

Product Name:
Guardian™ MAX Herbicide

Guardian™ MAX is a combination package of products:

Classic™ Herbicide

PCP # 29416

SDS Date: 04/05/2019

Ref: 130000121249

Polaris™ MAX Herbicide

PCP # 32504

SDS Date: 01/06/2016

Ref: 130000147304

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: April 5, 2019

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Classic™ Herbicide

Version 3.0

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Revision Date : 04/01/2019

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 : Classic™ Herbicide
SDS Number : 130000121249
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

Caution

May irritate eyes, nose, throat or skin. May be harmful if absorbed through skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing.

Potential Health Effects

This section includes potential acute adverse effects which could occur if this material is not used according to the label.

Eyes : May cause: Irritation with discomfort, pain, redness, or visual impairment.

Repeated exposure

Quartz : DuPont has classified this material as a known human carcinogen.

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.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Chlorimuron ethyl	90982-32-4	25 %
Other Ingredients		75 %

Present as an impurity in the clay component of this product:

Titanium Dioxide		<1 %
Quartz		<1 %

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.
- 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** : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- 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.

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SECTION 5. FIREFIGHTING MEASURES

Flammable Properties

Ignition temperature : 330 °C (626 °F)

Lower explosion limit/ Lower flammability limit : 0.212 g/l

Fire and Explosion Hazard : Under severe dusting conditions, this material may form explosive mixtures in air.

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

Unsuitable extinguishing media : High volume water jet, (contamination risk)

Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus. Wear suitable protective equipment.
If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Use water spray. Runoff from fire control may be a pollution hazard. Control Runoff.

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.

Spill Cleanup : Dike spill. Prevent further leakage or spillage. Shovel or sweep up. Dispose of in an approved container. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. For minor spills, leaks, etc., follow all precautions indicated on the label and clean up immediately. If spill area is on ground near valuable plants or trees, remove 5 cm of top soil after initial clean-up.

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.

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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 the outside of gloves before removing. Wash thoroughly and put on clean clothing.
- Handling (Physical Aspects) : Avoid dust formation.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Use only with adequate ventilation. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. **IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

Personal protective equipment

- Skin and body protection : Applicators and other handlers must wear:
 - Long sleeved shirt and long pants
 - Chemical resistant gloves made of any waterproof material
 - Polyvinylchloride
 - Shoes plus socks

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

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

Coveralls

Chemical resistant gloves made of any waterproof material

Polyvinylchloride

Shoes plus socks

Protective measures : 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.

All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated.

Exposure Guidelines

Exposure Limit Values

Chlorimuron ethyl			
AEL *	(DuPont)	10 mg/m3	8 & 12 hr. TWA Total dust.
AEL *	(DuPont)	5 mg/m3	8 & 12 hr. TWA Respirable dust.

Titanium dioxide			
TLV	(ACGIH)	10 mg/m3	8-hour, time-weighted average Titanium dioxide

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		Lower Respiratory Tract irritation Not classifiable as a human carcinogen
AEL *	(DuPont)	10 mg/m3 8 & 12 hr. TWA Total dust.
AEL *	(DuPont)	5 mg/m3 8 & 12 hr. TWA Respirable dust.

Quartz		
TLV	(ACGIH)	0.025 mg/m3 8-hour, time-weighted average Respirable fraction Silica Lung cancer Pulmonary fibrosis Suspected human carcinogen
AEL *	(DuPont)	0.01 mg/m3 12 hr. TWA Respirable dust.
AEL *	(DuPont)	0.02 mg/m3 8 hr. TWA Respirable dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : solid, granules
Color : ivory
Odor : none
Bulk density : loose
Water solubility : dispersible

SECTION 10. STABILITY AND REACTIVITY

Stability : Stable at normal temperatures and storage conditions.
Incompatibility : None reasonably foreseeable.

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SECTION 11. TOXICOLOGICAL INFORMATION

Classic™ Herbicide

- Inhalation 4 h LC50 : > 5.0 mg/l , Rat
- Dermal LD50 : > 2,000 mg/kg , Rabbit
- Oral LD50 : > 5,000 mg/kg , Rat
- Skin irritation : No skin irritation, Rabbit
- Eye irritation : slight irritation, Rabbit
- Sensitisation : Did not cause sensitisation on laboratory animals., Guinea pig

Chlorimuron ethyl

- Repeated dose toxicity : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.
 - Dermal
Rabbit
No toxicologically significant effects were found.
 - Oral
Dog
No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., Abnormal decrease in number of red blood cells
 - Oral
Rat
No adverse effect has been observed in chronic toxicity tests.
- Carcinogenicity : Not classifiable as a human carcinogen.
Animal testing did not show any carcinogenic effects.
- Reproductive toxicity : No toxicity to reproduction

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Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Titanium Dioxide
Carcinogenicity : Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

Quartz
Repeated dose toxicity : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Inhalation
Fluid retention in lungs (pulmonary oedema), lung effects, Inflammation, Chronic lung disease, Fibrosis

Carcinogenicity : Human carcinogen.

DuPont has classified this material as a known human carcinogen.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
Chlorimuron ethyl

96 h LC50	:	Oncorhynchus mykiss (rainbow trout) > 1,000 mg/l
96 h LC50	:	Lepomis macrochirus (Bluegill sunfish) > 100 mg/l
72 h EC50	:	Pseudokirchneriella subcapitata (green algae) 0.001 mg/l
48 h EC50	:	Daphnia magna (Water flea) > 1,000 mg/l

Additional ecological information : Environmental Hazards: 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. Do not apply where/when conditions favour runoff.

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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.

SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Chlorimuron ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Chlorimuron ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Chlorimuron ethyl)

Not regulated as a hazardous material by TDG.

SECTION 15. REGULATORY INFORMATION

PCP Registration # : 29416
Remarks : Regulated under the Pest Control Products Act - WHMIS exempt.
No substances are subject to a Significant New Activity Notification.

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SECTION 16. OTHER INFORMATION

MSDS preparation date : 04/01/2019

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

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.

Polaris™ MAX Herbicide

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Issue Date : 04/05/2019 Ref. 130000147304
Revision Date : 04/01/2019

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 : Polaris™ MAX Herbicide
SDS Number : 130000147304
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
WARNING!
Irritating to eyes and skin. HARMFUL IF SWALLOWED. HARMFUL IF INHALED.

Potential Health Effects
Skin : Causes skin irritation.
Eyes : Severe eye irritation
Inhalation : Harmful if inhaled.
Ingestion : Harmful if swallowed.
Primary Routes of Entry : Skin contact, Eye contact, Inhalation

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.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Glyphosate, potassium salt	70901-12-1	48.7 %
Other Ingredients		51.3 %

SECTION 4. FIRST AID MEASURES

- Skin contact** : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- 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. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. 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** : Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

SECTION 5. FIREFIGHTING MEASURES

- Flammable Properties**
- Flash point** : does not flash

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- Hazardous combustion products : Carbon monoxide, phosphorous oxides, Nitrogen oxides (NOx).
- Suitable extinguishing media : Water, Foam, Dry chemical, Carbon dioxide (CO2)
- Firefighting Instructions : Wear self-contained breathing apparatus (SCBA). Thoroughly decontaminate all equipment used in fire fighting efforts before returning to service. Minimize use of water to prevent environmental contamination.

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.

- Spill Cleanup : Clean-up methods - small spillage Flush with plenty of water.
Clean-up methods - large spillage Prevent further leakage or spillage. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Large spills should be collected mechanically (remove by pumping) for disposal. Collect leaking liquid in sealable (metal/plastic) containers. Collect and contain contaminated absorbent and dike material for disposal. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.
- Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Prevent product from entering drains.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not breathe spray mist. When using do not eat, drink or smoke. Wash thoroughly after handling. Wash contaminated clothing before re-use.
- Storage : Store in original container. Keep in properly labelled containers. Keep tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

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Minimum storage temperature:

Storage temperature : -15 °C (5 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Skin and body protection : Wear as appropriate:

Chemical-resistant gloves

Face shield

Wear chemical resistant clothing to prevent incidental contact with this material such as safety glasses/goggles and gloves, aprons, boots or whole body suite made of neoprene or nitrile.

Goggles

This equipment must be cleaned thoroughly after each use.

Applicators and other handlers must wear:

Long sleeved shirt and long pants

Shoes plus socks

Protective measures : 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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None established.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid
Color : pale, ambertopale, brown
Odor : odourless
pH : 4.3 - 4.8
Vapour Pressure : aqueous phase
Density : 1.3565 g/cm³ at 20 °C (68 °F)
Water solubility : completely miscible
Partition coefficient: n-octanol/water : log Pow: -3.2 at 25 °C (77 °F)

SECTION 10. STABILITY AND REACTIVITY

Incompatibility : steel
Hazardous decomposition products : Carbon monoxide, phosphorous oxides, Nitrogen oxides (NO_x)

SECTION 11. TOXICOLOGICAL INFORMATION

Polaris™ MAX Herbicide
Dermal LD50 : > 5,000 mg/kg , Rat
Oral LD50 : > 5,000 mg/kg , Rat
Skin irritation : slight irritation, Rabbit
Eye irritation : Moderate eye irritation, Rabbit
Sensitisation : Guinea pig
Further information : Information given is based on data obtained from similar product.
Glyphosate, potassium salt
Inhalation 4 h LC50 : > 2.07 mg/l , Rat
Repeated dose toxicity :

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animals (unspecified species)
Reduced body weight gain, Liver effects

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Reproductive toxicity : Weight of evidence does not support classification for reproductive toxicity
Information given is based on data obtained from similar substances.

Teratogenicity : Evidence suggests the substance is not a developmental toxin in animals.
Information given is based on data obtained from similar substances.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Polaris™ MAX Herbicide

96 h static test LC50 : Lepomis macrochirus (Bluegill sunfish) 5.2 mg/l
96 h static test LC50 : Cyprinus carpio (Carp) 4.0 mg/l
72 h static test EC50 : Selenastrum capricornutum (green algae) 0.46 mg/l
48 h static test EC50 : Daphnia magna (Water flea) 8.0 mg/l

Toxicity to other organisms

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48 d LD50 : Apis mellifera (bees) > 281 mg/kg
48 d LD50 : Apis mellifera (bees) > 273 mg/kg
LD50 : Colinus virginianus (Bobwhite quail) > 3,851 mg/kg

Glyphosate, potassium salt

8 d LC50 : Colinus virginianus (Bobwhite quail) > 4,500 ppm
Dietary
8 d LC50 : Anas platyrhynchos (Mallard duck) > 4,500 ppm
Dietary

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Environmental Fate
Polaris™ MAX Herbicide
Bioaccumulation : Lepomis macrochirus (Bluegill sunfish)

Additional ecological information : Information given is based on data on the components and the ecotoxicology of similar products.

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.
Do not transport if this container is damaged or leaking.

Environmental Hazards : Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

TDG: Not regulated.

SECTION 15. REGULATORY INFORMATION

PCP Registration # : 32504
Remarks : No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

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MSDS preparation date : 04/01/2019

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

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