

**FINALE SL150 4X5L JUG GB**Version 3 / GB  
1020000005731/8  
Revision Date: 10.04.2006  
Print Date: 21.06.2006**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name FINALE SL150 4X5L JUG GB  
Product code (UVP) 05936128  
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  
Emergency telephone number 0800-220876 (UK 24 hr)  
+44(0)1603-242424 (Overseas 24 hr)

**2. 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-phrases(s)	Concentration [%]
Glufosinate ammonium	77182-82-2 278-636-5	Xn	R22	12.00
Alkylethersulfate, sodium salt	68891-38-3	Xi	R38, R41	> 5.00 - < 25.00
1-Methoxy-2-propanol	107-98-2 203-539-1		R10	> 5.00 - < 25.00
Perfluorinated phosphinic- /phosphonic acids		Xn, N	R22, R51/53	< 5.00

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

Does not require a hazard warning label, but the normal safety precautions for handling of chemicals must be observed.  
No hazards to be specially mentioned.

**4. FIRST AID MEASURES****Inhalation**

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



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**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**

shivering, disturbance of consciousness, cramps after several hours delay, gastrointestinal discomfort, hyperthermia, dyspnoea, bradycardia/tachycardia

**Treatment**

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

Contraindication: atropine.

Endotracheal intubation should be done and gastric lavage performed, 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.

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**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

water spray

foam

carbon dioxide (CO<sub>2</sub>)

dry powder

**Extinguishing media which must 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<sub>x</sub>)

Sulphur oxides

hydrogen fluoride

phosphorus oxides (e.g. phosphorus pentoxide)

cyanides

**Special protective equipment for fire-fighters**

Wear full protective suit.

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



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pressure being built up due to heat.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Whenever possible, contain fire-fighting water by diking area with sand or earth.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Evacuate personnel to safe areas.  
Use personal protective equipment.

### Environmental Precautions

Do not discharge into the drains/surface water/groundwater.  
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

Take up with absorbent material (e.g. sand, diatomaceous earth or a proprietary absorbent material).  
Keep in suitable, closed containers for disposal.

### Additional Advice

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

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## 7. HANDLING AND STORAGE

### Handling

Advice on safe handling  
Provide suitable exhaust ventilation at processing machines.

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

### Storage

Requirements for storage areas and containers

Store in original container.  
Keep tightly closed in a dry, cool and well-ventilated place.  
Keep away from direct sunlight.  
Protect against frost.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Storage stability

Storage period	> 24 Months
Storage temperature	20 - 30 °C
Other data	Storage temperature should ideally lie between 0 and 30 °C, however, storage for two weeks at 54 °C has shown no adverse effects regarding product safety or stability.

Suitable materials

Plastic container of HDPE  
glass



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### 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
1-Methoxy-2-propanol	107-98-2	375 mg/m <sup>3</sup> / 100 ppm (TWA)	2005	EH40 WEL
1-Methoxy-2-propanol	107-98-2	560 mg/m <sup>3</sup> / 150 ppm (STEL)	2005	EH40 WEL
1-Methoxy-2-propanol	107-98-2	375 mg/m <sup>3</sup> / 100 ppm (TWA)	05 2003	EU ELV
1-Methoxy-2-propanol	107-98-2	568 mg/m <sup>3</sup> / 150 ppm (STEL)	05 2003	EU ELV

#### Engineering measures

See section 7; no measures exceeding those mentioned are necessary.

#### Personal protective equipment

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES



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### Appearance

Form	liquid, clear
Colour	blue green
Odour	weakly pungent

### Safety data

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

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## 10. STABILITY AND REACTIVITY

Hazardous Decomposition Products	No hazardous decomposition products if stored and handled as prescribed.
Thermal decomposition	> 400 °C , Heating rate: 10 K/min
Hazardous Reactions	No hazardous reactions known. Stable under recommended storage conditions.

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## 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)

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Sensitization	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Buehler test
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**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

Biodegradability	According to the results of tests on biodegradability this product is considered as being readily biodegradable.
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**Ecotoxicity effects**

Toxicity to Fish	LC50 (Rainbow trout ( <i>Oncorhynchus mykiss</i> )) 42.3 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea ( <i>Daphnia magna</i> )) > 100 mg/l Exposure time: 48 h
Toxicity to algae	EC50 ( <i>Desmodesmus subspicatus</i> ) 36 mg/l Exposure time: 72 h Test conducted with a similar formulation.

**13. DISPOSAL CONSIDERATIONS****Product**

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

<b>ADNR</b>	Not dangerous goods
<b>ADR</b>	Not dangerous goods
<b>GGVE</b>	Not dangerous goods
<b>GGVS</b>	Not dangerous goods
<b>IATA_C</b>	Not dangerous goods
<b>IATA_P</b>	Not dangerous goods
<b>IMDG</b>	Not dangerous goods
<b>RID</b>	Not dangerous goods

**FINALE SL150 4X5L JUG GB**Version 3 / GB  
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Not 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

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)

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 2:

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.



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