



DIURON 1X500KG FBC GB

Version 1 / D
10200006044

1/8
Revision Date: 28.02.2005
Print Date: 05.05.2006

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

Product information

Trade name DIURON 1X500KG FBC GB
Product code (UVP) 00286540
Product code AE F013679
Usage herbicide
Company Bayer Environmental Science
Alfred-Nobel-Straße 50
40789 Monheim
Germany
Telephone +49(0)69-305-5748
Telefax +49(0)69-305-80950
Responsible Department Material and Transport Safety Management
+49(0)69-305-82369/12588

Emergency telephone number +49(0)2133-51-4233 (Sicherheitszentrale Dormagen, Bayer AG)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Technical material (TC)
CAS name Urea, N'-(3,4-dichlorophenyl)-N,N-dimethyl-
CAS-No. 330-54-1
EINECS-No. 206-354-4
Index-No. 006-015-00-9

Hazardous components

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Diuron	330-54-1 206-354-4	Xn, N	R22, R40, R48/22, R50/53	

3. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Harmful if swallowed.
Limited evidence of a carcinogenic effect.
Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Dust may form explosive mixtures with air.

4. FIRST AID MEASURES

Inhalation

Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.



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Skin contact

Take off contaminated clothing and shoes immediately. When in contact with the skin, clean with soap and water. If symptoms persist, call a physician.

Eye contact

In case of contact with eyes rinse thoroughly with plenty of water. If symptoms persist, seek medical advice

Ingestion

Do not induce vomiting. Rinse mouth thoroughly with water. Take medical treatment.

Notes to Physician

Symptoms

Systemic:., The absorption of this product into the body may lead to the formation of methaemoglobine that, in sufficient concentration, causes cyanosis., If large amounts are ingested, the following symptoms may occur:., dizziness, headache

Risks

Danger of formation of methaemoglobin.

Treatment

Local treatment:
Treat symptomatically.

Treatment

Systemic treatment:
In the event of a mouthful or more being ingested, the following measures should be considered:
Monitoring of: cardiac, kidney and red blood cell count.
Observe specific parameters: methaemoglobinaemia and serum potassium.
If ingested, irrigate the stomach using activated charcoal in addition.
If methaemoglobin level is less than 20%, administer 100% oxygen. If methaemoglobin level is greater than 20% treat with 100% oxygen and slowly give 1% Methylene Blue/Toluidine Blue solution intravenously, 1-2 mg/kg body weight.
Contraindications: alcohol.
Recovery: Spontaneous.
Oxygen, if needed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

water spray
foam

Extinguishing media which must not be used for safety reasons

Do NOT use water jet.
dry powder
carbon dioxide (CO2)

Specific hazards during fire fighting

The product itself does not burn.
In the event of fire the following can be released:
carbon monoxide (CO)
nitrous gases (NOx)
hydrogen chloride (HCl)

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.



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Wear full protective suit.

Further information

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Avoid generation of dust clouds.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear personal protective equipment. Unprotected persons must be kept away.

Remove all sources of ignition.

Environmental Precautions

Do not flush into surface water or sanitary sewer system.

Methods for Cleaning Up

Avoid dust formation and electrical charging (sparking) because dust explosion might occur. Contain and collect spillage with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Additional Advice

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Avoid dust formation.

Product should be worked up in closed equipment as far as possible.

Take precautionary measures against static discharges.

Use and store away from all naked flames, heat sources and electrical appliances in use.

Advice on protection against fire and explosion

The product is weakly capable of dust explosion.

Keep away from open flames, hot surfaces and sources of ignition.

Take precautionary measures against static discharges.

Avoid deposition of dust.

The product is neither sensitive to impacts nor to rub effects and is therefore not explosive.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

German storage class 11 Combustible Solids

Storage stability

Storage period > 24 Months

Suitable materials

Only use containers that are approved specifically for the substance/product.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Diuron (Inhalable fraction.)	330-54-1	5 mg/m ³ (MAK)	05 2004	TRGS 900

Personal protective equipment

Respiratory Protection	Full mask with dust filter P3
Hand Protection	PVC or nitrile rubber gloves
Eye protection	tightly fitting safety goggles
Skin and body protection	Light protective clothing, thick material

Hygiene measures

When handling the product do not consume alcohol.
Wash hands before breaks and at the end of workday.

