

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 1/9
(30271689/SDS_CPA_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Molecular formula:	C15 H19 N3 O3 ; C15 H19 N3 O4
Chemical family:	imidazole derivative
PCP # 25111	
Synonyms:	imazethapyr ; imazamox

2. Hazards Identification

Emergency overview

WARNING:
Contains the allergen sulfite(s).
Causes eye irritation.
CAUSES SKIN IRRITATION.
May cause eye damage.
KEEP OUT OF REACH OF CHILDREN.

State of matter: solid
Colour: off-white to tan
Odour: odourless

Potential health effects

Acute toxicity:
Harmful if swallowed.

Irritation / corrosion:
May cause slight irritation to the eyes. May cause slight irritation to the respiratory tract. Prolonged contact with the product can result in skin irritation.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

Medical conditions aggravated by overexposure:
Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

Potential environmental effects

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 2/9
(30271689/SDS_CPA_CA/EN)

Aquatic toxicity:

There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Degradation / environmental fate:

Not readily biodegradable (by OECD criteria).

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Hazardous ingredients</u>
114311-32-9	35.0 %	Imazamox
81335-77-5	35.0 %	Imazethapyr
13463-67-7	>= 0.1 - <= 1.0 %	Titanium dioxide
14808-60-7	>= 0.1 - <= 1.0 %	crystalline silica

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

Antidote: No known specific antidote.
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	not applicable
Autoignition:	not applicable
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Self-ignition temperature:	not self-igniting

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons,
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 3/9
(30271689/SDS_CPA_CA/EN)

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions:

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Cleanup:

Avoid raising dust. Sweep/shovel up. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Handling

General advice:

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 4/9
(30271689/SDS_CPA_CA/EN)

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	granules	
Odour:	odourless	
Odour threshold:	No data available.	
Colour:	off-white to tan	
pH value:	2.9	
Melting point:	164 - 165 °C	
Boiling point:		The product is a non-volatile solid., not applicable
Vapour pressure:		negligible
Bulk density:	529 - 609 kg/m ³	
Vapour density:		not determined
Solubility in water:		(20 °C) dispersible

10. Stability and Reactivity

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Substances to avoid:

strong acids, strong bases, strong oxidizing agents

Hazardous reactions:

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 5/9
(30271689/SDS_CPA_CA/EN)

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

not fire-propagating

Not an oxidizer.

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Inhalation:

Type of value: LC50

Species: rat

Value: > 27.2 mg/l

Exposure time: 1 h

Dermal:

Type of value: LD50

Species: rat

Value: > 4,000 mg/kg

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

Irritation / corrosion

Skin:

Species: rabbit

Result: non-irritant

Method: Primary skin irritation test

Eye:

Species: rabbit

Result: non-irritant

Sensitization:

Skin sensitization test

Species: guinea pig

Skin sensitizing effects were not observed in animal studies.

Repeated dose toxicity

Information on: crystalline silica

Assessment of repeated dose toxicity:

This product may contain greater than 0.1% crystalline silica. Repeated exposure to high concentrations results in silicosis, a lung disease characterized by coughing, difficult breathing, wheezing, scarring of the lungs, and repeated, non-specific chest illnesses.

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 6/9
(30271689/SDS_CPA_CA/EN)

Genetic toxicity

Information on: imazamox
No mutagenic effect was found in various tests with microorganisms and mammals.

Information on: imazethapyr
No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity

Information on: imazamox
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: imazethapyr
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: imazamox
The results of animal studies gave no indication of a fertility impairing effect.

Information on: imazethapyr
The results of animal studies gave no indication of a fertility impairing effect.

Development:

Information on: imazamox
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Information on: imazethapyr
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Fish

Information on: imazamox
Acute:
Oncorhynchus mykiss/LC50 (96 h): = > 122 ppm

Information on: imazethapyr
Acute:
OPP 72-1 (EPA-Guideline) static
Oncorhynchus mykiss/LC50 (96 h): 340 mg/l

Aquatic invertebrates

Information on: imazamox
Acute:
Daphnia magna/EC50: >122 ppm

Information on: imazethapyr
Acute:
Daphnia magna/LC50 (48 h): > 1,000 mg/l

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 7/9
(30271689/SDS_CPA_CA/EN)

Aquatic plants

Information on: imazamox
Toxicity to aquatic plants:
algae/EC50 (120 h): > 0.037 mg/l

Information on: imazethapyr
Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (96 h): 71 mg/l
swollen duckweed/EC50 (14 d): 0.01 mg/l

Non-Mammals

Information on: imazamox
Other terrestrial non-mammals:
mallard duck/LC50: > 5,572 ppm
Honey bee/LD50: > 100 ug/bee

Information on: imazethapyr

Degradability / Persistence Biological / Abiological Degradation

Evaluation: Not readily biodegradable (by OECD criteria).

