

MATERIAL SAFETY DATA SHEET

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24 Hour Emergency Response Information:
BASF Corporation: 1 (800) 832-HELP
CHEMTREC: 1 (800) 424-9300

ESTABLISH™ Herbicide

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SECTION I – SUBSTANCE/PREPARATION

Trade Name: Establish herbicide
Chemical Name: (S)-2-chloro-N-[(1-methyl-2-methoxy) ethyl]-N-(2,4-dimethyl-thien-3-yl)-acetamide
Synonyms:
Formula: C(12) H(18) Cl N O(2) S
Chemical Family: Chloroacetamide
Mol Wt: 275.8

SECTION II – INGREDIENTS

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
Dimethenamid-P	163515-14-8	63.9	Not established
Inerts	N/A	36.1	Not established
including:			
*naphthalene	91-20-3	(3)	10 ppm TWA ACGIH

SARA Title III Section 313: *Listed

SECTION III - PHYSICAL DATA

BOILING/MELTING POINT@760mm Hg: 122°C@ 0.07mmHg(ai) pH: 3.5 - 4.5
VAPOR PRESSURE mmHg @ 20°C: 1.88x10(-5)@25°C
SPECIFIC GRAVITY OR BULK DENSITY: 1.13 g/ml 9.41 lb/gal
SOLUBILITY IN WATER: Emulsifiable
APPEARANCE: Light to dark brown liquid ODOR: Aromatic INTENSITY: Strong

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD): 216-220 °F SFCC AUTOIGNITION TEMP: N/D
FLAMMABILITY LIMITS IN AIR (% BY VOL): LOWER: N/D UPPER: N/D

NFPA 704 HAZARD CODES

HEALTH: 2 FLAMMABLE: 1 INSTABILITY: 0 OTHER:

NFPA 30 STORAGE CLASSIFICATION: Class III B

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.

UNUSUAL FIRE EXPLOSION HAZARDS:

Contact with strong oxidizers present a serious explosion hazard.

Combustion Products: Oxides of carbon, sulfur, nitrogen, HCl, aldehydes under fire conditions.

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, (for male and female combined) Oral LD50 = 695 mg/kg

Rat, Inhalation LC50 (4 hr) > 5.6 mg/L

Rat, Dermal LD50 > 2000 mg/kg

Rabbit, Eye Irritation - Mildly to moderately irritating to rabbit eyes clearing by 14 days.

Rabbit, Skin Irritation - Slightly irritating

Guinea pig, Dermal Sensitizer - Sensitizer

For Dimethenamid-P:

Developmental effects were noted in offspring (rat and rabbit) at doses that caused maternal toxicity.

In a longterm study in rats, a slight increase in liver tumors were noted in males only.

OSHA, NTP, or IARC Carcinogen: No - EPA has classified Dimethenamid-P as a Group C (MOS) carcinogen (possible human carcinogen).**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 the skin.

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

For a major component (petroleum solvent) of this formulation:

Slightly irritating to the eyes. Prolonged contact with skin may irritate and cause dermatitis. May aggravate an existing skin condition. Inhalation of vapor/aerosol concentrations (> 1000 ppm) are irritating to eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. Small amounts aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death. At high oral doses in rats, this component caused damage to the stomach, liver, thyroid, and urinary bladder. These effects are not relevant to humans at occupational levels of exposure.

For naphthalene (a component of petroleum solvent):

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 and/or kidney disorders. Hemolysis, anemia, fever, hemoglobinuria, and jaundice may also occur. Those with prior blood diseases may be more severely affected.

A National Toxicology Program (NTP) draft report states that lifetime inhalation exposure to naphthalene resulted in increases in tumors of the nose in rats. In a previous NTP study, lifetime inhalation exposure to naphthalene increased lung tumors in female mice. The relevance of the rodent findings to humans is questionable.

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. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. 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 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 to physician: Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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: Use product with caution around heat, sparks, pilot lights, static electricity or open flame.

