

**PISTOL**Version 1 / GB
10200001746

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Revision Date: 07.03.2008

Print Date: 11.07.2008

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

Trade name PISTOL
Product code (UVP) 05923883, 06424104
Usage Herbicide
Company Bayer Environmental Science
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
Great Britain

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Emergency telephone number 0800-220876 (UK 24 hr)
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2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Suspension concentrate (=flowable concentrate)(SC)
Diflufenican/Glyphosate 40:250 g/l**Hazardous components**

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Diflufenican	83164-33-4		R52/53	3.40
Glyphosate, isopropylamine salt	38641-94-0 254-056-8	N	R51/53	28.90
Alcohols, C11-14-iso-, C13-rich	68526-86-3 271-235-6	N	R50	> 0.10 - < 2.50
1,2-Propanediol	57-55-6 200-338-0			> 1.00

For the full text of the R phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES**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



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symptoms 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. Rinse mouth, ingest activated charcoal. Obtain medical attention.

Notes to Physician

Symptoms

Nausea, Vomiting, Diarrhoea, Salivation, If large amounts are ingested, the following symptoms may occur: abnormally decreased blood volume (hypovolaemia), acidosis, Liver disorders, Kidney disorders

Treatment

Treat symptomatically.

In case of ingestion perform gastric lavage, then administer charcoal (carbo medicalis) and sodium sulfate.

Early dialysis (h(a)emoperfusion).

Monitor fluid balance.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which should not be used for safety reasons

High volume water jet

Specific hazards during fire fighting

Dangerous gases are evolved in the event of a fire.

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.

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

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 diking area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Keep people away from and upwind of spill/leak.

Avoid contact with spilled product or contaminated surfaces.

When dealing with a spillage do not eat, drink or smoke.

Environmental Precautions

Do not allow to get into surface water, drains and ground water.

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).



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Methods for Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Collect and transfer the product into a properly labelled and tightly closed container.
Clean contaminated surface thoroughly.

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.
Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

No special precautions required.

Storage

Requirements for storage areas and containers

Store in a place accessible by authorized persons only.
Keep away from direct sunlight.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Protect from freezing.

Suitable materials

HDPE (high density polyethylene)
Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)
Coextruded containers with an internal barrier layer made of polyamide (PA).
Deformation through oxygen consumption possible.

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
Diflufenican	83164-33-4	1.1 mg/m ³		OES BCS*
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	2007	EH40 WEL
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m ³ / 150 ppm (TWA)	2007	EH40 WEL

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

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Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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	When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands immediately after work, if necessary take a shower.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid, suspension
Colour	white
Odour	almost odourless

Safety data

Flash point	no data available
Density	approx. 1.17 g/cm ³ at 20 °C
Water solubility	miscible
Viscosity, dynamic	30 - 60 mPa.s at 20 °C

10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight.
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Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.
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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) > 2,000 mg/kg
Acute Dermal Toxicity	LD50 (rat) > 2,000 mg/kg
Skin Irritation	Slight irritant effect - does not require labelling. (rabbit)
Eye Irritation	No eye irritation. (rabbit)
Sensitization	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Buehler test

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Bioaccumulation	Oncorhynchus mykiss (rainbow trout) Bioconcentration factor (BCF): 1,596 The value mentioned relates to the active ingredient diflufenican.
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Ecotoxicity effects

Toxicity to Fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 109 µg/l Exposure time: 96 h The value mentioned relates to the active ingredient diflufenican. Aquatic toxicity is unlikely due to low solubility.
Toxicity to Fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 86 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient glyphosate-isopropylamine salt.
Toxicity to daphnia	EC50 (Water flea (Daphnia magna)) > 240 µg/l Exposure time: 48 h The value mentioned relates to the active ingredient diflufenican. No acute toxicity was observed at its limit of water solubility.
Toxicity to daphnia	EC50 (Daphnia) 930 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient glyphosate-isopropylamine salt.
Toxicity to algae	EC50 (Scenedesmus subspicatus) 0.018 mg/l Exposure time: 72 h

13. DISPOSAL CONSIDERATIONS



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Product

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

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

Contaminated packaging

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-Number	3082
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)

IMDG

UN-Number	3082
Labels	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)

IATA

UN-Number	3082
Labels	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)

UK 'Carriage' Regulations

UN-Number	3082
Labels	9
Packaging group	III
Hazard no.	90
Emergency action code	3Z

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Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
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15. REGULATORY INFORMATION

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

Classification:

Labelling according to EC Directives

Hazardous components which must be listed on the label:

- Diflufenican
- Glyphosate, isopropylamine salt

Symbol(s)

N Dangerous for the environment

R-phrase(s)

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.
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)

16. OTHER INFORMATION**Further information**

Text of R phrases mentioned in Section 3:

- | | |
|--------|---|
| R50 | Very toxic to aquatic organisms. |
| 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.

Bayer Environmental Science

SAFETY DATA SHEET according to Regulation (EU) No. 1907/2006



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