

**FREEWAY 12713 4X5L GB**Version 1 / GB
1020000017191/8
Revision Date: 14.11.2003
Print Date: 14.11.2003**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING****Product information**

| | |
|----------------------------|---|
| Trade name | FREEWAY 12713 4X5L GB |
| Product code (UVP) | 05923530 |
| Product code (EXP) | 30845A |
| Specification | 12713 |
| Usage | herbicide |
| Company | Bayer Environmental Science Durkan House 214-224 High Street Waltham Cross Hertfordshire EN8 7DP Great Britain |
| Telephone | +44(0)1992 784270 |
| Telefax | +44(0)1992 784276 |
| Emergency telephone number | 0800-220876 (UK only) +44(0)1223-870312 |

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Suspension concentrate (=flowable concentrate)(SC)
Diuron 500 g/l**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 | 44.00 |
| 1,2 Propanediol | 57-55-6 200-338-0 | | | 4.30 |
| Polyarylphenylether sulfate, ammonium salt | 119432-41-6 | Xi | R36, R52/53 | 2.60 |
| (Polyethylenethoxy)ethanol 10 EO | 68412-54-4 | Xn, N | R22, R41, R51/53 | > 0.10 - < 1.00 |

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**



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Inhalation

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

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: methaemoglobinemia 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
alcohol-resistant foam
dry chemical
carbon dioxide (CO₂)

Extinguishing media which must not be used for safety reasons

Product itself is non-combustible; fire extinguishing measures to suit surroundings.

Specific hazards during fire fighting

In case of fire the evolution of dangerous gases is possible.

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.
Wear self contained breathing apparatus for fire fighting if necessary.



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Further information

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain fire-fighting water by bunding area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.

Environmental precautions

Keep people and animals away.
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

Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material).
Transfer collected material to heavy duty plastic drums and keep safe for disposal.
Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations

Additional advice

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.
Check also for any local site procedures.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.
Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion

No special precautions required.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a cool, well-ventilated place.
Store in a place accessible by authorized persons only.

Further information on storage conditions

Keep away from direct sunlight.
Protect against frost.

Storage stability

Storage temperature 0 - 30 °C

Suitable materials

Keep in original packaging, tightly closed.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of substances Hazardous to Health Regulations 1999 as amended). Engineering controls should be used in preference to personal protective equipment wherever practicable.

Components with workplace control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|-----------------|---------|---|--------------|----------------------|
| 1,2 Propanediol | 57-55-6 | 10 mg/m ³ (TWA) 474 mg/m ³ (TWA) | 2001 2001 | EH40 OES EH40 OES |

Personal protective equipment

- Respiratory protection No personal respiratory protective equipment normally required.
- Hand protection Chemical resistant gloves
 PVC or nitrile rubber gloves
- Eye protection Chemical resistant goggles must be worn.
- Skin and body protection Light protective clothing, PVC
 PVC boots

Hygiene measures

- When using, do not eat, drink or smoke.
- Remove soaked clothing immediately.
- Remove soiled clothing immediately.
- Clean hands and face at work intervals and after work.
- Work in an adequately ventilated room.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form Liquid
- Colour white opaque

Safety data

- pH 6.5 - 8.5 at 10 g/l
- Density ca. 1.17 g/cm³ at 20 °C
- Water solubility Miscible
- Partition coefficient (n-octanol/water) log Pow: 2.85
 The value mentioned relates to the active ingredient diuron.
- Other information The product is not combustible.

10. STABILITY AND REACTIVITY



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|---------------------|--|
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Materials to avoid | None |
| Hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions. |

11. TOXICOLOGICAL INFORMATION

| | |
|---------------------------|---|
| Acute oral toxicity | LD50 (rat) > 2,000 mg/kg |
| Acute inhalation toxicity | LC50 (rat) > 4.07 mg/l Exposure time: 4 h 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, Buehler test |

Assessment carcinogenicity

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

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

| | |
|---------------------|--|
| Toxicity to fish | LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 14.7 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient diuron. |
| Toxicity to daphnia | EC50 (<i>Daphnia</i>) 1.4 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient diuron. |
| Toxicity to algae | EC50 (<i>Scenedesmus subspicatus</i>) 0.022 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient diuron. |

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
Can be landfilled or incinerated, when in compliance with local regulations.
Advice may be obtained from the local waste regulation authority (part of the Environment



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Agency in the UK).

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as product waste.

Empty containers can be landfilled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION

ADR/RID/ADNR

| | |
|--------------------------|---|
| UN-No | 3082 |
| 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 | 3082 |
| Class | 9 |
| Packaging group | III |
| Marine pollutant | Marine pollutant |
| Description of the goods | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON SOLUTION) |

IATA

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

CDG CPL

| | |
|------------------------------|--|
| UN-No | 3082 |
| Class | 9 |
| Packaging group | III |
| Hazard identification number | 90 |
| Emergency action code | 2X |
| Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIURON) |

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Hazardous components which must be listed on the label:

- Diuron



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|--|--|
| Symbol(s) | |
| Xn | Harmful |
| N | Dangerous for the environment |
| R-phrase(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-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 containment to avoid environmental contamination. |
| Exceptional labelling of special preparations | |
| Restricted to professional users. | |
| To avoid risks to man and the environment, comply with the instructions for use. | |
| Further information | |
| WHO-classification: II (Moderately hazardous) | |

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. |
| R41 | Risk of serious damage to eyes. |
| 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. |
| R51/53 | 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 will be highlighted in the margin. This version replaces all previous versions. |
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Bayer Environmental Science

SAFETY DATA SHEET according to EC Directive 2001/58/EC



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