SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	INFINITY® HERBICIDE
Product code (UVP)	79002149
SDS Number	102000011554
PCP Registration No.	28738

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer CropScience Inc #200, 160 Quarry Park Blvd, SE Calgary, Alberta T2C 3G3 Canada
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Acute toxicity(Oral): Category 4
Eye irritation: Category 2B
Aspiration hazard: Category 1
Specific target organ toxicity - single exposure: Category 3
Carcinogenicity: Category 2
Reproductive toxicity: Category 2
Specific target organ toxicity - repeated exposure: Category 2
Flammable liquids: Category 4

Labelling in accordance with Part 3 of the Hazardous Products Regulations

Signal word: Danger

Hazard statements
Harmful if swallowed.
Causes eye irritation.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Combustible liquid.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Do not breathe gas/ mist/vapours/ spray.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.
Do NOT induce vomiting.
Rinse mouth.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Call a POISON CENTER/doctor/physician if you feel unwell.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Pyrasulfotole	365400-11-9	3.3
Bromoxynil octanoate	1689-99-2	13.4
Bromoxynil heptanoate	56634-95-8	12.9
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	15 – 40
Propylene carbonate	108-32-7	10 – 30
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	5 – 10
Naphthalene	91-20-3	3 – 7
Calcium dodecylbenzenesulphonate	26264-06-2	1 – 5
2-Ethylhexanol	104-76-7	1 – 5

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

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 physician or poison control center immediately.

Skin contact
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

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 physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. 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. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
Aspiration may cause pulmonary oedema and pneumonitis.

Indication of any immediate medical attention and special treatment needed

Risks
Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Specific hazards from the substance or mixture which can increase the fire

Flash point	90 °C
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
Advice on protection against fire and explosion	Keep away from heat and sources of ignition.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from heat and sources of ignition. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Pyrasulfotole	365400-11-9	0.3 mg/m3 (TWA)		OES BCS*
Bromoxynil octanoate	1689-99-2	0.21 mg/m3 (SK-SEN)		OES BCS*
Solvent Naphtha (petroleum), heavy aromatic (Non-aerosol.)	64742-94-5	200 mg/m3 (TWA)	11 2010	CAD ON OEL
Solvent Naphtha (petroleum), heavy aromatic (Vapor.)	64742-94-5	250 mg/m3 (15 MIN ACL)	05 2009	CAD SK OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	200 mg/m3 (TWA)	03 2014	CAD MB OEL

(Non-aerosol.)				
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	525 mg/m3 (TWA)	11 2010	CAD ON OEL
Solvent Naphtha (petroleum), heavy aromatic (Non-aerosol.)	64742-94-5	200 mg/m3 (TWA)	01 2020	CAD ON OEL
Solvent Naphtha (petroleum), heavy aromatic (Non-aerosol.)	64742-94-5	200 mg/m3 (TWA)	01 2021	CAD MB OEL
Solvent Naphtha (petroleum), heavy aromatic (Vapor.)	64742-94-5	200 mg/m3 (TWA)	08 2020	CAD AB OEL
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	200 mg/m3 (TWA)	04 2022	OEL (QUE)
Solvent Naphtha (petroleum), heavy aromatic (Non-aerosol.)	64742-94-5	200 mg/m3 (TWA)	06 2022	CAD BC OEL
Naphthalene	91-20-3	52 mg/m3/10 ppm (TWA)	10 2006	CAD AB OEL
Naphthalene	91-20-3	79 mg/m3/15 ppm (STEL)	10 2006	CAD AB OEL
Naphthalene	91-20-3	10 ppm (TWA)	07 2007	CAD BC OEL
Naphthalene	91-20-3	10 ppm (8 HR ACL)	05 2009	CAD SK OEL
Naphthalene	91-20-3	15 ppm (15 MIN ACL)	05 2009	CAD SK OEL
Naphthalene	91-20-3	10 ppm (TWA)	03 2011	CAD MB OEL
Naphthalene	91-20-3	10 ppm (TWA)	11 2010	CAD ON OEL
Naphthalene	91-20-3	10 ppm (TWA)	03 2020	OEL (QUE)
Naphthalene	91-20-3	10 ppm (TLV)		OES BCS*
2-Ethylhexanol	104-76-7	5 ppm (TWA)	01 2022	CAD MB OEL

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	beige to brown
Odour	aromatic, solvent-like
Odour Threshold	No data available
pH	ca. 3.9 (10 %) (23 °C) (deionized water)
Melting point/ range	No data available
Boiling Point	No data available
Flash point	90 °C
Flammability	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available

Relative density	No data available
Density	1.14 g/cm³ (20 °C)
Water solubility	No data available
Partition coefficient: n-octanol/water	Pyrasulfotole: log Pow: -1.362 Bromoxyniloctanoate: log Pow: 5.4 Bromoxynilheptanoate: log Pow: 5.9
Viscosity, dynamic	19.8 mPa.s (25 °C)
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Eye contact, Skin contact, Inhalation
Immediate Effects	
Eye	May cause temporary eye irritation.
Skin	May be harmful in contact with skin.
Ingestion	Harmful if swallowed.

Inhalation May be harmful if inhaled.

