



## Nufarm Fluroxypyr Herbicide Safety Data Sheet

Issue Date: 2017-12-20

Supersedes Date: 2017-05-17

{Reserved}

### 1. Identification

**Product Name:** Nufarm Fluroxypyr Herbicide

**PCP Registration No.:** 30194

Refer to the approved product label for handling and use instructions.

**Product Type:** Herbicide

**Supplier:** Nufarm Agriculture Inc.  
Suite 350, 2618 Hopewell Place NE  
Calgary, Alberta, T1Y 7J7, Canada  
1-800-868-5444

**Telephone Numbers:** 24 Hour Emergency Response Number, Chemtrec, 1-800-424-9300.  
For medical emergencies, ProPharma Group, 1-877-325-1840.  
For product and use information, Nufarm Agriculture Inc.,  
1-800-868-5444.

### 2. Hazard Identification

Classified according to UN GHS Version 5.

**Physical Hazards:**

Flammable liquid                      Category 4

**Health Hazards:**

Acute toxicity (Oral)                      Category 5

Acute toxicity (Dermal)                      Category 5

Acute toxicity (Inhalation)                      Category 5

Skin irritation                      Category 3

Eye irritation                      Category 2B

**Environmental Hazards:**

Hazardous to aquatic environment, acute                      Category 1

**Signal Word:**

WARNING

**Hazard Statements:**

Combustible liquid. May be harmful if swallowed. May be harmful in contact with skin.  
May be harmful if inhaled. Causes eye irritation. Causes mild skin irritation. Very toxic  
to aquatic life.

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## Precautionary Statements:

Keep away from flames and hot surfaces.

Causes skin and eye irritation. May be harmful in contact with skin. Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wash concentrate from skin or eyes immediately. Wear coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. Remove and wash contaminated clothing before reuse.

Avoid breathing spray mist. Use only outdoors or in a well-ventilated area.

May be harmful if swallowed. Do not eat, drink or smoke when using this product.

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

## 3. Composition / Information on Ingredients

Hazardous Components	CAS No.	Wt. %
Solvent naphtha (petroleum), heavy aromatic, naphthalene depleted	64742-94-5	59-62
Fluroxypyr 1-methylheptyl ester	81406-37-3	26-28
Chemical Synonyms: fluroxypyr MHE; fluroxypyr-meptyl; 1-methylheptyl [(4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy]acetate		
1-methyl-2-pyrrolidinone	872-50-4	4-6
Chemical Synonyms: NMP; N-Methylpyrrolidone; N-Methylpyrrolidinone		

Other ingredients are considered non-hazardous.

## Content as Expressed on Product Label

Fluroxypyr, present as 1-methylheptyl ester ... 180 g/L

## 4. First Aid Measures

**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 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 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.

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**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.

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

This product contains petroleum distillates. Do not induce vomiting. Vomiting may cause aspiration pneumonia. Treat symptomatically for ingestion and/or skin and eye contact.

## 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:**..... 63C

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

**Hazardous Decomposition Products:** ... Under fire conditions, may produce gases such as hydrogen fluoride or other fluorine compounds, hydrogen chloride, nitrogen oxides and carbon oxides.

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product: Health: 2      Flammability: 2      Reactivity: 1**

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

## 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.

## 7. Handling and Storage

**Handling:** Avoid contact with skin, eyes and clothing. Wear goggles or face shield during mixing/loading. Wear coveralls or a long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal. After use, wash hands and other exposed skin. 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 near sources of heat. May be stored at any temperature. Shake well before using.

## 8. Exposure Controls / Personal Protection

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

**Personal Protective Equipment:** Goggles or face shield, coveralls or long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves. Rinse gloves before removal.

**Exposure Guidelines:**

Component	TWA*	STEL**	Reference/Note
Solvent naphtha (petroleum), heavy aromatic, naphthalene depleted	50 mg/m <sup>3</sup>	N/E	Supplier recommendation
Fluroxypyr 1-methylheptyl ester	10 mg/m <sup>3</sup>	N/E	Supplier recommendation
1-methyl-2-pyrrolidinone	10 ppm	N/E	AIHA recommendation

\*Time-weighted Average, 8-hour unless otherwise noted.

\*\*Short Term Exposure Limit

NE = Not Established

Refer to approved product label for additional exposure control guidance.

<b>9. Physical and Chemical Properties</b>
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**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 predominant ingredient(s).

**Appearance (physical state, colour, etc.)** ..... brown liquid

**Odour** ..... slight aromatic (solvent)

**Odour threshold** ..... not available

**pH** ..... 5.5 (1% w/w dilution)

**Melting point / Freezing point** ..... not available

**Initial boiling point and boiling range** ..... not available

**Flash point** ..... 63C

**Evaporation rate** ..... <0.01 (n-butyl acetate = 1) (solvent)

**Flammability (solids, gases)** ..... not applicable

**Upper / Lower flammability or explosive limits** ... LEL = 0.7, UEL = 5.6 vol. % in air (solvent)

**Vapour pressure** ..... 4.0 Pa @ 20C (solvent)

**Vapour density** ..... 5.6 @ 101 kPa (air = 1) (solvent)

**Relative density** ..... 0.99 @25C

**Solubility(ies)** ..... negligible in water, emulsifiable  
highly soluble in organic solvents

**Partition coefficient: n-octanol/water** ..... logP = 5.04 @ pH 7 (fluroxypyr MHE)

**Autoignition temperature** ..... not available

**Decomposition temperature** ..... >60C (fluroxypyr MHE)

**Viscosity** ..... not available

<b>10. Stability and Reactivity</b>
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**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 fluoride or other fluorine compounds, hydrogen chloride, nitrogen oxides and carbon oxides.

