Product Name: Assure™ II Herbicide

Assure® II is a combination package of products:

Assure™ II Herbicide PCP # 25462

SDS Date: 04/05/2019 Ref: 130000023960

Sure-Mix[™] Surfactant PCP # 25467

SDS Date: 02/13/2014

Safety data sheets are attached.

Manufacturer/Distributor:

Production Agriscience Canada Company P.O. Box 730, 7398 Queens Line Chatham, Ontario N7M 5L1

Telephone Numbers:

Product Information: 1-800-667-3852

Medical Emergency: 1-800-667-3852 (24 hours)

Preparation Date: July 15, 2019

®/™ Registered trademark/trademarks of Production Agriscience Canada Company. Production Agriscience Canada Company is a licensed user. Member of CropLife

*All other products mentioned are trademarks of their respective companies.



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This SDS adheres to the standards and regulatory requirements of Canada and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Assure II™ Herbicide

Tradename/Synonym : DPX-79376

Assure Pro Assure Plus B10054988

Quizalofop P-ethyl: Ethyl(R)-2-[4-(6-chloroquinoxalin-2-yl

oxy)- phenoxy]propionate

SDS Number : 130000023960

Product Use : Herbicide

Manufacturer : Production Agriscience Canada Company

P.O. Box 730, 7398 Queen's Line

Chatham, Ontario

N7M 5L1 Canada

Product Information : 1-800-667-3852

Medical Emergency : 1-800-441-3637 (24 hours)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Harmful if swallowed, inhaled or absorbed through skin.

Potential Health Effects

Skin

N-Methyl-2-pyrrolidone : Causes skin irritation. May cause:, Pain, burning sensation, itching,

redness, swelling, or rash...

Eyes

Quizalofop p-ethyl : May cause: slight irritation, tearing, Blurred vision.

N-Methyl-2-pyrrolidone : Causes eye irritation. May cause:, Pain, tearing, swelling, redness, or

temporary visual impairment..

Inhalation



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N-Methyl-2-pyrrolidone : Causes respiratory tract irritation. May cause:, Cough, sneezing, runny

nose, sore throat, or shortness of breath...

Repeated exposure

N-Methyl-2-pyrrolidone : May cause harm to the unborn child.

Target Organ

N-Methyl-2-pyrrolidone : Respiratory system

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC,

NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Quizalofop p-ethyl	100646-51-3	10.3 %
Other Ingredients		89.7 %

Includes percentages of the following:

includes percentages of the fellewing.			
N-Methyl-2-pyrrolidone	872-50-4	<8 %	

SECTION 4. FIRST AID MEASURES

Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with

plenty of water for 15-20 minutes. Call a poison control center or doctor for

treatment advice.



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Eye contact : 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 center or doctor for treatment advice.

Inhalation : Move 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 treatment advice.

Ingestion : Call a poison control center or doctor for treatment advice. DO NOT induce

vomiting unless directed to do so by a physician or poison control center. Do not give any liquid to the person. Do not give anything by mouth to an

unconscious person.

General advice : Have the product container or label with you when calling a poison control

center or doctor, or going for treatment.

For medical emergencies involving this product, call toll free 1-800-441-3637.

See Label for Additional Precautions and Directions for Use.

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

SECTION 5. FIREFIGHTING MEASURES

Flammable Properties

Flash point : 98.9 °C (210.0 °F) closed cup

Method: Setaflash closed cup - SCC

Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing

media

: High volume water jet, (contamination risk)

Firefighting Instructions : Wear full protective clothing and self-contained breathing apparatus.

Evacuate personnel and keep upwind of fire.

(on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool

containers/tanks with water spray.



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SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing

apparatus. Use personal protective equipment.

Spill Cleanup : Dike spill.

Sweep up and shovel into suitable containers for disposal.

If spill area is on ground near valuable plants or trees, remove top 2 inches of

soil after initial cleanup.

Dispose of in an approved container.

Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas.

Never return spills in original containers for re-use. Dispose of in accordance

with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating,

drinking, chewing gum, using tobacco, or using the toilet. Remove

clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon

as possible, wash thoroughly and change into clean clothing.

Handling (Physical Aspects) : Combustible

Keep away from heat and sources of ignition.

