

**FIREFLY**Version 1 / GB
102000011941

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Revision Date: 27.09.2007

Print Date: 14.07.2008

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

Trade name FIREFLY
Product code (UVP) 06455646
Usage Fungicide
Company Bayer CropScience Limited
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**

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

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Emulsifiable concentrate (EC)
Fluoxastrobin 50 g/l, Prothioconazole 100 g/l**Hazardous components**

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Fluoxastrobin	361377-29-9	N	R50/53	4.40
Prothioconazole	178928-70-6	N	R51/53	8.80
2-Ethylhexanol propylene ethyleneglycol ether	64366-70-7	Xn	R20, R52/53	> 1.00
Citric acid	77-92-9 201-069-1	Xi	R36	>= 1.00
gamma-Butyrolactone	96-48-0 202-509-5	Xn	R22, R36	> 1.00

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

4. FIRST AID MEASURES



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General advice

Remove contaminated clothing immediately and dispose of safely. Move out of dangerous area. Place and transport victim in stable position (lying sideways).

Inhalation

Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact

Wash off thoroughly with plenty of water and soap, if available with polyethyleneglycol 400, subsequently rinse with water.

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. Call a physician or poison control center immediately. Rinse mouth.

Notes to Physician

Treatment

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

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray
Carbon dioxide (CO₂)
Foam
Sand

Specific hazards during fire fighting

In the event of fire the following can be released:
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide (CO)
Hydrogen chloride (HCl)
Nitrogen oxides (NO_x)
Hydrogen fluoride (HF)

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

Contain the spread of the fire-fighting media.
Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with spilled product or contaminated surfaces.
Use personal protective equipment.



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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

Clean contaminated floors and objects thoroughly, observing environmental regulations.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Keep in suitable, closed containers for disposal.

Additional Advice

Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Take measures to prevent the build up of electrostatic charge.

Storage

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.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Storage stability

Storage temperature -5 - 40 °C

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.

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

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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

Avoid contact with skin, eyes and clothing.

Keep working clothes separately.

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

Remove soiled clothing immediately and clean thoroughly before using again.

Garments that cannot be cleaned must be destroyed (burnt).

Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form liquid, clear to slightly turbid
Colour tan
Odour aromatic

Safety data

pH 4 - 5 at 1 %
Flash point 96 °C
Ignition temperature 405 °C
Density approx. 1.13 g/cm³ at 20 °C
Water solubility emulsifiable
Viscosity, dynamic 58.5 mPa.s at 20 °C
Velocity gradient 100 /s
Viscosity, kinematic 517 mm²/s at 20 °C
Surface tension 32.13 mN/m
Determined in the undiluted form.
Explosivity Not explosive

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.
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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) > 2,500 mg/kg
Acute Inhalation Toxicity	LC50 (rat) > 5.077 mg/l Exposure time: 4 h Highest attainable concentration.
Acute Dermal Toxicity	LD50 (rat) > 4,000 mg/kg
Skin Irritation	No skin irritation. (rabbit)
Eye Irritation	No eye irritation. (rabbit)
Sensitization	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to Fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 3.29 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea (<i>Daphnia magna</i>)) 6.9 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (<i>Pseudokirchneriella subcapitata</i>) 13 mg/l Growth rate Exposure time: 72 h

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.

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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. (FLUOXASTROBIN, PROTHIOCONAZOLE 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. (FLUOXASTROBIN, PROTHIOCONAZOLE SOLUTION)

IATA

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

UK 'Carriage' Regulations

UN-Number	3082
Labels	9
Packaging group	III
Hazard no.	90
Emergency action code	3Z
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUOXASTROBIN, PROTHIOCONAZOLE 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:

Labelling according to EC Directives

Hazardous components which must be listed on the label:

- Fluoxastrobin
- Prothioconazole

Symbol(s)

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N	Dangerous for the environment
R-phrase(s) R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s) S35 S57	This material and its container must be disposed of in a safe way. Use appropriate container to avoid environmental contamination.
Exceptional labelling To avoid risks to man and the environment, comply with the instructions for use.	

16. OTHER INFORMATION**Further information**

Text of R phrases mentioned in Section 3:

R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36	Irritating to eyes.
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 information given in this Data Sheet has been included in accordance with the guidelines established by Regulation (EC) 1907/2006. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

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