

Safety Data Sheet

EQUINOX EC HERBICIDE

Revision date : 2010/09/09

Version: 1.0

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(30326684/SDS_CPA_CA/EN)

1. Product and Company Identification

Use: crop protection product, herbicide

CompanyBASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA24 Hour Emergency Response InformationCANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Molecular formula:	C17 H24 Cl N O4
Chemical family:	crop protection product, herbicide, emulsion concentrate (EC)
27603	
Synonyms:	Tepraloxydim

2. Hazards Identification

Emergency overviewCAUTION:
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 aromaticPotential health effects**Acute toxicity:**

Harmful: may cause lung damage if swallowed. The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion:

Irritating to skin.

Sensitization:

Skin sensitizing effects were not observed in animal studies.

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Chronic toxicity:

Carcinogenicity: Limited evidence of a carcinogenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Reproductive toxicity: Possible risk of impaired fertility. The product has not been tested. The statement has been derived from the properties of the individual components.

Teratogenicity: Possible risk of harm to the unborn child. The product has not been tested. The statement has been derived from the properties of the individual components.

Potential environmental effects

Degradation / environmental fate:

Not readily biodegradable (by OECD criteria). The product has not been tested. The statement has been derived from the properties of the individual components.

3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting due to aspiration hazard.

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:	approx. 491 °C	Information applies to the solvent.
Lower explosion limit:	approx. 0.7 %(V)	Information applies to the solvent.
Upper explosion limit:	approx. 5.6 %(V)	Information applies to the solvent.
Self-ignition temperature:		not self-igniting

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

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Hazards during fire-fighting:

carbon monoxide, Hydrogen chloride, nitrogen oxides, organochloric compounds
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:

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:

Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothes, undergarments and shoes immediately.

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.

Protection against fire and explosion:

The product is combustible. Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

General advice:

Keep container in a well-ventilated place. Keep container dry. Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

Storage stability:

Storage duration: 36 Months

Temperature tolerance

Protect from temperatures below: -10 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 30 °C

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

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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.

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. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Take off immediately all contaminated clothing. Store work clothing separately. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	faintly aromatic	
Odour threshold:	No data available.	
Colour:	dark yellow	
pH value:	approx. 4	(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	Information applies to the solvent.
Density:	1.035 g/cm ³	(20 °C)
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	approx. 9.6 mPa.s	(20 °C)
Viscosity, kinematic:	4.8 mm ² /s	(40 °C)
Solubility in water:		emulsifiable

10. Stability and Reactivity

Substances to avoid:

No substances known that should be avoided.

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:

No decomposition if stored and handled as prescribed/indicated.

Corrosion to metals:

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Corrosive effects to metal are not anticipated.

Oxidizing properties:

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

11. Toxicological information

Acute toxicity

Oral:

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

Genetic toxicity

Information on: Tepraloxydim

Mutagenicity tests revealed no genotoxic potential.

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.

Other Information:

Misuse can be harmful to health.

12. Ecological Information

Fish

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

Aquatic invertebrates

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

Aquatic plants

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

13. Disposal considerations

Waste disposal of substance:

Must be disposed of or incinerated in accordance with local regulations.
See product label for disposal and recycling instructions.

14. Transport Information

Reference Bill of Lading

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

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msds@basf.com
MSDS Prepared on: 2010/09/09

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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/, PCP #25818

2. Hazards Identification

Emergency overview

COMBUSTIBLE LIQUID.
CAUSES SKIN IRRITATION.

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

Potential health effects

Irritation / corrosion:
Irritating to eyes and skin.

3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

If inhaled:

Keep patient calm, remove to fresh air. Assist in breathing if necessary. Consult a physician.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Hold eyelids open to facilitate rinsing. Flush with copious amounts of water for at least 15 minutes. If symptoms persist, seek medical advice.

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If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.

5. Fire-Fighting Measures

Flash point: 65.5 °C (closed cup)

Suitable extinguishing media:

water spray, dry extinguishing media, 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:

Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. 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.

6. Accidental release measures

Personal precautions:

Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothes, undergarments and shoes immediately.

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).

Storage

General advice:

Protect against moisture. Avoid all sources of ignition: heat, sparks, open flame. Protect from direct sunlight. Store protected against freezing.

Storage incompatibility:

General advice: Segregate from foods and animal feeds.

Storage stability:

Storage duration: 24 Months

8. Exposure Controls and Personal Protection

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

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Personal protective equipment

Respiratory protection:

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

Hand protection:

Chemical resistant protective gloves, Suitable materials, rubber, plastic

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

light protective clothing, thick material

General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep separated from food stuffs and feed stocks. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift.

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:		Information applies to the solvent.
<i>Information on: Solvent naphtha</i>		
Boiling point:	183.89 °C	

Vapour pressure:		No data available.
<i>Information on: Solvent naphtha</i>		
Vapour pressure:	< 5 hPa	

Density:	0.934 g/cm3	(20 °C)
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Solubility in water:		emulsifiable

10. Stability and Reactivity

Conditions to avoid:

Avoid extreme heat.

Substances to avoid:

strong oxidizing agents

Hazardous reactions:

The product is chemically stable.

No hazardous reactions when stored and handled according to instructions.

11. Toxicological information

Acute toxicity

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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

Information on: solvent naphtha

Species: rabbit

Result: moderately irritating

Eye:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Species: rabbit

Result: non-irritant

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Method: BASF-Test

Information on: solvent naphtha

Species: rabbit

Result: Slightly irritating.

Sensitization:

Information on: Alcohols, C16-18, ethoxylated propoxylated

Information on: solvent naphtha

Buehler test

Species: guinea pig

Result: Non-sensitizing.

Genetic toxicity

Information on: Alcohols, C16-18, ethoxylated propoxylated

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.

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:

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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.

Degradability / Persistence Biological / Abiological Degradation

Information on: Alcohols, C16-18, ethoxylated propoxylated

Test method: mod. OECD 303A

Method of analysis: Bismuth-active substance

Degree of elimination: >= 90 %

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: 70 - 80 %

Information on: solvent naphtha

Test method: OECD 301F; ISO 9408; 92/69/EEC, C.4-D (aerobic), activated sludge, domestic

Method of analysis: BOD of COD

Degree of elimination: 50 - 60 % (28 d)

Evaluation: Easily eliminated from water.

Readily biodegradable.

Evaluation: Not readily biodegradable (by OECD criteria).

Moderately/partially biodegradable.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information

Federal Regulations

Registration status:

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

BASF supports 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

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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.

Local Contact Information

BASF Canada Product Safety
prod_reg@basf.com

END OF DATA SHEET