Storage : Store in original container. Do not contaminate water, other pesticides,

fertilizer, food or feed in storage. Store in a cool, dry place. Keep out of the

reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : Use only with adequate ventilation. Keep container tightly closed. When

handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for



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agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal protective equipment

Skin and body protection : Applicators and other handlers must wear:

Long sleeved shirt and long pants

Chemical resistant gloves, such as barrier laminate or Viton

Shoes plus socks

Protective eyewear

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has

been treated, such as plants, soil, or water, is:

Coveralls

Chemical resistant gloves, such as barrier laminate or Viton

Shoes plus socks

Protective eyewear

Protective measures : Discard clothing and other absorbent materials that have been drenched or

heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and

wash PPE separately from other laundry.

Exposure Guidelines

Exposure Limit Values



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Quizalofop p-ethyl				
AEL *	(DuPont)	1 mg/m3	12 hr. TWA Total dust.	
AEL *	(DuPont)	0.5 mg/m3	12 hr. TWA Respirable dust.	
AEL *	(DuPont)	2 mg/m3	8 hr. TWA Total dust.	
AEL *	(DuPont)	1 mg/m3	8 hr. TWA Respirable dust.	

Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified		
TLV	(ACGIH)	200 mg/m3 8-hour, time-weighted average total hydrocarbon vapor
		Central Nervous System impairment Upper Respiratory Tract irritation Skin irritation Application restricted to conditions in which there are neglible aerosol exposures Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption varies
AEL *	(DuPont)	100 ppm 8 & 12 hr. TWA

N-Methyl-2-pyrrolidone			
AEL *	(DuPont)	5 ppm	8 & 12 hr. TWA, Skin



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : dark amber

Odor : aromatic, hydrocarbon-like

рΗ : 5-7

(1% solution in water)

Oxidizing Substance : The product is not oxidizing.

Specific gravity : 1.02

Water solubility : emulsifiable

SECTION 10. STABILITY AND REACTIVITY

Stability : Stable at normal temperatures and storage conditions.

Conditions to avoid : Heat, flames and sparks.

Incompatibility : None reasonably foreseeable.

Hazardous reactions : Heating can release vapours which can be ignited.

Vapours may form explosive mixture with air.

Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Assure II[™] Herbicide

Inhalation 4 h LC50 : 2.6 - 4.4 mg/l, Rat

Dermal LD50 > 2,000 mg/kg , Rabbit

Oral LD50 5,900 mg/kg, Rat

Skin irritation Skin irritation, Rabbit

Eye irritation Risk of serious damage to eyes., Rabbit

Sensitisation Did not cause sensitisation on laboratory animals., Guinea pig

Further information Information given is based on data on the components and the

toxicology of similar products.

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Quizalofop p-ethyl

Repeated dose toxicity : Oral - feed

Mouse 90 d

Liver effects

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Not classifiable as a human carcinogen.

Reproductive toxicity : No toxicity to reproduction

Teratogenicity : Animal testing showed no developmental toxicity.

N-Methyl-2-pyrrolidone

Repeated dose toxicity : Ingestion

Rat 90 d

No toxicologically significant effects were found.

Inhalation Rat 90 d

No toxicologically significant effects were found.

Skin contact Rabbit 20 d

No toxicologically significant effects were found.

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Reproductive toxicity : Animal testing showed no reproductive toxicity.

Clear evidence of adverse effects on development, based on animal

experiments.

Teratogenicity : Animal testing showed effects on embryo-foetal development

including:

Reduced embryo-foetal viability

Reduced growth Foetal malformations

Delayed foetal development (variations)



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SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
Quizalofop p-ethyl

96 h LC50 : Oncorhynchus mykiss (rainbow trout) 0.72 mg/l

72 h ErC50 : Pseudokirchneriella subcapitata (green algae) 0.021 mg/l

48 h EC50 : Daphnia magna (Water flea) 51.9 mg/l

21 d : NOEC Daphnia magna (Water flea) 0.787 mg/l

N-Methyl-2-pyrrolidone

96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 500 mg/l

72 h EC50 : Desmodesmus subspicatus (green algae) 600.5 mg/l DIN 38412

72 h NOEC : Desmodesmus subspicatus (green algae) 125 mg/l DIN 38412

48 h EC50 : Daphnia magna (Water flea) 4,897 mg/l

21 d : NOEC Daphnia magna (Water flea) 12.5 mg/l OECD Test Guideline

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Environmental Fate

N-Methyl-2-pyrrolidone

Bioaccumulation : Bioaccumulation is unlikely.

