



SPEARHEAD SC335 SAMPLE WW

Version 3 / GB
10200001671

1/11
Revision Date: 17.09.2012
Print Date: 02.12.2014

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name SPEARHEAD SC335 SAMPLE WW
Product code (UVP) 05922909

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer Environmental Science
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
United Kingdom

Telephone 00800-1214 9451
Telefax +44(0)1223 426240
Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.

Emergency telephone no. 0800-220876 (UK 24 hr)
+44(0)1635-563000 (Overseas 24 hr)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful, R21/22
N Dangerous for the environment, R50/53

2.2 Label elements

Labelling in accordance with the EU Directive on dangerous preparations 1999/45/EC, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- MCPA
- Clopyralid
- Diflufenican

Symbol(s)

Xn	Harmful
N	Dangerous for the environment

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R-phrase(s)

R21/22

Harmful in contact with skin and if swallowed.

R50/53

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

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

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 container to avoid environmental contamination.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****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**

R-phrase(s) according to EC directive 67/548/EEC

Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Concentration [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
MCPA, potassium salt	5221-16-9 226-015-4	Xn; R20/21/22 N; R50/53	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	30.50
Clopyralid, monoethanolamine salt	57754-85-5 260-929-4	Not classified	Not classified	2.25
Diflufenican	83164-33-4	R52/53	Aquatic Chronic 3, H412	1.28
Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt	68425-94-5	Xi; R36/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319	> 1.00 - < 20.00
1,2-Propanediol	57-55-6 200-338-0	Not classified	Not classified	> 1.00



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Further information

For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

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

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

4.3 Indication of any immediate medical attention and special treatment needed

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.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media



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

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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.

6.2 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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

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

Keep in suitable, closed containers for disposal.

Clean floors and contaminated objects with plenty of water.

Additional advice

Check also for any local site procedures.

6.4 Reference to other sections

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.

Ensure adequate ventilation.

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Advice on protection against fire and explosion

No special precautions required.

Hygiene measures

When using, do not eat, drink or smoke.

Remove soiled clothing immediately and clean thoroughly before using again.

Contaminated work clothing should not be allowed out of the workplace.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Wash hands immediately after work, if necessary take a shower.

7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage areas and containers**

Store in a place accessible by authorized persons only.

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

Keep away from direct sunlight.

Protect from freezing.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Suitable materials

HDPE (high density polyethylene)

7.3 Specific end uses

Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Diflufenican	83164-33-4	5.5 mg/m ³ (TWA)		OES BCS*
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	12 2011	EH40 WEL
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m ³ / 150 ppm (TWA)	12 2011	EH40 WEL

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

8.2 Exposure controls

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.

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



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	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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	liquid, suspension
Colour	grey to tan
Odour	characteristic
pH	8.0 - 10.0 at 100 % (23 °C)
Density	ca. 1.17 g/cm ³ at 20 °C
Water solubility	miscible

9.2 Other information

Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible materials



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Store only in the original container.

10.6 Hazardous decomposition products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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)
Sensitisation	Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

MCPA caused liver and/or kidney effects in chronic dietary toxicity studies in rats, mice, and dogs.

Diflufenican did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

MCPA was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Diflufenican was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

MCPA was not carcinogenic in oncogenicity studies in rats and mice.

Diflufenican was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment Toxicity to Reproduction

MCPA was not a reproductive toxicant in a multi-generation study in rats.

Diflufenican did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Diflufenican did not cause developmental toxicity in rats and rabbits.

Further information

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

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 232 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient MCPA.



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	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 103.5 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient clopyralid.
	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 aquatic invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) > 100 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient MCPA.
	EC50 (Water flea (<i>Daphnia magna</i>)) 225 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient clopyralid.
	EC50 (<i>Daphnia</i>) > 0.24 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient diflufenican.
Toxicity to aquatic plants	EC50 (<i>Selenastrum capricornutum</i>) > 392 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient MCPA.
	EC50 (<i>Selenastrum capricornutum</i>) 6.9 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient clopyralid.
	EC50 (<i>Selenastrum capricornutum</i>) 0.00025 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient diflufenican.

12.2 Persistence and degradability

Biodegradability Not applicable for this mixture.

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

Mobility in soil Not applicable for this mixture.

12.5 Results of PBT and vPvB assessment

Not relevant as no chemical safety report is necessary.

12.6 Other adverse effects

Additional ecological information
No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS



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13.1 Waste treatment methods

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

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
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

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES



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UK 'Carriage' Regulations

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Emergency action code	3Z

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Further information

WHO-classification: II (Moderately hazardous)

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: OTHER 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.
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.

Text of the hazard statements mentioned in Section 3

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

The above information is intended to give general health and safety guidance on the storage and



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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.

Reason for Revision: Safety Data Sheet according to Regulation (EU) No. 453/2010.

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