

MATERIAL SAFETY DATA SHEET

Agricultural Products Group
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EMERGENCY TELEPHONE NUMBERS:

BASF Corporation: 1 (800) 832-HELP
CHEMTREC: 1 (800) 424-9300

Product No.: E06161 **Frontier® 6.0 herbicide**

Date Prepared: 2/12/97 **Date Revised:** 6/16/2000

SECTION I

Trade Name: Frontier® 6.0 herbicide

Chemical Name: 2-chloro-N-[(1-methyl-2-methoxy)ethyl]-N-(2,4-dimethyl-thien-3-yl) acetamide

Synonyms: Dimethenamid

Formula: C(12) H(18) Cl N O(2) S

Chemical Family: Chloroacetamide

Mol Wt: 299.8

SECTION II - INGREDIENTS

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
Dimethenamid	87674-68-8	63.14	Not established
Inert Ingredients	N/A	36.86	Not established
including naphthalene	91-20-3		10 ppm ACGIH/OSHA

SARA Title III Section 313: Listed

SECTION III - PHYSICAL DATA

BOILING/MELTING POINT@760mm Hg: N/D **pH:** 4.5

VAPOR PRESSURE mmHg @ 20°C: 2.8 x 10 (-4) @ 25°C

SPECIFIC GRAVITY OR BULK DENSITY: 1.141 @ 25°C

SOLUBILITY IN WATER: Forms emulsion in water

APPEARANCE: Clear brown liquid

ODOR: Sweet

INTENSITY: Moderate

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD): 192 °F (88.9°C) **AUTOIGNITION TEMP:** N/D

FLAMMABILITY LIMITS IN AIR (% BY VOL): **LOWER:** N/D **UPPER:** N/D

NFPA 704 HAZARD CODES

HEALTH: 2

FLAMMABLE: 2

INSTABILITY: 0

OTHER:

NFPA 30 STORAGE CLASSIFICATION: Class III A

EXTINGUISHING MEDIUM: Use water fog, foam, CO(2), or dry chemical extinguishing media.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Do not allow fire fighting water to escape into waterways or sewers.

UNUSUAL FIRE -EXPLOSION HAZARDS: Combustion Products: Oxides of sulfur, oxides of nitrogen, hydrogen chloride.

SELECT ACRONYM KEY

N/A - Not available; N/D - Not determined; N/R - Not rated; N/E - Not established

SECTION V - HEALTH DATA**TOXICOLOGICAL TEST DATA:**

Rat, Oral LD50 = 849 mg/kg
Rabbit, Dermal LD50 > 2000 mg/kg
Rat, Inhalation LC50 (4 hr) > 2.5 mg/L
Rabbit, Skin Irritation - Non-irritating
Rabbit, Eye Irritation - Moderate to Severely Irritating
Guinea pig, Skin Sensitization - Not a Sensitizer

EFFECTS OF OVEREXPOSURE:

See Product Label and Directions For Use for additional precautionary statements.

Precautionary Statements:

Hazards to Humans and Domestic Animals.

Warning: Causes substantial but temporary eye injury. Harmful if inhaled, swallowed, or absorbed through skin.

Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist.

For a component (naphthalene) of this formulation:

Ingestion of naphthalene results in cramps, nausea, vomiting, and diarrhea; listlessness; bladder irritation and brownish urine. Inhalation of naphthalene may cause headache, confusion and excitement. Chronic overexposure to naphthalene may result in liver/kidney disorders. Hemolysis, anemia, fever, hemoglobinuria and jaundice may also occur.

Those with prior blood diseases may be more severely affected.

Acute overexposure to solvent naphtha vapors may cause central nervous system effects, including headache, dizziness, drowsiness, and confusion. Ingestion causes nausea, vomiting, blurred vision, and CNS disorder. Aspiration of the liquid into the lungs may result in chemical pneumonitis, which may be fatal. Prolonged or repeated skin contact may cause defatting and dermatitis.

Existing medical conditions aggravated by exposure to this material:

No information found for this mixture.

FIRST AID PROCEDURES

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 by a poison control center or doctor.
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. 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.
Note:	Have the product container or label with you when calling a poison control center or doctor or going for treatment.

SECTION VI - REACTIVITY DATA**STABILITY:** Stable**CONDITIONS TO AVOID:** None known.**CHEMICAL INCOMPATIBILITY:** Avoid contact with strong oxidizers.**HAZARDOUS DECOMPOSITION PRODUCTS:** None known.**HAZARDOUS POLYMERIZATION:** Does not occur.**CONDITIONS TO AVOID:** None known.**CORROSIVE TO METAL:** No**OXIDIZER:** No**SECTION VII - PERSONAL PROTECTION**

PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions For Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Protective Clothing:

Applicators and handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves (such as barrier laminate or butyl rubber or nitrile rubber, or neoprene rubber or viton), shoes plus socks.

Eye Protection:

Protective eyewear.

Respiratory Protection:

If mists are generated, wear an approved pesticide respirator for mists to prevent inhalation.

Ventilation:

Use local exhaust to control dusts/mists.

SECTION VIII - ENVIRONMENTAL DATA**ENVIRONMENTAL TOXICITY DATA**

For the active ingredient:

Rainbow Trout, (96 hr) LC50 = 2.6 mg/L

Bluegill Sunfish, (96 hr) LC50 = 6.4 mg/L

Daphnia magna, (48 hr) EC50 = 16 mg/L

Bobwhite Quail, Oral LD50 = 1908 mg/kg

Bobwhite Quail, (8 day dietary) LD50 > 5620 ppm

Mallard Duck, (8 day dietary) LD50 > 5620 ppm

Freshwater diatom (Navicula pelliculosa), (5 day) EC50 > 1.2 ppm

Duckweed (Lemna gibba), (14 day) EC50 = 0.016 ppm

Blue-green algae (Anabaena), (5 day) EC50 = 0.36 ppm

Freshwater green algae (Selanastrum capricornutum), (5 day) EC50 = 0.018 ppm

Monocots - Oats, EC25 = 0.23 lbs ai/A

Dicots - Cucumber, EC25 = 0.36 lbs ai/A

SECTION X - ADDITIONAL INFORMATION**Frontier® 6.0 herbicide**

Revised information:

SECTION VIII - Environmental Toxicity updated.

EPA Reg. No. 7969-147

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

Complete Label and Directions For Use are attached to the product.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

BASF Corporation

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