Information on: imazethapyr
Test method: DIN ISO 11266, soil
Method of analysis: CO2 formation relative to the theoretical value
Degree of elimination: approx. 1 - 2 % (28 d)

Information on: imazamox
Test method: OECD 301B; ISO 9439; 92/69/EEC, C.4-C
Method of analysis: CO2 formation relative to the theoretical value
Degree of elimination: approx. 30 %

Bioaccumulation

Information on: imazethapyr

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: imazamox
OECD-Guideline 305
sunfish, bluegill Bioconcentration factor < 1
Does not accumulate in organisms.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Rinse the container or liner as needed for disposal. Add rinsate to spray tank. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Consult the product label for additional details.

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 8/9
(30271689/SDS_CPA_CA/EN)

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHSM
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains IMAZETHAPYR)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3077
Hazard label: 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(contains IMAZETHAPYR)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released; restriction on quantity / not listed

Crop Protection DSL, CA released / exempt

WHMIS does not apply to this product.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

Recommended use: herbicide

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Safety Data Sheet

ODYSSEY

Revision date : 2013/01/07
Version: 4.0

Page: 9/9
(30271689/SDS_CPA_CA/EN)

MSDS Prepared by:
BASF NA Product Regulations
msds@basf.com
BASF HOTLINE (800) 454 – COPE (2673)
MSDS Prepared on: 2013/01/07

END OF DATA SHEET

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 1/8
(30326684/SDS_CPA_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1
CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Molecular formula: C17 H24 Cl N O4
PCP # 27603
Synonyms: Tepraloxydim

2. Hazards Identification

Emergency overview

CAUTION:
POISON.
WARNING:
Eye irritant.
Skin Irritant
HARMFUL IF SWALLOWED.
Irritating to eyes and skin.
Avoid inhalation of mists/vapours.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly after handling.

State of matter: liquid
Colour: dark yellow
Odour: faintly aromatic

Potential health effects

Acute toxicity:

Slightly toxic after single ingestion. Relatively nontoxic after short-term inhalation. Relatively nontoxic after short-term skin contact.

Irritation / corrosion:

May cause slight to moderate irritation after single short term exposure.

Sensitization:

Skin sensitizing effects were not observed in animal studies.

Signs and symptoms of overexposure:

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 2/8
(30326684/SDS_CPA_CA/EN)

Vomiting may cause aspiration pneumonia due to the ingredients. Because of the increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

Potential environmental effects

Aquatic toxicity:

Acutely toxic for aquatic invertebrates. Acutely toxic for aquatic plants. Acutely toxic for fish.

Terrestrial toxicity:

Acutely harmful to terrestrial organisms.

3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Flash point:	93 °C	(DIN EN 22719; ISO 2719)
Autoignition:	440 °C	(Directive 84/449/EEC, A.15)
Lower explosion limit:	approx. 0.7 %(V)	Information applies to the solvent.
Upper explosion limit:	approx. 5.6 %(V)	Information applies to the solvent.
Flammability:	not determined	

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Hazards during fire-fighting:

carbon monoxide, Hydrogen chloride, carbon dioxide, nitrogen oxides, organochloric compounds
The substances/groups of substances mentioned can be released in case of fire.

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 3/8
(30326684/SDS_CPA_CA/EN)

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions:

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Cleanup:

For large amounts: Dike spillage. Pump off product.

For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

General advice:

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Personal protective equipment

Respiratory protection:

Breathing protection if gases/vapours are formed. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 4/8
(30326684/SDS_CPA_CA/EN)

Hand protection:

Chemical resistant protective gloves

Eye protection:

Safety glasses with side-shields.

Body protection:

light protective clothing, thick material

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	faintly aromatic	
Odour threshold:	No data available.	
Colour:	dark yellow	
pH value:	approx. 3 - 5	(1 %(m), 20 °C) (as an emulsion)
crystallization temperature:	< -20 °C	
Boiling point:	approx. 250 °C	Information applies to the solvent.
Vapour pressure:	approx. 0.05 hPa	(20 °C) Information applies to the solvent.
Density:	approx. 1.04 g/cm3	(20 °C)
Vapour density:		not determined
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	approx. 9.4 mPa.s	(20 °C)
Viscosity, kinematic:	4.8 mm2/s	(40 °C)
Solubility in water:		emulsifiable

10. Stability and Reactivity

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

not determined

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

11. Toxicological information

Acute toxicity**Oral:**

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 5/8
(30326684/SDS_CPA_CA/EN)

Type of value: LD50
Species: rat
Value: > 2,000 - < 3,000 mg/kg (Guideline 92/69/EEC, B.1)

Inhalation:

Type of value: LC50
Species: rat
Value: > 5.4 mg/l (OECD Guideline 403)
Exposure time: 4 h
An aerosol was tested.