## 11. Toxicological Information

**Likely routes of exposure:** Inhalation, ingestion, skin and eye contact.

**Eye contact:** Causes eye irritation.

**Skin contact:** May be harmful if absorbed through skin. Causes mild skin irritation.

**Ingestion:** May be harmful if swallowed. No significant adverse health effects are expected if only small amounts are swallowed.

**Inhalation:** May be harmful if inhaled.

**Medical Conditions Aggravated by Exposure:** Skin exposure may aggravate preexisting skin conditions. Inhalation of mist may aggravate preexisting respiratory conditions.

### Toxicological Data:

Data are from laboratory studies conducted on similar products.

**Acute oral LD<sub>50</sub> (mg/kg)** ..... 3738 mg/kg (Rat, male), 3162 mg/kg (Rat, female)

**Acute dermal LD<sub>50</sub> (mg/kg)** ..... >2000 mg/kg (Rabbit)

**Acute inhalation LC<sub>50</sub> (mg/l)** ..... >6.2 (Rat, male & female, 4-hour exposure)

**Skin corrosion/irritation** ..... Considered as slightly irritating to the skin

**Serious eye damage/irritation** ..... Considered as moderately irritating to the eye

**Respiratory or skin sensitization** ... Not considered as a contact dermal sensitizer (Guinea pig)

**Germ cell mutagenicity** ..... Fluroxypyr shows no evidence of genotoxicity. Products similar to the hydrocarbon component are not considered to be mutagenic.

**Carcinogenicity** ..... Fluroxypyr shows no evidence of carcinogenicity.

Products similar to the hydrocarbon component are not considered to be mutagenic and are unlikely to cause tumors.

**Reproductive toxicity** ..... Fluroxypyr shows no evidence of reproductive toxicity.

## 12. Ecological Information

### Ecotoxicity:

Data are for fluroxypyr 1-methylheptyl ester technical, from published sources.

**Aquatic Invertebrate:** 48-Hour EC<sub>50</sub> (mg/L) ..... >0.09 (solubility limit) (*Daphnia*)

**Fish:** 96-Hour LC<sub>50</sub> (mg/L) ..... >0.09 (solubility limit) (Rainbow Trout)

**Algae:** 120-Hour EC<sub>50</sub> (mg/L) .... >0.09 (solubility limit) (*Selenastrum*), 0.093 (*Navicula*)

**Birds:** Oral LD<sub>50</sub> (mg/kg) ..... >2000 (Mallard and Bobwhite)

**Bees:** Oral and Contact LD<sub>50</sub> ..... >100 µg/bee

**Persistence and Degradability:** Fluroxypyr MHE is rapidly converted to fluroxypyr acid in all soil types. Fluroxypyr is degraded microbially with representative soil half-lives for fluroxypyr MHE and acid of 11 to 38 days.

**Mobility in Soil:** Field studies with fluroxypyr demonstrate no evidence of significant leaching.

**Bioaccumulation Potential:** Negligible.

### **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.

### **14. Transport Information**

#### **Canadian TDG Description (Road & Rail):**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (fluroxypyr-meptyl), Class 9, PG III

Marine pollutant.

Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by a road or railway vehicle.

#### **United States:**

##### **DOT Description:**

##### **< 119 gallons per complete package**

Non Regulated – See 49 CFR 173.132(b)(3) & 172.101 Appendix A

##### **≥ 119 gallons per complete package**

NA1993, Combustible, Liquid, n.o.s., (Napthalene), 3, III, Marine Pollutant

#### **IMDG**

UN3082, Environmentally hazardous substance, liquid, n.o.s., (fluroxypyr-meptyl), 9, III, Marine Pollutant

#### **IATA**

UN3082, Environmentally hazardous substance, liquid, n.o.s., (fluroxypyr-meptyl), 9, III, Marine Pollutant

## 15. Regulatory Information

*Pest Control Products Act* Registration Number: ..... 30194

OPAC Schedule: .... 3

Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

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:



DANGER POISON  
WARNING – EYE IRRITANT  
CAUTION – SKIN IRRITANT

WHMIS exempt.

## 16. Other Information

This Safety Data Sheet (SDS) is designed to comply with the Globally Harmonized System (GHS) of classification, and the *Hazardous Products Regulations*.

This SDS 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. The product labeling provides that information specifically for product use as intended.

Company and published information is used in the development of this SDS. The information herein is presented in good faith and believed accurate at the date of publication. However, no warranty, expressed or implied, is given.

Revisions to the last issue: Addition of PMRA guidance info to Section 15.