Additional ecological information : Do not apply directly to water, or to areas where surface water is

present, or to intertidal areas below the mean high water mark. Do not

contaminate water when cleaning equipment or disposing of

equipment washwaters or rinsate.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : Do not contaminate water, food or feed by disposal. Wastes resulting from the

use of this product must be disposed of on site or at an approved waste

disposal facility.

Container disposal: : Container Refilling and Disposal:

Refer to the product label for instructions.

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IMDG

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Do not transport if this container is damaged or leaking.

SECTION 14. TRANSPORT INFORMATION

IATA_C UN number : 3334

Proper shipping name : Aviation regulated liquid, n.o.s. (Quizalofop p-ethyl)

Class : 9
Packing group : III
Labelling No. : 9
UN number : 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

LIQUID, N.O.S. (Quizalofop p-ethyl)

Class : 9
Packing group : III
Labelling No. : 9

Marine pollutant : yes (Quizalofop p-ethyl)

Not regulated by TDG when transported soley on land by road or railway vehicle.

SECTION 15. REGULATORY INFORMATION

PCP Registration # : 25462

Remarks : Regulated under the Pest Control Products Act - WHMIS exempt.

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

MSDS preparation date : 04/01/2019

(TM) Trademark of E.I. du Pont de Nemours and Company.

Contact person : Production Agriscience Canada Company, Chatham, Ontario, N7M 5L1

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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.

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SURE-MIX

GPA00126 Revised 20-MAR-2018

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"SURE-MIX" is a registered trademark of DuPont.

Product Use

Agricultural Adjuvant

Tradenames and Synonyms

Company Identification

MANUFACTURER/DISTRIBUTOR

E.I. du Pont Canada Company

P.O. Box 2200 Streetsville

Mississauga, Ontario L5M 2H3

PHONE NUMBERS

Product Information : 1-800-387-2122

Medical Emergency : 1-800-441-3637 (24 hours)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

CAS Number % Material Agricultural adjuvant, surfactant blend 40 %

60 % Paraffinic hydrocarbon, petroleum oil

HAZARDS IDENTIFICATION

Potential Health Effects

HEALTH HAZARDS: Eye irritant

OTHER EFFECTS OF OVEREXPOSURE:

No other adverse clinical effects have been associated with exposures to this material.

Eye contact with Sure-Mix may cause eye irritation with tearing, pain or blurred vision.

Skin contact with Sure-Mix may cause skin irritation with discomfort or rash.

(HAZARDS IDENTIFICATION - Continued)

Inhalation of high concentrations of the mist or aerosol may cause irritation of the respiratory passages with coughing and discomfort.

Ingestion of Sure-Mix may cause irritation of the digestive tract with stomach pain, heartburn, nausea, vomiting or diarrhea. Ingestion of large amounts may cause central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness. Small amounts of hydrocarbon solvent, if aspirated into the lungs during ingestion or subsequent vomiting, may cause severe lung congestion resulting in labored breathing, coma and death.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

SKIN CONTACT:

IF ON SKIN OR CLOTHING: Wash with soap and water. Remove contaminated clothing and launder separately from household laundry before reuse. Consult a physician or poison control center if irritation develops.

EYE CONTACT:

IF IN EYES: Flush immediately with clean flowing water for at least 15 minutes consult a physician or poison control center if irritation develops.

INGESTION:

IF SWALLOWED: DO NOT INDUCE VOMITING. Give water or milk. Consult a physician immediately or call a poison control center. This product contains PETROLEUM DISTILLATES.

INHALATION:

IF INHALED: Remove person to fresh air. Assist breathing if necessary. Consult a physician immediately or call a poison control center. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

Notes to Physicians

Lavage is indicated for the unresponsive patient who has ingested a large dose. Hydrocarbon pneumonitis is a risk if product is aspirated.

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Material Safety Data Sheet

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : 93 C (199 F)

Method : Setaflash Closed Cup - SCC.

Unusual Fire and explosion hazards:

None known

Extinguishing Media

Foam, dry chemical, c02, halogenated agents. Water spray may be used to cool containers, but a water stream may spread flames.

