



## **FREEWAY (ENV) 12712 1X20L GB**

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Revision Date: 25.04.2006  
Print Date: 21.06.2006

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

#### **Product information**

Trade name FREEWAY (ENV) 12712 1X20L GB  
Product code (UVP) 05923522  
Usage herbicide  
Company Bayer Environmental Science  
230 Cambridge Science Park  
Milton Road  
Cambridge  
Cambridgeshire CB4 0WB  
Great Britain  
Telephone +44(0)1223 226500  
Telefax +44(0)1223 426240  
Emergency telephone number 0800-220876 (UK 24 hr)  
+44(0)1603-242424 (Overseas 24 hr)

### **2. COMPOSITION/INFORMATION ON INGREDIENTS**

#### **Chemical nature**

Suspension concentrate (=flowable concentrate)(SC)  
Diuron 500 g/l SC

#### **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	42.40
Polyarylether sulfate, ammonium salt	119432-41-6	Xi	R36, R52/53	>= 1.00 - < 5.00
Ethenediol	107-21-1 203-473-3	Xn	R22	> 1.00 - < 5.00

### **3. HAZARDS IDENTIFICATION**

#### **Risk advice to man and the environment**

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.

### **4. FIRST AID MEASURES**

#### **Inhalation**

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

#### **Skin contact**

Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of water and soap, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms



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persist, call a physician.

### **Eye contact**

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.

### **Ingestion**

Do not induce vomiting. If symptoms persist, call a physician. Rinse out mouth and give water in small sips to drink.

### **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.

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.

Give oxygen or artificial respiration if needed.

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## **5. FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media**

water spray

foam

carbon dioxide (CO<sub>2</sub>)

dry powder

### **Specific hazards during fire fighting**

The product itself does not burn.

In the event of fire the following can be released:

carbon monoxide (CO)

carbon dioxide (CO<sub>2</sub>)

nitrogen oxides (NO<sub>x</sub>)

Sulphur oxides

hydrogen chloride (HCl)

### **Special protective equipment for fire-fighters**

Use breathing apparatus.

### **Further information**

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



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drains.

### **6. ACCIDENTAL RELEASE MEASURES**

#### **Personal Precautions**

Use personal protective equipment.

#### **Environmental Precautions**

Do not discharge into the drains/surface water/groundwater.

If spillage enters drains leading to sewage works inform local water company immediately.

If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

#### **Methods for Cleaning Up**

Recover the product by pumping, suction or absorption using a dry and inert absorbent clay.

Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material).

Pick up and fill the product into a tightly closed container.

When picked up, treat material as prescribed in Ch. 13. "Disposal considerations".

### **7. HANDLING AND STORAGE**

#### **Handling**

Advice on safe handling

Smoking, eating and drinking should be prohibited in the application area.

#### **Storage**

Requirements for storage areas and containers

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

Protect against frost.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Suitable materials

High density polyethylene

### **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

#### **Components with workplace control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Ethanediol (Particulate.)	107-21-1	10 mg/m <sup>3</sup> (TWA)	2005	EH40 WEL
Ethanediol (Vapor.)	107-21-1	52 mg/m <sup>3</sup> / 20 ppm (TWA)	2005	EH40 WEL
Ethanediol (Vapor.)	107-21-1	104 mg/m <sup>3</sup> / 40 ppm (STEL)	2005	EH40 WEL



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Ethanediol	107-21-1	52 mg/m <sup>3</sup> / 20 ppm (TWA)	05 2003	EU ELV
Ethanediol	107-21-1	104 mg/m <sup>3</sup> / 40 ppm (STEL)	05 2003	EU ELV

**Personal protective equipment**

Respiratory Protection	No personal respiratory protective equipment normally required. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hand Protection	Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
Eye protection	Wear goggles conforming to EN166 (Field of Use 5 or equivalent).
Skin and body protection	Wear standard coverall and Type 6 suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
Hygiene measures	Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.
Protective measures	Avoid contact with skin and eyes.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

Form liquid  
Colour white

**Safety data**

pH 6.5 - 8.5 at 1 %  
Density ca. 1.18 g/cm<sup>3</sup> at 20 °C

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**10. STABILITY AND REACTIVITY**

Conditions to Avoid Extremes of temperature and direct sunlight.  
Materials to avoid None.



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Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions. Stable under normal conditions.
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### **11. TOXICOLOGICAL INFORMATION**

Acute Oral Toxicity	LD50 (rat) > 2,000 mg/kg
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Acute Inhalation Toxicity	LC50 (rat) > 4.07 mg/l Exposure time: 4 h
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Acute Dermal Toxicity	LD50 (rat) > 2,000 mg/kg
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Skin Irritation	No skin irritation. (rabbit)
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Eye Irritation	No eye irritation. (rabbit)
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Sensitization	Non-sensitizing. (guinea pig)
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#### **Assessment Carcinogenicity**

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

#### **Further information**

Methaemoglobin formation demonstrated in animal studies.  
Indication of a possible carcinogenic activity in animal tests.  
severe effects after repeated or prolonged exposure

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### **12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity effects**

Toxicity to Fish	LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) 5.6 mg/l Exposure time: 96 h
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Toxicity to daphnia	EC50 (Daphnia) 12 mg/l Exposure time: 48 h
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#### **Further information on ecology**

##### **Additional ecological information**

The ecotoxic effect of the product has not been tested. The information on this is given on the basis of details in the literature.

The ecological data given are those of the active ingredient.

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### **13. DISPOSAL CONSIDERATIONS**

#### **Product**

In accordance with current regulations may be taken to waste disposal site or incineration plant, after consultation with site operator and/or with the responsible authority.

Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

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Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.

Add washings to sprayer at time of filling.

Dispose of empty and cleaned packaging safely.

Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.

Return large containers to supplier.

Follow advice on product label and/or leaflet.

**Waste key for the unused product**

020108 agrochemical waste containing dangerous substances

**14. TRANSPORT INFORMATION****ADR/RID/ADNR**

UN-No	<b>3082</b>
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON SOLUTION)

**IMDG**

UN-No	<b>3082</b>
Class	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON SOLUTION )

**IATA**

UN-No	<b>3082</b>
Class	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON SOLUTION )

**UK 'Carriage' Regulations**

UN-No	<b>3082</b>
Labels	9
Packaging group	III
Hazard no.	90
Emergency action code	3Z
Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON SOLUTION)

**15. REGULATORY INFORMATION**

This product has been classified in accordance with The Chemicals (Hazard Information and



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Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.

**Classification:**

Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- Diuron

**Symbol(s)**

Xn	Harmful
N	Dangerous for the environment

**R-phrases(s)**

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)**

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.

**Exceptional labelling**

To avoid risks to man and the environment, comply with the instructions for use.

**Further information**

WHO-classification: II (Moderately hazardous)

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## **16. OTHER INFORMATION**

**Further information**

Text of R phrases mentioned in Section 2:

R22	Harmful if swallowed.
R36	Irritating to eyes.
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.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.



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