

**SPEARHEAD**Version 3 / GB  
10200001671

1/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

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

Trade name SPEARHEAD  
Product code (UVP) 05922909  
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  
Responsible Department Email: ukinfo@bayercropscience.com

Emergency telephone number 0800-220876 (UK 24 hr)  
+44(0)1603-242424 (Overseas 24 hr)

**2. HAZARDS IDENTIFICATION****Risk advice to man and the environment**

|| Harmful in contact with skin and if swallowed.  
|| 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)  
MCPA/Clopyralid/Diflufenican 300:20:15 g/l equivalent to: MCPA-potassium/Clopyralid-  
olamine/Diflufenican 357:26.4:15 g/l

**Hazardous components**

Chemical Name	CAS-No. / EC-No.	Symbol(s)	R-phrase(s)	Concentration [%]
MCPA, potassium salt	5221-16-9 226-015-4	Xn	R20/21/22	30.50
Clopyralid, monoethanolamine salt	57754-85-5 260-929-4			2.25
Diflufenican	83164-33-4		R52/53	1.28
Sulphonated aromatic polymer, sodium salt		Xi	R36/38	> 1.00 - < 20.00
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.



## SPEARHEAD

Version 3 / GB  
10200001671

2/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

### 4. FIRST AID MEASURES

#### General advice

Remove contaminated clothing immediately and dispose of safely.

#### Inhalation

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

#### Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

#### Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

#### Ingestion

Do NOT induce vomiting. Induce vomiting only, if: 1. patient is fully conscious, 2. medical aid is not readily available, 3. a significant amount (more than a mouthful) has been ingested and 4. time since ingestion is less than 1 hour. (Vomit should not get into the respiratory tract.) Rinse mouth. Keep patient warm and at rest.

#### Notes to Physician

##### Symptoms

Local: The product causes irritation of eyes, skin and mucous membranes.

##### Symptoms

Systemic: mild acidosis, Tachycardia, Irregular cardiac activity, low blood pressure, Circulatory collapse, Cough, Shortness of breath, Vomiting, Diarrhoea, Abdominal pain, rhabdomyolysis, Nausea, Somnolence, Coma, Fever, Convulsions

##### Risks

Kidney injury may occur.  
Ingestion may cause liver damage.

##### Treatment

Local treatment:  
Initial treatment: symptomatic.

##### Treatment

Systemic treatment:  
In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.  
Forced alkaline diuresis and hemodialysis may be considered.  
There is no specific antidote.

### 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



## SPEARHEAD

Version 3 / GB  
102000001671

3/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

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).

### Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Keep in suitable, closed containers for disposal.

Clean floors and contaminated objects with plenty of water.

### 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.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Temperature tolerance	min.	max.
	-5 °C	40 °C

Suitable materials

HDPE (high density polyethylene)

**SPEARHEAD**Version 3 / GB  
102000001671

4/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

**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 <sup>3</sup>		OES BCS*
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m <sup>3</sup> (TWA)	2007	EH40 WEL
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m <sup>3</sup> / 150 ppm (TWA)	2007	EH40 WEL

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

**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

**SPEARHEAD**Version 3 / GB  
102000001671

5/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

---

Colour	grey to tan
<b>Safety data</b>	
pH	8.0 - 10.0 at (23 °C) Determined in the undiluted form.
Density	approx. 1.17 g/cm <sup>3</sup> at 20 °C
Water solubility	miscible

---

**10. STABILITY AND REACTIVITY**

Conditions to Avoid	Extremes of temperature and direct sunlight.
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 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)

## Further information

The information is derived from the properties of the individual components.

**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.
-----------------	---

**Ecotoxicity effects**

Toxicity to Fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 232 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient MCPA.
Toxicity to Fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 103.5 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient clopyralid.

**SPEARHEAD**Version 3 / GB  
102000001671

6/9

Revision Date: 08.07.2009

Print Date: 08.07.2009

---

Toxicity to Fish	LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) > 0.1088 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient diflufenican.
Toxicity to daphnia	EC50 (Water flea ( <i>Daphnia magna</i> )) > 100 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient MCPA.
Toxicity to daphnia	EC50 (Water flea ( <i>Daphnia magna</i> )) 225 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient clopyralid.
Toxicity to daphnia	EC50 ( <i>Daphnia</i> ) > 0.24 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient diflufenican.
Toxicity to algae	EC50 ( <i>Selenastrum capricornutum</i> ) > 392 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient MCPA.
Toxicity to algae	EC50 ( <i>Selenastrum capricornutum</i> ) 6.9 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient clopyralid.
Toxicity to algae	EC50 ( <i>Selenastrum capricornutum</i> ) 0.00025 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient diflufenican.

---

**13. DISPOSAL CONSIDERATIONS****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  
Labels**3082**

9



## SPEARHEAD

Version 3 / GB  
102000001671

7/9  
Revision Date: 08.07.2009  
Print Date: 08.07.2009

Packaging group	III
Hazard no.	90
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways.  
Please refer to the manufacturer for further information.

### IMDG

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

### UK 'Carriage' Regulations

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

## 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:

|| Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- MCPA
- Clopyralid
- Diflufenican

Symbol(s)

||Xn  
||N

Harmful

Dangerous for the environment



## SPEARHEAD

Version 3 / GB  
10200001671

8/9  
Revision Date: 08.07.2009  
Print Date: 08.07.2009

R-phrase(s)

||| R21/22  
||| R50/53

Harmful in contact with skin and if swallowed.

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

S-phrase(s)

||| S35  
||| S36/37  
||| S57

This material and its container must be disposed of in a safe way.

Wear suitable protective clothing and gloves.

Use appropriate container to avoid environmental contamination.

### || CLASSIFICATION ACCORDING TO SPECIFIC UK REGULATIONS:

||| The labelling information below is that which has been approved under 'The Control of Pesticides Regulations 1986' and/or 'Part III of the Food and Environment Protection Act 1985' and/or 'Plant Protection Product Regulations 1999' and any subsequent amendments and may differ from that indicated by any toxicological and/or other testing otherwise indicated in this 'Safety Data Sheet'.

Symbol(s)

||| Xn  
||| N

Harmful

Dangerous for the environment

R-phrase(s)

||| R20/21/22  
||| R36/38  
||| R50/53

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes and skin.

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

S-phrase(s)

||| S36/37

Wear suitable protective clothing and gloves.

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

R20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

R36/38

Irritating to eyes and skin.

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.



## **SPEARHEAD**

Version 3 / GB  
102000001671

9/9  
Revision Date: 08.07.2009  
Print Date: 08.07.2009

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.

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