Fire Fighting Instructions

Wear self contained breathing apparatus with full facepiece and protective clothing.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

If needed, use MSHA-NIOSH approved respirator for organic vapors $% \left(1\right) =\left(1\right) +\left(1\right) +\left$

Initial Containment

If spilled, this material and its mixtures with water present a slip hazard. Use extra care in cleaning up spill areas to prevent injury.

Spill Clean Up

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Wear skin, eye, and respiratory protection during cleanup. Contain spill.

Keep out of sewers and drains.

Soak up material with absorbent and shovel into a chemical waste container.

Disposal Method:

Discarded product is not a hazardous waste under RCRA, 40 CF 261

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HANDLING AND STORAGE

Handling (Personnel)

Do not take internally. Harmful if swallowed or absorbed through the skin.

Skin irritant. Avoid inhalation of vapor or spray mist and contact with eyes, skin or clothing.

Wash throughly after handling and before eating, drinking, or smoking.

If clothing becomes contaminated, remove and wash separate from household laundry before re-use.

Handling (Physical Aspects)

Clean spray equipment throughly after use.

Storage

Store in original tightly closed container and do not allow water to be introduced to this container.

Do not ship or store near food, feed, seed, or fertilizers.

Store product in a cool, dry, locked, well-ventilated area without floor drain.

Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination

Product must be stored at temperatures above 5 C.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation.

Personal Protective Equipment

If needed, use MSHA-NIOSH approved respirator for organic vapors.

PROTECTIVE CLOTHING:

When mixing/loading this product, wear a long-sleeved shirt, long trousers, goggles or a face shield, chemical-resistant gloves, a hat, and rubber boots.

OTHER PROTECTIVE EQUIPMENT:

Eyewash station and safety shower in work area.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Exposure Guidelines

Exposure Limits
SURE-MIX

PEL (OSHA) : None Established TLV (ACGIH) : None Established

Exposure Guideline Comments

TLV or suggested control value:

No ACGIH TLV or OSHA PEL is assigned to this mixture. Control of exposure to below the PEL for the ingredients (See components section) may not be sufficient. Minimise exposure in accordance with good hygiene practice.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Form : Liquid. pH : 5-7

Specific Gravity : 0.9 (approx.)

Color : Pale yellow Solubility in water : Dispersible % volatile by volume : 4 (approx.)

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal conditions.

Incompatibility with Other Materials

Oxidizing agents

Decomposition

Combustion product:

Carbon dioxide, carbon monoxide nitrogen oxides, ammonia sulfur oxides

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Hydrocarbon Solvent
Oral LD50: > 24,000 mg/kg in rats

Animal testing indicates that the Hydrocarbon Solvent is an eye irritant, a mild skin irritant but not a skin sensitizer.

Single exposure tp ingestion to high doses of Hydrocarbon Solvent caused diarrhea. Repeated exposure caused decreased growth rate.

Single and repeated exposure by inhalation to high doses of Hydrocarbon Solvent caused inflammation of the lungs, histopathological changes of the lungs, and a form of pneumonia. Effects were only detected at or above levels well in excess of 100 ppm.

No adequate animal data are available to define the carcinogenic potential, developmental toxicity or reproductive effects of the Hydrocarbon Solvent.

Hydrocarbon Solvent did not produce genetic damage in bacterial cell cultures.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

No information is available.

DISPOSAL CONSIDERATIONS

Waste Disposal

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

For information on the disposal of unused, unwanted, product and the cleanup of spills, contact the Provincial Regulatory Agency or the Manufacturer.

(DISPOSAL CONSIDERATIONS - Continued)

Container Disposal

Triple-rinse the emptied container thoroughly and add the rinsing to the spray mixture in the tank.

Follow provincial instructions for any required additional cleaning of the container prior to its disposal.

Make the empty unsuitable for further use.

Dispose of the container in accordance with provincial requirements.

Do not contaminate domestic or irrigation water, lakes, streams, or ponds by the cleaning of equipment or the disposal of waste.

TRANSPORTATION INFORMATION

Shipping Information

Not Regulated by DOT/IMO/IATA

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : Listed.

Canadian Regulations

Regulated under the Pest Control Products Act--WHMIS Exempt

Registration No. 25467 Pest Control Products Act

OTHER INFORMATION

References

Information contained in the Material Safety Data Sheet was obtained from I.C.I. Americas Inc.- MSDS ID: 805479, with following disclaimer:

The information herein is given in good faith but no warranty, expressed or implied, is made.

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The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

End of MSDS