



Product Name: Guardian™ MAX 2 Herbicide

Guardian™ MAX 2 Herbicide is a combination of the following products:

Classic™ Herbicide, PCP: 29416

Polaris™ MAX Herbicide, PCP: 32504

The Safety Data Sheets are attached

COMPANY IDENTIFICATION

CORTEVA AGRISCIENCE CANADA COMPANY
#2450, 215 - 2ND STREET S.W.
CALGARY AB, T2P 1M4
CANADA

Customer Information Number : 800-667-3852

E-mail address : solutions@corteva.com

EMERGENCY TELEPHONE

24-Hour Emergency Contact : 1-888-226-8832

Local Emergency Contact : 1-888-226-8832



SAFETY DATA SHEET

PRODUCTION AGRISCIENCE CANADA COMPANY

Product name: Classic™ Herbicide

Issue Date: 04/30/2021

PRODUCTION AGRISCIENCE CANADA COMPANY encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: Classic™ Herbicide

Recommended use of the chemical and restrictions on use
Identified uses: Herbicide

COMPANY IDENTIFICATION

PRODUCTION AGRISCIENCE CANADA COMPANY
P.O. BOX 730, 7398 QUEEN'S LINE
CHATHAM, ONTARIO, N7M 5L1
CANADA

Customer Information Number : 800-667-3852
E-mail address : solutions@corveva.com

EMERGENCY TELEPHONE

24-Hour Emergency Contact : 1-888-226-8832
Local Emergency Contact : 1-888-226-8832

2. HAZARDS IDENTIFICATION

Hazard classification

This product is not hazardous under the criteria of the Hazardous Products Regulation (HPR) as implemented under the Workplace Hazardous Materials Information System (WHMIS 2015).

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Chlorimuron ethyl	90982-32-4	25.0%
Kaolin	1332-58-7	>= 30.0 - < 40.0 %

Sucrose	57-50-1	>= 30.0 - < 40.0 %
Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	68425-94-5	>= 1.0 - < 3.0 %
Quartz	14808-60-7	>= 0.1 - < 0.3 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

Never give anything by mouth to an unconscious person. For medical emergencies involving this product, call toll free 1-888-226-8832. See Label for Additional Precautions and Directions for Use. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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

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.

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

Most important symptoms and effects, both acute and delayed:

No cases of human intoxication are known and the symptoms of experimental intoxication are not known.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam

Unsuitable extinguishing media: Dry chemical

Special hazards arising from the substance or mixture

Hazardous combustion products: No data available

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust. Use personal protective equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. Pick up and arrange disposal without creating dust. recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Provide sufficient air exchange and/or exhaust in work rooms. Avoid formation of respirable particles. Do not breathe vapours/dust. Do not smoke. Handle in accordance with good industrial hygiene and safety practice. Avoid exposure - obtain special instructions before use. Smoking, eating and drinking should be prohibited in the application area. Do not get on skin or clothing. Avoid inhalation of vapour or mist. Avoid contact with skin and eyes. Keep container tightly closed. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Use with local exhaust ventilation.

Conditions for safe storage: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Explosives. Gases.

Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Consult local authorities for recommended exposure limits.

Component	Regulation	Type of listing	Value/Notation
Kaolin	ACGIH	TWA Respirable particulate matter	2 mg/m ³
	CA AB OEL	TWA Respirable	2 mg/m ³
	CA BC OEL	TWA Respirable	2 mg/m ³
	CA QC OEL	TWAEV respirable dust	5 mg/m ³
Sucrose	ACGIH	TWA	10 mg/m ³
	CA AB OEL	TWA	10 mg/m ³
	CA QC OEL	TWAEV	10 mg/m ³
	CA BC OEL	TWA Total dust	10 mg/m ³
	CA BC OEL	TWA respirable dust fraction	3 mg/m ³
Quartz	ACGIH	TWA Respirable particulate matter	0.025 mg/m ³ , Silica
	CA AB OEL	TWA Respirable particulates	0.025 mg/m ³
	CA ON OEL	TWA Respirable fraction	0.1 mg/m ³
	CA QC OEL	TWAEV respirable dust	0.1 mg/m ³
	CA BC OEL	TWA Respirable	0.025 mg/m ³ , Silica

Exposure controls

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.

Hygiene measures: 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.

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.

Individual protection measures

Eye/face protection: Wear protective eyewear to prevent contact with this substance.

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials

include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear protective clothing such as gloves, apron, boots, or coveralls, as appropriate.

Applicators and other handlers must wear: Long sleeved shirt and long pants 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 made of any waterproof material Polyvinylchloride Shoes plus socks

Respiratory protection: Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	solid granules
Color	ivory
Odor	none
Odor Threshold	No data available
pH	No data available
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	No data available
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	dispersible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	330 °C
Decomposition temperature	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Bulk density	loose
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: No decomposition if stored and applied as directed. Stable under normal conditions.

