

**FINALE**Version 3 / GB
102000000573

1/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

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

Trade name FINALE
Product code (UVP) 05936128
Usage Herbicide
Company Bayer Environmental Science
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
Great Britain

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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**

No particular hazards known.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Soluble concentrate (SL)
Glufosinate-ammonium 120 g/l**Hazardous components**

Chemical Name	CAS-No. / EINECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Glufosinate ammonium	77182-82-2 278-636-5	Xn	R22	12.00
Alkylethersulfate, sodium salt	68891-38-3	Xi	R38, R41	> 10.00
1-Methoxy-2-propanol	107-98-2 203-539-1		R10	> 1.00
Perfluorinated phosphinic-/phosphonic acids		Xn, N	R22, R51/53	>= 0.10 - < 2.50

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

4. FIRST AID MEASURES**Inhalation**

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



FINALE

Version 3 / GB
102000000573

2/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

Skin contact

Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion

Do NOT induce vomiting. Rinse mouth. Call a physician or poison control center immediately.

Notes to Physician

Symptoms

gastrointestinal discomfort, hyperthermia, dyspnoea, tachycardia, spasm, daze, Symptoms may be delayed.

Treatment

Emergency measures: Symptomatic treatment and administration of antidotes, decontamination.

Contraindication: atropine.

Endotracheal intubation and gastric lavage, followed by administration of charcoal and sodium sulphate.

Therapeutical: Phenobarbital-Sodium, 1 mg/kg intra-muscular or subcutaneously till maximum 5 mg/kg daily; when necessary, 10 mg Diazepam slowly intravenously.

Elimination by dialysis (forced alkaline diuresis) or haemoperfusion.

ECG - monitoring (Electrocardiogram).

EEG - monitoring (Electroencephalogram).

Monitoring of respiratory, cardiac and central nervous system.

In the event of a mouthful or more being ingested, keep under medical supervision for at least 48 hours.

Give oxygen or artificial respiration if needed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray

Foam

Carbon dioxide (CO₂)

Dry powder

Extinguishing media which should not be used for safety reasons

High volume water jet

Specific hazards during fire fighting

In the event of fire the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

Sulphur oxides

Hydrogen fluoride (HF)

Oxides of phosphorus

Cyanides

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



FINALE

Version 3 / GB
102000000573

3/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

pressure being built up due to heat.
Whenever possible, contain fire-fighting water by diking area with sand or earth.
Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment.

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

Keep in suitable, closed containers for disposal.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Additional Advice

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling
Provide for appropriate exhaust ventilation and dust collection at machinery.

Advice on protection against fire and explosion
No special precautions required.

Storage

Requirements for storage areas and containers
Store in original container.
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.

Storage stability

Storage period	24 Months
Storage temperature	0 - 30 °C
Other data	Storage temperature should ideally lie between 0 and 40 °C, however, storage for two weeks at 54 °C has shown no adverse effects regarding product safety or stability.

Suitable materials
HDPE (high density polyethylene)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**FINALE**Version 3 / GB
102000000573

4/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

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
Glufosinate ammonium	77182-82-2	0.9 mg/m ³		OES BCS*
1-Methoxy-2-propanol	107-98-2	375 mg/m ³ / 100 ppm (TWA)	2007	EH40 WEL
1-Methoxy-2-propanol	107-98-2	560 mg/m ³ / 150 ppm (STEL)	2007	EH40 WEL
1-Methoxy-2-propanol	107-98-2	375 mg/m ³ / 100 ppm (TWA)	02 2006	EU ELV
1-Methoxy-2-propanol	107-98-2	568 mg/m ³ / 150 ppm (STEL)	02 2006	EU ELV

*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. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product.
Protective measures	Avoid contact with skin and eyes.

9. PHYSICAL AND CHEMICAL PROPERTIES

**FINALE**Version 3 / GB
102000000573

5/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

Appearance

Form	liquid, clear
Colour	blue green
Odour	weakly pungent

Safety data

pH	5.5 - 7.5 at 100 % (20 °C)
Boiling point/ range	> 90 °C cannot be determined
Flash point	> 100 °C
Ignition temperature	445 °C
Density	approx. 1.06 g/cm ³ at 20 °C
Solubility/qualitative	soluble in alcohols and ketones
Water solubility	at 20 °C soluble
Impact Sensitivity	not impact-sensitive
Explosivity	Not explosive

10. STABILITY AND REACTIVITY

Conditions to Avoid	Extremes of temperature and direct sunlight.
Thermal decomposition	> 400 °C , Heating rate: 10 K/min
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) 3,030 mg/kg
Acute Inhalation Toxicity	LC50 (rat) 5.3 mg/l Exposure time: 4 h
Acute Dermal Toxicity	LD50 (rat) > 4,000 mg/kg
Skin Irritation	Slight irritant effect - does not require labelling. (rabbit)
Eye Irritation	Slight irritant effect - does not require labelling. (rabbit)
Sensitization	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Buehler test



FINALE

Version 3 / GB
102000000573

6/7

Revision Date: 10.03.2008

Print Date: 11.07.2008

12. ECOLOGICAL INFORMATION

Biodegradability Readily biodegradable.

Ecotoxicity effects

Toxicity to Fish LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 42.3 mg/l
Exposure time: 96 h

Toxicity to daphnia EC50 (Water flea (*Daphnia magna*)) > 100 mg/l
Exposure time: 48 h

Toxicity to algae EC50 (*Desmodesmus subspicatus*) 36 mg/l
Exposure time: 72 h
Test conducted with a similar formulation.

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

According to national and international transport regulations not classified as dangerous goods.

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 not compulsory

Hazardous components which must be listed on the label:

- Glufosinate ammonium



FINALE

Version 3 / GB
102000000573

7/7

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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)

Xi Irritant

R-phrases(s)

R36 Irritating to eyes.

Exceptional labelling

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

Further information

WHO-classification: III (Slightly hazardous)

16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 3:

R10	Flammable.
R22	Harmful if swallowed.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R51/53	Toxic 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.

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