CHEMICAL INCOMPATIBILITY: Avoid contact with strong oxidizers as this presents a serious explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: In a fire: oxides of carbon, sulfur, nitrogen, HCl, aldehydes

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:**

Chemically resistant suit, chemically resistant boots, and neoprene gloves as necessary to minimize skin contact.

Eye Protection:

Chemical goggles.

Respiratory Protection:

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

Ventilation:

Use local exhaust to control mists.

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

For Dimethenamid-P:

Bluegill Sunfish, (96 hr) LC50 = 10 mg/L

Rainbow Trout, (96 hr) LC50 = 6.3 mg/L

Daphnia magna, (48 hr) EC50 = 12 mg/L

Bobwhite Quail, Oral LD50 = 1068 mg/kg

Bobwhite Quail, (8 day dietary) LC50 > 5620 ppm

Mallard Duck, (8 day dietary) LC50 > 5620 ppm

Blue-green algae (Anabaena), (5 day) EC50 = 0.37 ppm

Fresh Water Green Algae (Selastrum capricornutum), (5 day) EC50 = 0.014 ppm

Freshwater diatom (Navicula pelliculosa) (5 day) EC50 = 0.33 ppm

Duckweed (Lemna gibba) (14 day) EC50 = 0.0089 ppm

Monocots - Ryegrass, EC25 = 0.0069 lbs ai/A

Dicots - Lettuce, EC25 = 0.0095 lbs ai/A

SARA 311/312 REPORTING

FIRE: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes TPQ(lbs): 10,000

SPILL AND LEAK PROCEDURES:

Contain liquid spill with absorbent material (clay granules, dirt, or equivalent), collect in a suitable waste container. Wash area of spill with detergent and water.

HAZARDOUS SUBSTANCE SUPERFUND: Yes

RQ(lbs): 100

WASTE DISPOSAL METHOD:

Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

HAZARDOUS WASTE 40CFR261: No**HAZARDOUS WASTE NUMBER: None****CONTAINER DISPOSAL:**

PLASTIC CONTAINERS: Triple rinse (or equivalent) and add rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

BULK/MINI-BULK CONTAINERS: Reusable containers should be returned to the point of purchase for cleaning and refilling because the container must be thoroughly cleaned before refilling.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean containers since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION IX - SHIPPING DATA - PACKAGE AND BULK**D.O.T. PROPER SHIPPING NAME (49CFR172.101-102):**

> 349 gal: RQ, Environmentally Hazardous Substances, liquid, N.O.S. (naphthalene)

< 349 gal: None

HAZARDOUS SUBSTANCE**(49CFR CERCLA LIST):**

Naphthalene (RQ = 349.5 gallons of product)

RQ(lbs): 100

D.O.T. HAZARD CLASSIFICATION (CFR 172.101-102):**PRIMARY**

> 349 gal: RQ, Environmentally Hazardous Substances, liquid

< 349 gal: None

SECONDARY

None

D.O.T. LABELS REQUIRED (49CFR172.101-102):

Class 9

D.O.T. PLACARDS REQUIRED (CFR172.504):

Class 9

POISON CONSTITUENT (49CFR172.203(K)):

N/A

BILL OF LADING DESCRIPTION

> 349 gallons: RQ, Environmentally Hazardous Substances, liquid, N.O.S. (naphthalene), 9, UN3082, PG III, ERG 171

< 349 gallons: Not regulated by the Department of Transportation

Please note: The above shipping information applies for domestic (USA) transportation. This material is regulated internationally in the European Union (EU). The Bill of Lading Description (air or sea transport) for the EU is: RQ, Environmentally hazardous substances, liquid, n.o.s. (dimethenamid), 9, UN 3082, PG III. The words "Marine Pollutant" shall be entered in association with the basic description on the shipping paper.

CC NO.:

UN/NA CODE: UN 3082

SECTION X - ADDITIONAL INFORMATION

Establish™ herbicide

EPA Reg. No. 7969-156-55467

KEEP OUT OF REACH OF CHILDREN

WARNING

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.

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