



Material Safety Data Sheet NORTRON® SC HERBICIDE

MSDS Number: 102000013443

MSDS Version 2.2

Revision Date: 03/08/2012

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SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	NORTRON® SC HERBICIDE
MSDS Number	102000013443
Product code (UVP)	05853965
EPA Registration No.	264-613
Product Use	Herbicide

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist.

Physical State suspension Liquid

Odor characteristic

Appearance brown

Exposure routes Eye contact, Skin Absorption, Ingestion, Inhalation

Immediate Effects

Eye May cause mild irritation to eyes. Avoid contact with eyes.

skin Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Inhalation Harmful if inhaled. Avoid inhalation of vapour or mist.

Chronic or Delayed Long-Term This product or its components may have target organ effects.



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Potential Environmental Effect Toxic to fish.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Ethofumesate	26225-79-6	42.00
1,2-Propanediol	57-55-6	6.75
Sodium lignosulphonate	8061-51-6	1.26

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
skin	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.
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.
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.
Notes to physician	
Signs and Symptoms	Local: To date no symptoms are known. Systemic: Drowsiness Headache Lethargy Dyspnoea Ataxia Tremors
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. FIRE FIGHTING MEASURES

Flash point	No flash point - Determination conducted up to the boiling point.
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	High volume water jet
Fire Fighting Instructions	<p>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.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

SECTION 7. HANDLING AND STORAGE

Handling procedures	No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.
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Storing Procedures 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.

Work/Hygienic Procedures 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection 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.

Follow all label instructions. Train employees in safe use of the product.

Eye/Face Protection Tightly fitting safety goggles

Hand protection Chemical resistant nitrile rubber gloves

Body Protection Wear long-sleeved shirt and long pants and shoes plus socks.

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.

Exposure Limits

Ethofumesate	26225-79-6	OES BCS*	TWA	10 mg/m3
		OES BCS*	TWA	10 mg/m3
1,2-Propanediol	57-55-6	WEEL	TWA	10 mg/m3
		TX ESL	ST ESL	20 ug/m3
		TX ESL	ST ESL	500 ppm
		TX ESL	AN ESL	2 ug/m3
		TX ESL	AN ESL	50 ppm

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

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Appearance	brown
Physical State	suspension Liquid
Odor	characteristic
pH	6.0 - 7.5 (100 %) at 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	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 mPa.s at 20 °C Velocity gradient 20 /s

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatibility	no data available
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity data have been bridged from another SC formulation containing a slightly higher percentage of the active ingredient, ethofumesate. The non-acute information pertains to the technical-grade active



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ingredient.

Acute oral toxicity	rat: LD50: > 2,100 mg/kg
Acute dermal toxicity	rat: LD50: > 4,100 mg/kg
Acute inhalation toxicity	no data available Low toxicity is expected for this formulated product as indicated by the LC50 of the technical grade active ingredient, ethofumesate (4HR Dust: Rat: >4 mg/L).
Skin irritation	rabbit: No skin irritation
Eye irritation	rabbit: Minimally irritating.
Sensitisation	guinea pig: Non-sensitizing.
Chronic toxicity	Ethofumesate did not cause specific target organ toxicity in experimental animal studies.

Assessment Carcinogenicity

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

- ACGIH**
None.
- NTP**
None.
- IARC**
None.
- OSHA**
None.

Reproductive toxicity	Ethofumesate did not cause reproductive toxicity in a two-generation study in rats.
Developmental Toxicity	Ethofumesate did not cause developmental toxicity in rats and rabbits.
Mutagenicity	Ethofumesate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to aquatic plants	Scenedesmus subspicatus EC50: 6.7 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Acute Toxicity to Aquatic Invertebrates	Water flea (Daphnia magna) EC50: 93.2 mg/l Exposure time: 48 h



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Test conducted with a similar formulation.

Bioaccumulation

Lepomis macrochirus (Bluegill sunfish) BCF: 67 - 144
 The value mentioned relates to the active ingredient ethofumesate.

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

General Disposal Guidance

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal

Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Information

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

49CFR

Not dangerous goods / not hazardous material

IMDG

UN-Number **3082**
 Class 9
 Packaging group III
 Marine pollutant YES
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ETHOFUMESATE SOLUTION)

IATA

UN-Number **3082**
 Class 9
 Packaging group III



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Environm. Hazardous Mark YES
 Description of the goods 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.

Freight Classification: COMPOUNDS, TREE OR WEEDKILLING, N.O.I., other than poison;
 HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 264-613

US Federal Regulations

TSCA list

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

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, RI

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.

International Regulations



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European Inventory of Existing Commercial Substances (EINECS)
Ethofumesate 26225-79-6

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

HMS (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: Reviewed and updated for general editorial purposes. The following sections have been revised: Section 9: Physical and Chemical Properties. Section 14: Transport Information. Section 16: Other Information.

Revision Date: 03/08/2012

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