

SAFETY DATA SHEET



NORTRON® FLOWABLE HERBICIDE

Version 2.0 / CDN
102000013443

1/10
Revision Date: 05/10/2016
Print Date: 04/26/2018

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

Product identifier

Trade name NORTRON® FLOWABLE HERBICIDE

Product code (UVP) 05853965

SDS Number 102000013443

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

This material is not hazardous under the criteria of Part 2 of the Hazardous Products 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
Ethofumesate	26225-79-6	42.0
1,2-Propanediol	57-55-6	7.0
Sodium lignosulphonate	8061-51-6	1.3

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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	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. 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.

Most important symptoms and effects, both acute and delayed

Symptoms	Local:, To date no symptoms are known. Systemic:, Drowsiness, Headache, Lethargy, Dyspnoea, Ataxia, Tremors
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Indication of any immediate medical attention and special treatment needed

Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.
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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

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

Special protective equipment for firefighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
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Further information	Keep out of smoke. Fight fire from upwind position. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	No flash point - Determination conducted up to the boiling point.
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. 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.

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. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

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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. Protect from freezing. Keep away from direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Ethofumesate	26225-79-6	10 mg/m3 (TWA)		OES BCS*
Ethofumesate	26225-79-6	10 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA EV)	11 2010	CAD ON OEL
1,2-Propanediol (Vapor and aerosol, inhalable fraction.)	57-55-6	155 mg/m3/50 ppm (TWA EV)	11 2010	CAD ON OEL

*OES BCS: Internal Bayer CropScience "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 nitrile rubber gloves

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

Appearance brown

Physical State suspension

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Odor	characteristic
Odour Threshold	No data available
pH	6.0 - 7.5 at 100 % (23 °C)
Vapor Pressure	No data available
Vapor Density (Air = 1)	No data available
Density	ca. 1.13 g/cm ³ at 20 °C
Evaporation rate	No data available
Boiling Point	No data available
Melting / Freezing Point	No data available
Water solubility	miscible
Minimum Ignition Energy	Not applicable
Decomposition temperature	No data available
Partition coefficient: n-octanol/water	log Pow: 2.7 at 25 °C The value mentioned relates to the active ingredient ethofumesate.
Viscosity	200 - 450 mPaxs at 20 °C Velocity gradient 20 /s
Flash point	No flash point - Determination conducted up to the boiling point.
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	No data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	No data available
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	Extremes of temperature and direct sunlight.
Incompatible materials	No data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

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SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Skin Absorption, Ingestion, Inhalation

Immediate Effects

Eye May cause mild irritation to eyes.

Skin Harmful if absorbed through skin.

Inhalation Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 2,100 mg/kg

Acute inhalation toxicity ATE (Mix) (Rat) > 5.0 mg/l
Exposure time: 4 h

Acute dermal toxicity LD50 (Rat) > 4,100 mg/kg

Skin irritation No skin irritation (Rabbit)

Eye irritation Minimally irritating. (Rabbit)

Sensitisation Non-sensitizing. (Guinea pig)

Assessment repeated dose toxicity

Ethofumesate did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Ethofumesate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Ethofumesate was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Ethofumesate did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Ethofumesate did not cause developmental toxicity in rats and rabbits.

Further information

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Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Cyprinus carpio (Carp)) 64.1 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 93.2 mg/l Exposure time: 48 h Test conducted with a similar formulation.
Toxicity to aquatic plants	EC50 (Desmodesmus subspicatus (green algae)) 6.7 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Biodegradability	Ethofumesate: Not rapidly biodegradable
Koc	Ethofumesate: Koc: 147
Bioaccumulation	Ethofumesate: Bioconcentration factor (BCF) 144 Does not bioaccumulate.
Mobility in soil	Ethofumesate: Moderately mobile in soils
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Do not contaminate water, food, or feed by disposal. Dispose in accordance with all local, state/provincial and federal regulations. Follow advice on product label and/or leaflet.
Contaminated packaging	Do not re-use empty containers. Triple rinse containers. Add washings to sprayer at time of filling. Puncture container to avoid re-use. Consult state and local regulations regarding the proper disposal of container.

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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. (ETHOFUMESATE)

49CFR

Not dangerous goods / not hazardous material

IMDG

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

IATA

UN number	3082
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ETHOFUMESATE 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.
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SECTION 15: REGULATORY INFORMATION

US Federal Regulations

TSCA list

None.

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US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN
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Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol	57-55-6
Sodium lignosulphonate	8061-51-6

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

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

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NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 0 Instability - 0 Others - none

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

Health - 1 Flammability - 0 Physical Hazard - 0 PPE -

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

Reason for Revision: Revised according to the current Canadian WHMIS standard (WHMIS 2015).

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

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