Possibility of hazardous reactions: None known.
No hazards to be specially mentioned.

Conditions to avoid: None known.

Incompatible materials: None.

Hazardous decomposition products
No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product:

LD50, Rat, > 5,000 mg/kg

Acute dermal toxicity

Product test data not available. Refer to component data.

Acute inhalation toxicity

Brief exposure (minutes) to easily attainable concentrations may cause adverse effects. Prolonged excessive exposure to mist may cause serious adverse effects, even death.

As product: The LC50 has not been determined.

For the active ingredient(s):

LC50, Rat, 4 Hour, dust/mist, > 5.0 mg/l

Skin corrosion/irritation

Essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Sensitization

For skin sensitization:

As product:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):

In animals, effects have been reported on the following organs:
Liver.

Carcinogenicity

For the active ingredient(s): No relevant data found.

Based on information for component(s): Did not cause cancer in laboratory animals.

Teratogenicity

For the active ingredient(s): Has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive toxicity

For the active ingredient(s): In animal studies, did not interfere with reproduction.

Mutagenicity

For the active ingredient(s): In vitro genetic toxicity studies were negative. In vivo tests did not show mutagenic effects

Aspiration Hazard

Based on available information, aspiration hazard could not be determined.

COMPONENTS INFLUENCING TOXICOLOGY:

Chlorimuron ethyl

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rat, male and female, > 5,000 mg/kg

Kaolin

Acute dermal toxicity

The dermal LD50 has not been determined.

Sucrose

Acute dermal toxicity

The dermal LD50 has not been determined.

Alkyl naphthalenesulfonic acid, polymer with formaldehyde, sodium salt

Acute dermal toxicity

The dermal LD50 has not been determined.

Quartz

Acute dermal toxicity

The dermal LD50 has not been determined.

Carcinogenicity

Component

Quartz

List

IARC
US NTP
OSHA CARC
ACGIH

Classification

Group 1: Carcinogenic to humans
Known to be human carcinogen
OSHA specifically regulated carcinogen
A2: Suspected human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

General 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 wash waters or rinsate. Do not apply where/when conditions favour runoff. See product label for additional application instructions relating to environmental precautions.

Toxicity

Acute toxicity to fish

As product:

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, > 1.000 mg/l

As product:

LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 100 mg/l

Acute toxicity to aquatic invertebrates

As product:

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1.000 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 0.0031 mg/l, OECD Test Guideline 201

EC50, Lemna gibba (duckweed), 14 d, Frond, 0.00027 mg/l, US EPA Test Guideline OPPTS 850.4400

EC50, Lemna gibba (duckweed), 14 d, Biomass, 0.00045 mg/l, US EPA Test Guideline OPPTS 850.4400

Persistence and degradability

Biodegradability: For the active ingredient(s): Not readily biodegradable.

Bioaccumulative potential

Bioaccumulation: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Mobility in soil

Kaolin

No relevant data found.

Sucrose

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 3.16 Estimated.

Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

TDG

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
UN number	UN 3077
Class	9
Packing group	III

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Chlorimuron ethyl)
UN number	UN 3077
Class	9
Packing group	III
Marine pollutant	Chlorimuron ethyl
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Chlorimuron ethyl)
UN number	UN 3077
Class	9
Packing group	III

Further information:

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

NOT REGULATED PER TDG EXEMPTION 1.45.1 FOR ROAD OR RAIL

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Canadian Domestic Substances List (DSL)

This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements.

Pest Control Products Act

Pest Control Products Act (PCPA) Registration Number: 29416

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this 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 (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. 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 products label:

PCPA Label Hazard Communications:

Read the label and booklet before using. Keep out of reach of children.

This product is toxic to:

Non-target terrestrial plants

Toxic to freshwater plants and algae.

16. OTHER INFORMATION

Revision

Identification Number: 011000007588 / Issue Date: 04/30/2021 / Version: 5.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	Canada. British Columbia OEL
CA ON OEL	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
TWA	8-hour time weighted average
TWAEV	Time-weighted average exposure value

Full text of other abbreviations

AiIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to

50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

PRODUCTION AGRISCIENCE CANADA COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

CA

Product name: Polaris™ MAX Herbicide

Issue Date: 04/28/2021

PRODUCTION AGRISCIENCE CANADA COMPANY encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: Polaris™ MAX Herbicide

Recommended use of the chemical and restrictions on use

Identified uses: Herbicide

Uses advised against: Do not use product for anything outside of the above specified uses.

