

**FINALE SL150 4X5L JUG GB**Version 3 / GB
102000005731/7
Revision Date: 03.12.2004
Print Date: 22.03.2005**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name FINALE SL150 4X5L JUG GB
Product code (UVP) 05936128
Product code AE F039866 00 SL11 A2
Specification 21044
Usage herbicide
Company Bayer Environmental Science
Durkan House
214-224 High Street
Waltham Cross
Hertfordshire EN8 7DP
Great Britain

Telephone +44(0)1992 784270
Telefax +44(0)1992 784276
Emergency telephone number 0800-220876 (UK only)
+44(0)1223-870312

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**

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



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Skin contact

Take off all contaminated clothing 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

Rinse mouth thoroughly with water. Do not induce vomiting. Call a physician 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.

Therapeutic: 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.

Oxygen, if needed.

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

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

water spray
foam
carbon dioxide (CO₂)
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_x)

Sulphur oxides

hydrogen fluoride

phosphorus oxides (eg phosphorus pentoxide)

Under certain conditions of combustion traces of other toxic substances, such as hydrocyanic acid, cannot be excluded

Special protective equipment for fire-fighters

Wear full protective suit.

In the event of fire, wear self-contained breathing apparatus.

Further information



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Remove product from areas of fire, or otherwise cool containers with water in order to avoid 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 bunding area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate personnel to safe areas.
Use personal protective equipment.

Environmental Precautions

Keep people and animals away.
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, 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.

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.
The product neither sensitive to impacts nor to rub effects and therefore not explosive.

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	The storage temperature should lie between 0 °C and 30 °C, maximum up to 50 °C.

Suitable materials

Store in original container.

**FINALE SL150 4X5L JUG GB**Version 3 / GB
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glass**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Refer to COSHH assessment (Control of substances Hazardous to Health Regulations 1999 as amended). Engineering controls should be used in preference to personal protective equipment wherever practicable.

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
1-Methoxy-2-propanol	107-98-2	375 mg/m ³ (TWA)	2003	EH40 OES
1-Methoxy-2-propanol	107-98-2	560 mg/m ³ (STEL)	2003	EH40 OES
1-Methoxy-2-propanol	107-98-2	375 mg/m ³ (TWA)	05 2003	EU ELV
1-Methoxy-2-propanol	107-98-2	568 mg/m ³ (STEL)	05 2003	EU ELV

Engineering measures

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

Personal protective equipment

Respiratory Protection Short term: filter apparatus, Filter A/P2

Hand Protection fluorinated rubber gloves
nitrite rubber

Eye protection Safety glasses with side-shields

Skin and body protection protective suit

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**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



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Boiling point/ range	> 90 °C cannot be determined
Flash point	> 100 °C closed cup
Ignition temperature	445 °C
Density	ca. 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
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive

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 EPA D-63-5
Hazardous reactions	No hazardous reactions known. Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) 3,570 mg/kg
Acute Inhalation Toxicity	LC50 (rat) 5.3 mg/l Exposure time: 4 h
Acute Dermal Toxicity	LD50 (rat) ca. 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 406, Buehler test

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

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Biodegradability	According to the results of tests on biodegradability this product is considered as being readily biodegradable.
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.
Toxicity to bacteria	EC50 (Activated sludge) > 1,000 mg/l Exposure time: 3 h The value mentioned relates to the active ingredient glufosinate-ammonium.

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
Can be landfilled or incinerated, when in compliance with local regulations.
Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as product waste.
Empty containers can be landfilled after cleaning, when in compliance with local regulations.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION

ADNR	Not dangerous goods
ADR	Not dangerous goods
GGVE	Not dangerous goods
GGVS	Not dangerous goods
IATA_C	Not dangerous goods
IATA_P	Not dangerous goods
IMDG	Not dangerous goods
RID	Not dangerous goods

||UK 'Carriage' Regulations **Not dangerous goods**

Classification according to 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004' and any subsequent amendments.

15. REGULATORY INFORMATION



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|| This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Classification:

|| Hazard warning labelling not compulsory

Hazardous components which must be listed on the label:

- Glufosinate ammonium

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.

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