



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 16-Sep-2022

Revision Date 31-May-2023

Revision Number 1.01

1. Identification

Product identifier

Product Name FBN 2,4-D Ester 700 EC

Other means of identification

Product Code(s) PMRA Reg. No.: 34857

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

Flammable liquids	Category 4
Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 1B

Label elements

Danger

Hazard statements

Combustible liquid
Harmful if swallowed
May cause an allergic skin reaction
May cause cancer

**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
 Avoid breathing vapors or mists
 Contaminated work clothing should not be allowed out of the workplace
 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

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 Rinse mouth

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. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

8.7 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

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)
2,4-D 2-Ethylhexyl ester	1928-43-4	90 - 99	-	
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	0.5 - < 1	-	
Naphthalene	91-20-3	0.1 - 0.5	-	

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.
Inhalation	Remove to fresh air.
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. Call a physician.
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. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives.
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical, CO2, 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
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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. 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. Avoid breathing vapors or mists.

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.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	Alberta	British Columbia	Ontario	Quebec
2,4-D 2-Ethylhexyl ester 1928-43-4	-	TWA: 10 mg/m ³ STEL: 20 mg/m ³	-	-
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

Chemical name	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Naphthalene	TWA: 10 ppm Skin	TWA: 10 ppm Skin	TWA: 10 ppm Skin	TWA: 10 ppm Skin

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Naphthalene	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm	TWA: 10 ppm

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
	STEL: 15 ppm Skin		STEL: 15 ppm Skin	TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³

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.

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 Transparent liquid
Physical state Liquid
Color Light brown
Odor Ester
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No data available
pH (as aqueous solution)	3.56	solution (1 %)
Melting point / freezing point		No data available
Initial boiling point and boiling range		No data available
Flash point	80.4 °C / 176.7 °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 limits		No data available
Vapor pressure		No data available
Relative 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		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	18.4 - 18.8 mPa s @40°C	

Other information

Explosive properties	None.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	1.15 g/mL @20°C
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. Incompatible materials.
Incompatible materials	Acids, Oxidizing agents.
Hazardous decomposition products	Hydrogen chloride, Nitrogen oxides (NOx), Carbon monoxide.

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

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Contact with eyes may cause irritation.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be harmful in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity**Numerical measures of toxicity**

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

ATEmix (oral) 552.90 mg/kg

Unknown acute toxicity

8.7 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-D 2-Ethylhexyl ester 1928-43-4	= 300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.4 mg/L (Rat) 4 h
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 4688 mg/m ³ (Vapor) 4h
Naphthalene 91-20-3	= 1110 mg/kg (Rat)	= 1120 mg/kg (Rabbit)	> 0.4 mg/L (Rat) 4 h

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

Skin corrosion/irritation	No information available.
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
2,4-D 2-Ethylhexyl ester 1928-43-4	-	Group 2B	-	X
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	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,4-D 2-Ethylhexyl ester 1928-43-4	-	LC50: 6 - 8.7mg/L (96h, Oncorhynchus mykiss) LC50: =7.8mg/L (96h, Oncorhynchus mykiss) LC50: <11.5mg/L (96h, Lepomis macrochirus)	-	-
Solvent Naphtha (Petroleum),	-	LC50: =19mg/L (96h,	-	EC50: =0.95mg/L (48h,

Heavy Aromatic 64742-94-5		Pimephales promelas) LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =45mg/L (96h, Pimephales promelas) LC50: =41 mg/L (96h, Pimephales promelas)		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
2,4-D 2-Ethylhexyl ester 1928-43-4	5.78
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	6.5
Naphthalene 91-20-3	3.4

Mobility No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

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

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	Not regulated in quantities less than 5 liter per individual container. See IATA SP A197
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
IATA Technical Name	2,4-D 2-Ethylhexyl ester
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D 2-Ethylhexyl ester), 9, III
Special Provisions	A97, A158, A197
ERG Code	9L
IMDG	Not regulated in quantities less than 5 liter per individual container. See IMDG 2.10.2.7
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
IMDG Technical Name	2,4-D 2-Ethylhexyl ester
Marine pollutant	P
Marine pollutant	2,4-D 2-Ethylhexyl ester
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D 2-Ethylhexyl ester), 9, III, Marine pollutant
Special Provisions	274, 335, 969
EmS-No.	F-A, S-F

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