COMPANY IDENTIFICATION

PRODUCTION AGRISCIENCE CANADA COMPANY
P.O. BOX 730, 7398 QUEEN'S LINE
CHATHAM, ONTARIO, N7M 5L1
CANADA

Customer Information Number : 800-667-3852
E-mail address : solutions@corveva.com

EMERGENCY TELEPHONE

24-Hour Emergency Contact : 1-888-226-8832
Local Emergency Contact : 1-888-226-8832

2. HAZARDS IDENTIFICATION

Hazard classification

This product is hazardous under the criteria of the Hazardous Products Regulation (HPR) as implemented under the Workplace Hazardous Materials Information System (WHMIS 2015).

Acute toxicity - Category 4 - Inhalation

Label elements

Hazard pictograms



Signal Word: **WARNING!**

Hazards

Harmful if inhaled.

Precautionary statements**Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

Other hazards

No data available

Further information

The values listed below represent the percentages of ingredients of unknown toxicity.
The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 51.3 %

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Glyphosate-potassium	70901-12-1	>= 40.0 - < 50.0 %

4. FIRST AID MEASURES

Description of first aid measures**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 1-888-226-8832. See Label for Additional Precautions and Directions for Use.

Inhalation: Move to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Call a poison control center or doctor for treatment advice.

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.

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. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: No data available

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe vapours/dust. Do not smoke. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Do not get in eyes. Avoid contact with skin and eyes. Avoid prolonged or repeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Do not store near acids.. Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Consult local authorities for recommended exposure limits.

Exposure controls

Engineering controls: 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.

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. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Nitrile rubber gloves. Butyl rubber or neoprene gloves. Viton.

Other 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.

Respiratory protection: Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH approved respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid liquid
Color	pale amber to pale brown pale amber to pale brown
Odor	odourless odourless
Odor Threshold	No data available
pH	4.3 - 4.8 4.3 - 4.8

Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	No data available
Flash point	does not flash does not flash
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	aqueous phase aqueous phase
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	No data available
Water solubility	completely miscible completely miscible
Partition coefficient: n-octanol/water	log Pow: -3.2 log Pow: -3.2
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Liquid Density	1.3565 g/cm ³ at 20 °C
Molecular weight	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: No decomposition if stored and applied as directed. Stable under normal conditions.

Possibility of hazardous reactions: None known.
No hazards to be specially mentioned.

Conditions to avoid: None known.

Incompatible materials: None.

Hazardous decomposition products: Carbon monoxide phosphorous oxides Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

For similar material(s):
LD50, Rat, > 5,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

For similar material(s):
LD50, Rat, > 5,000 mg/kg

Acute inhalation toxicity

Prolonged excessive exposure to dust may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

For similar material(s):
LC50, Rat, 4 Hour, dust/mist, > 2.58 mg/l

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Sensitization

For skin sensitization:
For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the active ingredient(s):
No relevant data found.

Carcinogenicity

For the active ingredient(s): No relevant data found.

Teratogenicity

For the active ingredient(s): No relevant data found.

Reproductive toxicity

For the active ingredient(s): No relevant data found.

Mutagenicity

For the active ingredient(s): No relevant data found.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

For similar material(s):

LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 5.2 mg/l

For similar material(s):

LC50, Cyprinus carpio (Carp), static test, 96 Hour, 4.0 mg/l

Acute toxicity to aquatic invertebrates

For similar material(s):

EC50, Daphnia magna (Water flea), static test, 48 Hour, 8.0 mg/l

Acute toxicity to algae/aquatic plants

For similar material(s):

EyC50, Selenastrum capricornutum (green algae), static test, 72 Hour, 0.46 mg/l

Toxicity to Above Ground Organisms

LD50, Apis mellifera (bees), 48 d, > 281 mg/kg

LD50, Apis mellifera (bees), 48 d, > 273 mg/kg

LD50, Colinus virginianus (Bobwhite quail), > 3,851 mg/kg

Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, > 10,000 mg/kg

Persistence and degradability

No data available.

Bioaccumulative potential

Partition coefficient: n-octanol/water(log Pow): -3.2 at 25 °C Partition coefficient: n-octanol/water(log Pow): -3.2 at 25 °C

Mobility in soil

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

TDG

Not regulated for transport

Classification for SEA transport (IMO-IMDG):**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**Not regulated for transport
Consult IMO regulations before transporting ocean bulk**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

National Fire Code of Canada

Not applicable

Canadian Domestic Substances List (DSL)

This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements.

Pest Control Products Act

Pest Control Products Act (PCPA) Registration Number: 32504

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this 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 (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. 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 products label:

PCPA Label Hazard Communications:

Read the label and booklet before using.

CAUTION POISON

WARNING EYE AND SKIN IRRITANT

This product is toxic to:

Aquatic organisms

Non-target terrestrial plants

16. OTHER INFORMATION

Revision

Identification Number: 011000008090 / Issue Date: 04/28/2021 / Version: 7.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

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