



NUFARM AGRICULTURE INC.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIED BY:

Nufarm Agriculture Inc.
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MANUFACTURED BY:

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403-258-8471

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PRODUCT:**CORDON****PCP NUMBER:**

29494

DATE PREPARED:

February 8, 2010

PREPARER:

Brent R McLennan

CHEMICAL FAMILY/USE:

Herbicide

FORMULA:

$C_{18}H_{16}ClNO_5$

CHEMICAL SYNONYMS:

ethyl (R)-2-[4-(6-chloro-1,3-benzoxazol-2-yloxy)phenoxy]propionate

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	Wt. %	CAS NO.
Fenoxaprop-P-ethyl	11.5 – 12.5	71283-80-2
Ethoxylated isotridecyl alcohol	20.5 – 22.5	9043-30-5
Naphthalene	<0.5%	91-20-3

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: KEEP OUT OF REACH OF CHILDREN. Causes eye damage. Causes eye and skin irritation. Potential skin sensitizer. DO NOT get in eyes. Avoid contact with skin and clothing. Avoid breathing spray mist or vapours. Protective eye equipment must be worn. Contains petroleum distillates. DO NOT induce vomiting. Vomiting may cause aspiration pneumonia.



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EFFECTS OF ACUTE EXPOSURE:

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

MEDICAL CONDITIONS AGGRAVATED: None known.

TOXICOLOGICAL EFFECTS: See toxicological data in Section 11.

PRINCIPLE ROUTES OF EXPOSURE: Skin contact and inhalation.

TOXICOLOGICALLY SYNERGISTIC MATERIALS: None known.

OTHER: None Known.

4. FIRST AID MEASURES

Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre 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 the first 5 minutes, then continue rinsing eye. Call a poison control centre 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 centre 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.

No specific antidote. Treat symptomatically. Treatment should be based on judgement of the physician in response to reactions of the patient. **CONTAINS PETROLEUM DISTILLATES.** DO NOT induce vomiting. Vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

FLASH POINT: 79°C

CONDITIONS OF FLAMMABILITY: Combustible mixture

FLAMMABLE LIMITS IN AIR - Upper (%): N/E

FLAMMABLE LIMITS IN AIR - Lower (%): N/E

AUTOIGNITION TEMPERATURE: >400°C

SENSITIVITY TO MECHANICAL IMPACT (Y/N): No sensitivity expected based on handling history.

SENSITIVITY TO STATIC DISCHARGE: No sensitivity expected based on handling history.

EXTINGUISHING MEDIA: Suitable extinguishing media for the surrounding fire should be used. Water, water mist, foam, 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.



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6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: 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, labelled 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. See Section 13 for disposal information.

7. HANDLING AND STORAGE

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Storage conditions: Store in cool, well ventilated area. DO NOT store below freezing. Keep container tightly closed. Keep away from food and feed products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

Hazardous Ingredients	TWA	ACGIH TLV	STEL	Units
Fenoxaprop-P-ethyl	N/E	N/E	N/E	N/E
Ethoxylated isotridecyl alcohol	N/E	N/E	N/E	N/E
Naphthalene	10 ppm	N/E	15 ppm	ppm

ENGINEERING CONTROLS: Ensure there is sufficient ventilation of the area.

RESPIRATORY PROTECTION EQUIPMENT: Self-contained breathing apparatus must be available in case of emergency.

PROTECTIVE GLOVES: All types of impervious gloves for handling chemicals are acceptable, provided that they can be cleaned.

EYE AND FACE PROTECTION: Wear chemical splash goggles during mixing/pouring operations or other activities in which eye contact with undiluted product is likely to occur.

OTHER PROTECTIVE EQUIPMENT: Use other equipment appropriate to specific situation.

VENTILATION: Use in well ventilated area.

SKIN PROTECTION: Wear appropriate protective clothing to prevent skin contact. Long sleeved shirt, long pants, socks and shoes suggested as minimum work clothing.

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.

BOILING POINT:Not available

VAPOR PRESSURE:Not available

VAPOR DENSITY (air = 1):.....Not available



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FREEZING POINT: Not available
MELTING POINT: Not applicable
PHYSICAL STATE: Liquid
ODOUR: Hydrocarbon (aromatic)
COLOUR: Pale yellow
ODOR THRESHOLD (ppm): Not available
EVAPORATION RATE (butyl acetate = 1): Not available
DENSITY @ 20°C: 0.99 g/cm³
pH: 8.2
SOLUBILITY IN WATER (20°C): Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS: In combustion emits toxic fumes.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, strong acids, strong bases.
CONDITIONS TO AVOID: Heat, hydrolyzing conditions

11. TOXICOLOGICAL INFORMATION

Cordon

ACUTE ORAL LD₅₀ (mg/kg): >2,000 mg/kg (Rat)
ACUTE DERMAL LD₅₀ (mg/kg): >2,000 mg/kg (Rat)
ACUTE INHALATION LC₅₀ (mg/l): 5.18 mg/L (Rat)
OTHER: May cause sensitization by skin contact.

Hazardous ingredients:

	Fenoxaprop-p-ethyl	Ethoxylated isotridecyl alcohol	Naphthalene
ACUTE ORAL LD₅₀ (mg/kg)	3,150-4,000 (Rat)	1,940 (Rat)	490 (Rat)
ACUTE DERMAL LD₅₀ (mg/kg)	>2,000 (Rat)	>2,000 (Rat)	2,500 (Rat)
ACUTE INHALATION LC₅₀ (mg/l)	>1.224 (Rat)	NE	NE
OTHER		Moderate eye irritant	

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: (fenoxaprop-p-ethyl technical)
96-HOUR LC₅₀ (mg/L): 0.46 mg/L (Rainbow Trout)
96-HOUR LC₅₀ (mg/L): 0.58 mg/L (Bluegill)
48-HOUR EC₅₀ (mg/L): 0.56 mg/L (Daphnia)
ORAL LD₅₀ (mg/kg): >2000 (Bobwhite Quail)



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CHEMICAL FATE INFORMATION: Readily absorbed into soil, biodegradable, no bioaccumulation potential.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: 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. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for cleanup of spills.

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 rinsing 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.

14. TRANSPORT INFORMATION

CANADIAN TDG DESCRIPTION (Road & Rail): not regulated

UN/NA NUMBER: UN3082 (fenoxaprop-p-ethyl, naphthalene)

IATA: Not regulated

IMO IMDG CODE: UN3082, Environmentally Hazardous Substances, Liquid, N.O.S. (fenoxaprop-p-ethyl, naphthalene)

15. REGULATORY INFORMATION

WHMIS HAZARD CLASS: B3 Combustible Liquid, D2B Toxic Material.

WHMIS TRADE SECRET: Exempt. (This product is regulated under the Pest Control Products Act - WHMIS exempt.)

CANADIAN INVENTORY:

Canadian Domestic Substance List: Naphthalene 91-20-3

HAZARD RATING SYSTEMS

HMIS: Health: 2; Flammability: 2; Physical hazard: 2; Personal protection: D, S, Q

National Fire Protection Association (NFPA®) Hazard Ratings:

Ratings for This Product		Key to Ratings	
2	Health Hazard	0	Minimal
1	Flammability	1	Slight
0	Instability	2	Moderate
		3	Serious
		4	Severe

16. OTHER INFORMATION

REVISIONS:

The following has been revised since the last issue of this MSDS: New



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ADDITIONAL INFORMATION:

Abbreviations used throughout the MSDS are: NA = Not available
 NAp = Not applicable
 N/E = None Established.

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 the CPR.

Company references utilized in preparation of the MSDS.

*****END OF MSDS*****