Information on toxicological effects

Acute oral toxicity	LD50 (female Rat) > 300 - < 2,000 mg/kg
Acute inhalation toxicity	LC50 (male/female combined Rat) > 5 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration.
Acute dermal toxicity	LD50 (male/female combined Rat) > 4,000 mg/kg
Skin corrosion/irritation	Mild skin irritation. (Rabbit)
Serious eye damage/eye irritation	Moderate eye irritation. (Rabbit)
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

Pyrasulfotole: Based on available data, the classification criteria are not met.
Bromoxyniloctanoate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Pyrasulfotole did not cause specific target organ toxicity in experimental animal studies.
Bromoxyniloctanoate caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver. The observed effects do not appear to be relevant for humans.
Bromoxynilheptanoate caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver. The observed effects do not appear to be relevant for humans.

Assessment mutagenicity

Pyrasulfotole was not genotoxic in a battery of in vitro and in vivo tests.
Bromoxyniloctanoate was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
Bromoxynilheptanoate was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Pyrasulfotole caused at high dose levels an increased incidence of tumours in the following organ(s): Cornea, urinary bladder. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.
Bromoxyniloctanoate caused at high dose levels an increased incidence of tumours in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.
Bromoxynilheptanoate caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.

ACGIH

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Group A3
Naphthalene	91-20-3	Group A3
2-Ethylhexanol	104-76-7	Group A3

NTP

Naphthalene	91-20-3

IARC

Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Overall evaluation: 3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Overall evaluation: 3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Overall evaluation: 3
Naphthalene	91-20-3	Overall evaluation: 2B

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Pyrasulfotole did not cause reproductive toxicity in a two-generation study in rats.
Bromoxyniloctanoate did not cause reproductive toxicity in a two-generation study in rats.
Bromoxynilheptanoate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Pyrasulfotole did not cause developmental toxicity in rats and rabbits.
Bromoxyniloctanoate caused a delayed foetal growth, an increased incidence of non-specific malformations. Bromoxyniloctanoate caused developmental toxicity only at dose levels toxic to the dams.
Bromoxynilheptanoate caused developmental toxicity only at dose levels toxic to the dams.
Bromoxynilheptanoate caused a delayed foetal growth, an increased incidence of non-specific malformations.

Aspiration hazard

May be fatal if swallowed and enters airways.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).
No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish

LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.029 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient bromoxynil octanoate.

LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.029 mg/l

	Exposure time: 96 h The value mentioned relates to the active ingredient bromoxynil heptanoate.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.046 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient bromoxynil octanoate. EC50 (Daphnia magna (Water flea)) 0.031 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient bromoxynil heptanoate.
Toxicity to aquatic plants	EC50 (Navicula pelliculosa (Freshwater diatom)) 0.043 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient bromoxynil octanoate. EC50 (Lemna gibba (gibbous duckweed)) 0.073 mg/l The value mentioned relates to the active ingredient bromoxynil octanoate.
Biodegradability	Pyrasulfotole: Not rapidly biodegradable Bromoxyniloctanoate: Not rapidly biodegradable Bromoxynilheptanoate: Not rapidly biodegradable
Koc	Pyrasulfotole: Koc: 20 - 213; log Koc: 2.34 Bromoxyniloctanoate: Koc: 639 Bromoxynilheptanoate: Koc: ca. 600
Bioaccumulation	Pyrasulfotole: Does not bioaccumulate. Bromoxyniloctanoate: Bioconcentration factor (BCF) 230 Does not bioaccumulate. Bromoxynilheptanoate: No data available, Does not bioaccumulate.
Mobility in soil	Pyrasulfotole: Moderately mobile in soils Bromoxyniloctanoate: Slightly mobile in soils Bromoxynilheptanoate: Slightly mobile in soils

Results of PBT and vPvB assessment

PBT and vPvB assessment	Pyrasulfotole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Bromoxyniloctanoate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Bromoxynilheptanoate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not

	considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet. Triple rinse containers.

SECTION 14: TRANSPORT INFORMATION

TDG

UN number	**3082**
Labels	9
Packaging group	III
Marine pollutant	Marine pollutant
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL, PETROLEUM DISTILLATES)

49CFR

NA-Number	**1993**
Packaging group	III
Marine pollutant	Marine pollutant
Proper shipping name	COMBUSTIBLE LIQUID, N.O.S. (BROMOXYNIL, PETROLEUM DISTILLATES, NAPHTHALENE)
RQ	Reportable Quantity is reached with 2,272 lb of product.

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL, PETROLEUM DISTILLATES SOLUTION)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL, PETROLEUM DISTILLATES SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Further Information	Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 28738

PMRA Information:
Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product regulated by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

Signal word:	Warning!
Hazard statements:	Poison. Harmful or fatal if swallowed. Causes eye irritation. May cause skin irritation.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2	Flammability - 2	Instability - 1	Others - none

HMIS (Hazardous Materials Identification System, based on the Fourth Edition Ratings Guide)

Health - 2*	Flammability - 2	Physical Hazard - 1	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard,
* = chronic health hazard

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 11: Toxicological Information. Section 16: Other Information. Reviewed and updated for general editorial purposes.

Revision Date: 12/16/2024

Changes since the last version are highlighted in the margin. This version replaces all previous versions.