Dermal:

Type of value: LD50
Species: rat
Value: > 4,000 mg/kg (Directive 92/69/EEC, B.3)

Irritation / corrosion

Skin:

Species: rabbit
Result: Irritant.
Method: OECD Guideline 404

Eye:

Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Sensitization:

modified Buehler test
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.
Method: OECD Guideline 406

Carcinogenicity

Information on: Tepraloxydim

Indication of possible carcinogenic effect in animal tests.

Information on: solvent naphtha

Long-term exposure to highly irritating concentrations resulted in skin tumors in animals. A carcinogenic effect in humans can be excluded after brief skin contact.

Reproductive toxicity

Information on: Tepraloxydim

The results of animal studies suggest a fertility impairing effect.

Development:

Information on: Tepraloxydim

Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information:

Misuse can be harmful to health.

12. Ecological Information

Fish

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 6/8
(30326684/SDS_CPA_CA/EN)

Acute:
Oncorhynchus mykiss/LC50 (96 h): 4.6 mg/l
Lepomis macrochirus/LC50 (96 h): 2.29 mg/l

Aquatic invertebrates

Acute:
Daphnia magna/EC50 (48 h): 8.1 mg/l

Mysid shrimp/EC50 (96 h): 0.26 mg/l

Aquatic plants

Toxicity to aquatic plants:
green algae/EC50 (72 h): 7.1 mg/l

Bioaccumulation

Information on: Tepraloxymid

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

*Information on: solvent naphtha
flagfish (128 d) Bioconcentration factor 130 - 159
Accumulation in organisms is expected. The product has not been tested. The statement has been derived from products of a similar structure or composition.*

Environmental mobility:

*Information on: Tepraloxymid
Assessment transport between environmental compartments:
Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*

Other adverse effects:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

Must be sent to a suitable incineration plant, observing local regulations.
See product label for disposal and recycling instructions.

Container disposal:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport
TDG

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01
Version: 2.0

Page: 7/8
(30326684/SDS_CPA_CA/EN)

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains SOLVENT NAPHTHA)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains SOLVENT NAPHTHA)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA blocked / not listed

Crop Protection DSL, CA released / exempt

WHMIS does not apply to this product.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

Recommended use: herbicide

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:

BASF NA Product Regulations
msds@basf.com
BASF HOTLINE (800) 454 – COPE (2673)
MSDS Prepared on: 2012/06/01

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2012/06/01

Page: 8/8

Version: 2.0

(30326684/SDS_CPA_CA/EN)

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET

Safety Data Sheet

MERGE

Revision date : 2012/04/26

Page: 1/8

Version: 1.3

(30059253/SDS_CPA_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

PCP # 21058/24702

2. Hazards Identification

Emergency overview

WARNING:
POISON.
Skin Irritant
KEEP OUT OF REACH OF CHILDREN.
HARMFUL IF SWALLOWED.
HARMFUL IN CONTACT WITH SKIN.
This product is a skin irritant.
COMBUSTIBLE LIQUID.
Avoid inhalation of mists/vapours.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.

State of matter: liquid
Colour: pale straw yellow
Odour: faintly aromatic

Potential health effects**Acute toxicity:**

Slightly toxic after single ingestion. Slightly toxic after short-term inhalation. Slightly toxic after short-term skin contact.

Irritation / corrosion:

Irritating to eyes and skin.

Sensitization:

There is no evidence of a skin-sensitizing potential.

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 2/8
(30059253/SDS_CPA_CA/EN)

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Hazardous ingredients</u>
91-20-3	>= 3.0 - <= 7.0 %	naphthalene

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Do not induce vomiting due to aspiration hazard.

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Note to physician

Antidote:	No known specific antidote.
Treatment:	Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	65.5 °C	(closed cup)
Lower explosion limit:		not determined
Upper explosion limit:		not determined

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 3/8
(30059253/SDS_CPA_CA/EN)

6. Accidental release measures

Personal precautions:

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Cleanup:

For small amounts: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

For large amounts: Dike spillage. Pump off product.

7. Handling and Storage

Handling

General advice:

Provide good ventilation of working area (local exhaust ventilation if necessary).