Protective measures

Avoid contact with skin and eyes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	powder
Colour	grey white
Odour	almost odourless

Safety data

pH	6 - 7 at 1 % Suspension in water
Melting point/ range	154 - 156 °C
Autoignition Temperature	> 400 °C works guideline
Minimum Ignition Energy	30 - 100 mJ
Dust explosion Kst number	176 m.b./s
Dust Explosion Class	St1
Vapour pressure	1,1 µPa
Density	1,49 g/cm ³ at 20 °C



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Water Solubility	ca. 32 mg/l at 22 °C
Partition Coefficient (n-octanol/water)	POW: 710 log Pow: 2,85
Solubility in Other Solvents	44,2 g/l Medium: acetone
Solubility in Other Solvents	1,1 g/l Medium: benzene
Combustion number	CN1 Does not catch fire
Other Information	Hydrolysis takes place with water under heating Incompatible substances: Bases (e.g. Caustic Soda). Incompatible substances: Acids. Ionic Characteristic: Non-Ionic

10. STABILITY AND REACTIVITY

Thermal decomposition	345 °C DTA Start of decomposition. Exothermic decomposition.
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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) 686 mg/kg
Acute Inhalation Toxicity	LC50 (rat) > 4,925 mg/l Highest attainable concentration.
Acute Dermal Toxicity	LD50 (rat) > 2.000 mg/kg
Skin Irritation	No skin irritation (rabbit)
Eye Irritation	No eye irritation (rabbit)
Sensitization	Non-sensitizing (guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment Mutagenicity
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Assessment Carcinogenicity
A possible carcinogenic effect at high doses in animal studies on the active substance diuron is indicated.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects



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Toxicity to Fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 14,7 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Daphnia) 1,4 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Desmodesmus subspicatus) 0,022 mg/l Exposure time: 96 h

Further information on ecology

Additional ecological information
Non-hazardous for Bees.

13. DISPOSAL CONSIDERATIONS

Product

Do not dispose of waste into sewer.
Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Contaminated packaging

Clean container with water.
Empty containers should be taken for local recycling or waste disposal.
Packaging that cannot be cleaned should be disposed of as product waste.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION

ADR/RID/ADNR

UN-No	3077
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)

IMDG

UN-No	3077
Class	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)

IATA

UN-No	3077
Class	9
Packaging group	III

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Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIURON)
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15. REGULATORY INFORMATION

The product is classified and labelled in accordance with the EC Directive on dangerous substances EC-Directive 67/548, as amended.

Classification:

Labelling according to EEC Directive

Hazardous components which must be listed on the label:

- Diuron

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

R-phrases(s)

R22	Harmful if swallowed.
R40	Limited evidence of a carcinogenic effect.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S22	Do not breathe dust.
S23	Do not breathe gas/fumes/vapour/spray.
S37	Wear suitable gloves.
S46	If swallowed, seek medical advice immediately and show this container or label.
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Exceptional labelling

EC Label

Further information

WHO-classification: III (Slightly hazardous)

National legislation

Water contamination class (Germany)	WGK 3 highly water endangering Classification according to VwVwS, Annex 2 ID-Number: 1294
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Major Accident Hazard Legislation	Subjected to the "Disasters and Major Accidents Act " 96/82/EC Annex I, list of dangerous substances, No. 9a
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Occupational health precautions

Work limitations for youth should be observed: - 94/33/EC
Work limitations for pregnant women and for women nursing babies should be observed: - 92/85/EEC.



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16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

R22	Harmful if swallowed.
R40	Limited evidence of a carcinogenic effect.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

For further information on active ingredients see also: Wirkstoffe in Pflanzenschutz- und Schädlingsbekämpfungsmitteln: physikalisch-chemische und toxikologische Daten IVA, Industrieverb. Agrar e.V. - 3., Neubearb. Aufl. - München; Wien; Zürich; BLV Verl.-Ges.mBH, 2000 ISBN 3-405-15809-5

The advice on classification in section 15 of this Safety Data Sheet is based on European Directive on Preparations (1999/45/EC and its subsequent adaptations). The legislation on pesticide preparations should be applied by EU Member States not later than 30 July 2004.

The information given in this Data Sheet has been included in accordance with the guidelines established by EC Directive 1991/155/EC as amended. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.