible, Liquid, n.o.s., (Napthalene), 3, III, Marine Pollutant

IMDG Water Transportation:

Not regulated

IATA:

Not regulated

SECTION 15 — REGULATORY INFORMATION

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:

WARNIG: EYE AND SKIN IRRITANT

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of chemical hazard classification. The information given here is not necessarily exhaustive but is representative of relevant, reliable data. Follow all local/regional/national/international regulations.

HMIS Rating: 2 Health; 2 Flammability; 1 Reactivity

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE Pest Management Regulatory (PMRA)- APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by product labeling and provincial legislation, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the PMRA-approved label.

Prepared by: Albaugh, LLC

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