



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the
Hazardous Products Regulation (HPR)

Issuing Date 23-Aug-2022

Revision Date 23-Aug-2022

Revision Number 1

1. Identification

Product identifier

Product Name FBN Clodinafop

Other means of identification

Product Code(s) PMRA Reg. No.: 33323

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use only as directed on product label

Details of the supplier of the safety data sheet

Supplier Address

Farmers Business Network Canada, Inc.
120D 1st Street SW
Box 5607
High River, Alberta T1V 1M7
1-844-200-FARM (3276)

E-mail regulatory@farmersbusinessnetwork.com

Emergency telephone number

Emergency telephone CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)
24/7 Health Emergencies: Call 800-858-7378 (National Pesticide Information Center)

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration hazard	Category 1
Flammable liquids	Category 4

Label elements

Danger

Hazard statements

Combustible liquid
Harmful if swallowed
Harmful if inhaled
May cause an allergic skin reaction
May cause cancer
May damage fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways



Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves, protective clothing, eye protection and face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust, fume, gas, mist, vapors and spray
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice and attention
Take off contaminated clothing and wash it before reuse

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Ingestion

Rinse mouth
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting

Fire

In case of fire: Use dry chemical, CO₂, water spray or regular foam to extinguish

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant

Other information

May be harmful in contact with skin. Causes mild skin irritation. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

13.14 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
38.44 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	50 - 60	-	
Clodinafop-propargyl	105512-06-9	20 - 30	-	
Methyl pyrrolidone	872-50-4	5 - 10	-	
2-Methylnaphthalene	91-57-6	5 - 10	-	
Cloquintocet-mexyl	99607-70-2	5 - 10	-	
Naphthalene	91-20-3	5 - 10	-	
1-Methylnaphthalene	90-12-0	1 - 5	-	

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required.
Inhalation	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention. Delayed pulmonary edema may occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Avoid breathing vapors or mists. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Prolonged contact may cause redness and irritation.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.
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5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None known based on information supplied.
Specific hazards arising from the chemical	Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Store away from other materials. Keep at temperatures below 40°C.
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8. Exposure controls/personal protection

Control parameters**Exposure Limits**

Chemical name	Alberta	British Columbia	Ontario	Quebec
Methyl pyrrolidone 872-50-4	-	-	TWA: 400 mg/m ³	-
2-Methylnaphthalene 91-57-6	-	TWA: 0.5 ppm Skin	TWA: 0.5 ppm Skin	TWA: 0.5 ppm Skin
Naphthalene 91-20-3	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³ Skin	TWA: 10 ppm Skin	TWA: 10 ppm Skin	TWA: 10 ppm Skin
1-Methylnaphthalene 90-12-0	-	TWA: 0.5 ppm Skin	TWA: 0.5 ppm Skin	TWA: 0.5 ppm Skin

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Physical state Liquid
Color Light to dark brown
Odor Aromatic, solvent
Odor threshold No information available

Property

Property	Values	Remarks • Method
pH	4 - 5.5	
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	62 °C / 143.6 °F	
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive		No data available

limits		
Vapor pressure		No data available
Vapor density		No data available
Relative density		No data available
Water solubility		No data available
Solubility in other solvents		No data available
Partition coefficient		No data available
Autoignition temperature	510 °C / 950 °F	
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Other information

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	1.05 g/mL
Bulk density	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks. Excessive heat.
Incompatible materials	Strong acids. Strong oxidizing agents. Alkalis.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. May cause irritation.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. May be harmful in contact with skin. Causes mild skin irritation. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Prolonged contact may cause redness and irritation.
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Acute toxicity**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral) 1,732.78 mg/kg
ATEmix (inhalation-dust/mist) 3.63 mg/l

Unknown acute toxicity

13.14 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

38.44 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4688 mg/m ³ (Vapor) 4h
Clodinafop-propargyl 105512-06-9	= 2271 mg/kg (Rat) = 1392 mg/kg (Rat)	-	> 2.35 mg/L (Rat) 4 h
Methyl pyrrolidone 872-50-4	= 3914 mg/kg (Rat)	= 8 g/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h
2-Methylnaphthalene 91-57-6	= 1630 mg/kg (Rat)	-	-
Cloquintocet-mexyl 99607-70-2	-	> 2000 mg/kg (Rat)	> 935 mg/m ³ (Rat) 4 h
Naphthalene 91-20-3	= 1110 mg/kg (Rat)	= 1120 mg/kg (Rabbit)	> 0.4 mg/L (Rat) 4 h
1-Methylnaphthalene 90-12-0	= 1840 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes mild skin irritation.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No information available.
Carcinogenicity	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
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STOT - single exposure	No information available.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	-	LC50: =19mg/L (96h, Pimephales promelas) LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =45mg/L (96h, Pimephales promelas) LC50: =41mg/L (96h, Pimephales promelas)	-	EC50: =0.95mg/L (48h, Daphnia magna)
Methyl pyrrolidone 872-50-4	EC50: >500mg/L (72h, Desmodosmus subspicatus)	LC50: =832mg/L (96h, Lepomis macrochirus) LC50: =1072mg/L (96h, Pimephales promelas) LC50: =1400mg/L (96h, Poecilia reticulata)	-	EC50: =4897mg/L (48h, Daphnia magna)
Naphthalene 91-20-3	-	LC50: 5.74 - 6.44mg/L (96h, Pimephales promelas) LC50: =1.6mg/L (96h, Oncorhynchus mykiss) LC50: 0.91 - 2.82mg/L (96h, Oncorhynchus mykiss) LC50: =1.99mg/L (96h, Pimephales promelas) LC50: =31.0265mg/L (96h, Lepomis macrochirus)	-	LC50: =2.16mg/L (48h, Daphnia magna) EC50: =1.96mg/L (48h, Daphnia magna) EC50: 1.09 - 3.4mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	6.5
Methyl pyrrolidone 872-50-4	-0.46
2-Methylnaphthalene 91-57-6	3.86
Cloquintocet-mexyl 99607-70-2	5.24
Naphthalene 91-20-3	3.4

Mobility No information available.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. Transport information

TDG Not Regulated / Non-Hazardous
Shipment by ground via highway or rail is not regulated as a dangerous good as long as the packaging meets all TDG requirements.
No marks, labels, placards or shipping papers apply per TDG 1.45.1, but may be used to facilitate multi-modal transport involving ICAO (IATA) or IMO

IATA

UN number or ID number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Transport hazard class(es) 9
Packing group III
ERG Code 9L
Special Provisions A97, A158, A197
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Solvent Naphtha (Petroleum), Heavy Aromatic, Clodinafop-propargyl), 9, III

IMDG

UN number or ID number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es) 9
Packing group III
EmS-No F-A, S-F
Special Provisions 274, 335, 969
Marine pollutant P
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent Naphtha (Petroleum), Heavy Aromatic, Clodinafop-propargyl), 9, III, Marine pollutant

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

16. Other information

NFPA	Health hazards 2	Flammability 2	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 2	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet