



SAFETY DATA SHEET
according to regulation (EC) no 1907/2006

Mextrol Biox
Version 5 (UK)

Issue date 11/02/2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : **Mextrol Biox**

Usage : herbicide

Company : Nufarm UK Limited
Wyke Lane
Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom

Telephone : +44 (0)1274 691234
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Emergency telephone : **+44(0)1274 696603**

2. HAZARDS IDENTIFICATION

Harmful if swallowed.
Irritating to eyes and skin.
May cause sensitization by skin contact.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Possible risk of harm to the unborn child.
Harmful: may cause lung damage if swallowed.
Vapours may cause drowsiness and dizziness.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Emulsifiable concentrate
Bromoxynil/ioxynil (200/200 g/l)

Components	CAS-No.	EINECS-No. ELINCS-No.	Symbol(s)	R-phrases(s)	Concentration (w/w)
Bromoxynil octanoate	1689-99-2	216-885-3	T, N	R22, R23, R43, R50/53, R63	25.1 %
ioxynil octanoate	3861-47-0	223-375-4	T, N	R25, R36, R43, R50/53, R63	23.1 %
Benzenesulfonic acid, mono-C11-C13-branched alkyl derivs., calcium salts	68953-96-8	273-234-6			0.1% - 2.5%
i-Butanol	78-83-1	201-148-0	Xi	R10, R37/38, R41, R67	1% - 5%
Solvent naphtha (petroleum), heavy arom.;	64742-94-5	265-198-5	Xn	R65	25% - %



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Kerosine - unspecified					
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4. FIRST AID MEASURES

- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
- Skin contact : Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
- Inhalation : Move to fresh air. If symptoms persist, call a physician.
- Ingestion : Do NOT induce vomiting. Rinse mouth. If conscious, drink plenty of water. If symptoms persist, call a physician.

Notes to physician

- Treatment : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- Specific hazards during fire fighting : In the event of fire (HBr, Br₂, NO_x, CO, HCl, Cl₂, HCN) may be formed.
- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Suitable extinguishing media : Water spray, Carbon dioxide (CO₂), Dry powder, Alcohol-resistant foam
- Extinguishing media which shall not be used for safety reasons : High volume water jet
- Further information : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment. (see Chapter 8)
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.
- Additional advice : Never return spills in original containers for re-use.



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7. HANDLING AND STORAGE

Handling

Safe handling advice : Wear personal protective equipment.

Storage

Requirements for storage areas and containers : Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

Advice on common storage : Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	occupational exposure limits	Note
Bromoxynil octanoate	1689-99-2		
ioxynil octanoate	3861-47-0		
Benzenesulfonic acid, mono-C11-C13-branched alkyl derivs., calcium salts	68953-96-8		
i-Butanol	78-83-1	154 mg/m ³	
Solvent naphtha (petroleum), heavy arom.; Kerosine - unspecified	64742-94-5		

Personal protective equipment

Respiratory protection : No special protective equipment required.

Hand protection : PVC or nitrile-rubber gloves

Eye protection : Safety glasses, or, Goggles

Skin and body protection : lightweight protective clothing

Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Protective measures : Avoid contact with skin, eyes and clothing. Keep working clothes separately.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : liquid
Colour : brown
Odour : aromatic

Other data

Flash point : 61 °C

Upper explosion limit : 7 %(V)
(Solvent naphtha)

Lower explosion limit : 0.8 %(V)
(Solvent naphtha)

Density : ca.1.15 g/cm³
at 20 °C

Water solubility : emulsifiable

pH : 3 - 5
at 10 g/l (23 °C)
(as an emulsion)

Surface tension : 33 mN/m

10. STABILITY AND REACTIVITY

Thermal decomposition : No decomposition if stored and applied as directed.

Conditions to avoid : Extreme temperatures., Exposure to sunlight

Materials to avoid : none

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat
Dose: 500 mg/kg



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Acute dermal toxicity	:	LD50 rat Dose: > 4,000 mg/kg
Acute inhalation toxicity	:	LC50 rat Exposure time: 4 h Dose: > 5.06 mg/l
Skin irritation	:	rabbit Classification: Irritating to skin.
Eye irritation	:	rabbit Classification: Irritating to eyes.
Sensitisation	:	Local Lymph Node Assay mouse Result: Causes sensitization.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : 37 %

Bioaccumulation : Lepomis macrochirus (Bluegill Sunfish)
Bioconcentration factor (BCF): 230
Test substance: (bromoxynil octanoate)

Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 209
Test substance: (ioxynil octanoate)

Ecotoxicity effects

Toxicity to fish : LC50
Dose: 0.11 mg/l
Testing period: 96 h

Toxicity to daphnia : EC50 Daphnia magna (Water flea)
Dose: 0.018 mg/l
Testing period: 48 h

Toxicity to algae : EC50 Navicula pelliculosa
Dose: 0.043 mg/l



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Exposure time: 120 h
Test substance: (bromoxynil octanoate)

EC50 *Navicula pelliculosa*
Dose: 0.24 mg/l
Exposure time: 96 h
Test substance: (ioxynil octanoate)

EC50 *Lemna gibba* (Duckweed)
Dose: 0.073 mg/l
Test substance: (bromoxynil octanoate)

EC50 *Lemna gibba* (Duckweed)
Dose: 0.027 mg/l
Test substance: (ioxynil octanoate)

13. DISPOSAL CONSIDERATIONS

- Product : Dispose of product and packaging in accordance with The Green Code. (The Code of Practice for the safe use of Pesticides on Farms and Holdings.) A MAFF Publication.
- Contaminated packaging : Do not dispose with household waste. Do not re-use empty containers. Dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations. according to EC directive 94/62/EC
- According to European Directive 2000/532/EC as amended :
Waste Key Number : 02 01 08 (agrochemical waste containing dangerous substances)

14. TRANSPORT INFORMATION

- UN-Number : **3082**
- Description of the goods : UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.*(Ioxynil, Bromoxynil)
- ADR/RID**
- Class : 9
- Packaging group : III



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IMDG

Class : 9
Packaging group : III
Marine pollutant : Y

IATA-DGR

Class : 9
Packaging group : III

15. REGULATORY INFORMATION

Symbol(s) : Xn Harmful
N Dangerous for the environment

R-phrase(s) : R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.

S-phrase(s) : S35 This material and its container must be disposed of in a safe way.
S36/37 Wear suitable protective clothing and gloves.
S57 Use appropriate container to avoid environmental contamination.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.



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16. OTHER INFORMATION

Print Date : 02/11/2009

(Alterations are indicated in the left hand margin by: ||)

Full text of any R phrases referred to under heading 3:

- R22 - Harmful if swallowed.
- R23 - Toxic by inhalation.
- R43 - May cause sensitization by skin contact.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R63 - Possible risk of harm to the unborn child.
- R25 - Toxic if swallowed.
- R36 - Irritating to eyes.
- R43 - May cause sensitization by skin contact.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R63 - Possible risk of harm to the unborn child.
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- R10 - Flammable.
- R37/38 - Irritating to respiratory system and skin.
- R41 - Risk of serious damage to eyes.
- R67 - Vapours may cause drowsiness and dizziness.
- R65 - Harmful: may cause lung damage if swallowed.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.