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

Temperature tolerance

Protect from temperatures below: 5 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with workplace control parameters

naphthalene	OSHA	PEL 10 ppm 50 mg/m ³ ;
	ACGIH	TWA value 10 ppm ; STEL value 15 ppm ; Skin Designation ;
		The substance can be absorbed through the skin.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 4/8
(30059253/SDS_CPA_CA/EN)

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Remove contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	faintly aromatic	
Odour threshold:	No data available.	
Colour:	pale straw yellow	
pH value:		not applicable, not soluble
Freezing point:		Unspecified
Boiling range:	> 100 °C	The statements are based on the properties of the individual components.
Density:	0.934 g/cm ³	(20 °C)
Vapour density:		not determined
Solubility in water:		emulsifiable

10. Stability and Reactivity

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Substances to avoid:

strong oxidizing agents

Hazardous reactions:

The product is chemically stable.
No hazardous reactions when stored and handled according to instructions.

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 5/8
(30059253/SDS_CPA_CA/EN)

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide

Stable at ambient temperature. If product is heated above decomposition temperature, toxic vapours will be released.

11. Toxicological information

Acute toxicity

Oral:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

Information on: solvent naphtha

Type of value: LD50

Species: rat

Value: > 7,000 mg/kg

Inhalation:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Type of value: LC50

Species: rat

Value: > 0.25 - < 1 mg/l

Exposure time: 4 h

An aerosol was tested.

Information on: solvent naphtha

Type of value: LC50

Species: rat

Value: > 4 mg/l

Exposure time: 4 h

Dermal:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Value: > 4,000 mg/kg

Information on: solvent naphtha

Type of value: LD50

Species: rat

Value: > 3,160 mg/kg

Irritation / corrosion:

Skin:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Species: rabbit

Result: non-irritant

Method: BASF-Test

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 6/8
(30059253/SDS_CPA_CA/EN)

Information on: solvent naphtha
Species: rabbit
Result: moderately irritating

Eye:

Information on: Alcohols, C16-18, ethoxylated propoxylated
Species: rabbit
Result: non-irritant
Method: BASF-Test

Information on: solvent naphtha
Species: rabbit
Result: Slightly irritating.

Sensitization:

Information on: solvent naphtha
Buehler test
Species: guinea pig
Result: Non-sensitizing.

Genetic toxicity

Information on: solvent naphtha
No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

12. Ecological Information

Fish

Information on: Alcohols, C16-18, ethoxylated propoxylated
Acute:
Oncorhynchus mykiss/LC50: 0.1 - 1 mg/l

Information on: solvent naphtha
Acute:
OECD 203; ISO 7346; 84/449/EEC, C.1 semistatic
Oncorhynchus mykiss/LC50 (96 h): 18 mg/l
The statement of the toxic effect relates to the analytically determined concentration. The product has low solubility in the test medium. An aqueous dispersion has been tested.

Aquatic invertebrates

Information on: Alcohols, C16-18, ethoxylated propoxylated
Acute:
EC50 (48 h): 0.1 - 1 mg/l

Information on: solvent naphtha
Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): 1.4 - 21 mg/l
The product has low solubility in the test medium. An aqueous dispersion has been tested.

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 7/8
(30059253/SDS_CPA_CA/EN)

Aquatic plants

Information on: Alcohols, C16-18, ethoxylated propoxylated

Toxicity to aquatic plants:

EC50 (72 h): 0.1 - 1 mg/l

Information on: solvent naphtha

Toxicity to aquatic plants:

OECD Guideline 201 green algae/EC50 (72 h): 3.7 - 8.3 mg/l

Analogous: Assessment derived from products with similar chemical character.

The product has low solubility in the test medium. An aqueous dispersion has been tested.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Rinse the container or liner as needed for disposal. Add rinsate to spray tank. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Consult the product label for additional details.

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SOLVENT NAPHTHA, FATTY ALCOHOL ETHOXYLATE 39%)

Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SOLVENT NAPHTHA, FATTY ALCOHOL ETHOXYLATE 39%)

15. Regulatory Information

Federal Regulations

Registration status:

Safety Data Sheet

MERGE

Revision date : 2012/04/26
Version: 1.3

Page: 8/8
(30059253/SDS_CPA_CA/EN)

Chemical	DSL, CA	blocked / not listed
Crop Protection	DSL, CA	released / listed

WHMIS does not apply to this product.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

Recommended use: adjuvant

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:

BASF NA Product Regulations
msds@basf.com
BASF HOTLINE (800) 454 – COPE (2673)
MSDS Prepared on: 2012/04/26

END OF DATA SHEET