
Safety Data Sheet

Ronstar Liquid
Prepared 13.01.2004

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1. Substance / preparation and company name

Ronstar Liquid

Use of the Substance/ Preparation

Horticultural herbicide

Company identification

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1b Mills Way, Boscombe Down Business Park, Amesbury, Wiltshire. SP4 7RX

Telephone: 01980 676500 Fax: 01980 626555

2. Composition / information on ingredients

Chemical name	Concentration (%)	CAS	Symbol	R-phrases
Oxadiazon	25.40	19666-30-9	N	R50/53
Calcium alkylarylsulfonate	>1.00 - <5.00		Xi	R36/38
Iso-butanol	>1.00 - <5.00	78-83-1	Xi	R10
				R37/38
				R41
				R67
Cyclohexanone	>5.00 - <25.00	108-94-1	Xn	R10
				R20
Solvent naphtha (petroleum), heavy arom.	>25.00 - <50.00		Xn, N	R65
				R66
				R67
				R51/53

3. Possible hazards

Flammable.

Irritating to eyes and skin.

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

Harmful: may cause lung damage if swallowed.

Vapours may cause drowsiness and dizziness.

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4. First aid measures

General advice: Remove contaminated, soaked clothing immediately and dispose of safely.

Inhalation: Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.

Skin contact: Wash off immediately with soap and plenty of water. Seek medical advice if at all worried.

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

Ingestion: Do not induce vomiting. Wash out mouth with water. Keep at rest. Obtain medical attention.

Notes to physician

Symptoms: Local: May cause skin and eye irritation.

Symptoms: Systemic: To date no symptoms are known.

Risks: Risk of product entering the lungs on vomiting after ingestion.

Treatment: Local treatment: Initial treatment should be symptomatic and supportive.

Treatment: Systemic treatment: Initial treatment should be symptomatic and supportive.

5. Fire fighting measures

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry powder, carbon dioxide (CO₂)

Extinguishing media which must not be used for safety reasons: High volume water jet.

Specific hazards during fire fighting: In case of fire the evolution of dangerous gases is possible.

Special protective equipment for fire-fighters: In the event of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus for fire-fighting if necessary.

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 bunding area with sand or earth.

6. Accidental release measures

Personal precautions: Avoid contact with spilled product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. When dealing with a spillage, do not eat, drink or smoke.

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: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Transfer collected material to heavy duty plastic drums and keep safe for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Additional advice: Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13. Check also for any local site procedures.

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7. Handling and storage

Handling:

Advice on safe handling: No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion: The product is flammable. Keep away from sources of ignition - No smoking. Vapours may form explosive mixture with air.

Storage:

Requirements for storage areas and containers: Keep containers tightly closed in a cool, well-ventilated place. Store in a place accessible by authorised persons only.

Further information: Keep away from direct sunlight. Protect against frost.

Advice on common storage: Keep away from food, drink and animal feedingstuffs.

Storage temperature: 0-30°C

Suitable materials: Keep in original packaging, tightly closed.

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
Iso-butanol	78-83-1	154 mg/m ³ (TWA) 231 mg/m ³ (STEL)	2001 EH40 OES	EH40 OES
Cyclohexanone	108-94-1	102 mg/m ³ (TWA)	2001	EH40 OES
		408 mg/m ³ (STEL)	2001	EH40 OES
		40.8 mg/m ³ (TWA)	05/2001	EU ELV
		81.6 mg/m ³ (STEL)	05/2001	EU ELV

Personal protective equipment

Respiratory protection: Short term: filter apparatus, Filter A.

Hand protection: Chemical resistant gloves, PVC gloves, nitrile gloves.

Eye protection: Chemical resistant goggles must be worn.

Skin and body protection: Light protective clothing, PVC. PVC boots.

Hygiene measures: When using, do not eat, drink or smoke. Remove soiled clothing immediately. Remove soaked clothing immediately. Clean hands and face at work intervals and after work. Work in adequately ventilated room.

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9. Physical and chemical properties

Appearance:	Liquid
Characteristics:	Brown, clear
Flash point:	55°C; method: closed cup
Ignition temperature:	>450°C; note: the data relate to the solvent
Autoignition temperature:	430°C
Upper explosion limit:	7.00% (V); note: the data relate to the solvent
Lower explosion limit:	0.8% (V); note: the data relate to the solvent
Vapour pressure:	0.3 hPa at 20°C; note: the data relate to the solvent
Relative vapour density:	1.00
Density:	ca. 0.99 g/cm ³ at 20°C
Water solubility:	Note: miscible
Partition coefficient (n-octanol/ water):	log Pow: 5.33; note: the value mentioned relates to the active ingredient oxadiazon
Viscosity, kinematic:	2.89 mm ² /s at 40°C
Surface tension:	22 mN/m at 40°C
Other information:	The product is flammable

10. Stability and reactivity

Conditions to avoid: Extremes of temperature and direct sunlight.

Materials to avoid: None.

Hazardous reactions: No hazardous reactions when stored and handled according to prescribed instructions. Note: stable under recommended storage conditions.

11. Toxicological information

Acute oral toxicity:	LD50 (rat) >2000 mg/kg
Acute inhalation toxicity:	LC50 (rat) >5.04 mg/l Exposure time: 4h
Acute dermal toxicity:	LD50 (rat) >2000 mg/kg
Skin irritation:	rabbit Result: Irritating to skin
Eye irritation:	rabbit Result: Irritating to eyes
Sensitization:	Buehler Test guinea pig Result: Non-sensitizing

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12. Ecological information

Elimination information

Bioaccumulation: Bluegill sunfish
Bioconcentration factor (BCF): 1,111
Test substance: the value mentioned relates to the active ingredient oxadiazon

Ecotoxicity effects:

Toxicity to fish: LC50: 1.5 mg/l
Cyprinodon variegatus (sheepshead minnow)
Exposure time: 96h
Test substance: the value mentioned relates to the active ingredient oxadiazon

Toxicity to fish: LC50: 1.2 mg/l
Bluegill sunfish
Exposure time: 96h
Test substance: the value mentioned relates to the active ingredient oxadiazon

Toxicity to fish: LC50: 1.2 mg/l
Rainbow trout
Exposure time: 96h
Test substance: the value mentioned relates to the active ingredient oxadiazon

Toxicity to daphnia: EC50: >2.4 mg/l
Water flea (Daphnia magna)
Exposure time: 48h
Test substance: the value mentioned relates to the active ingredient oxadiazon

Toxicity to algae: EC50: 0.028 mg/l
Algae
Exposure time: 72h

Toxicity to other organisms: LD50: >2150 mg/kg
Bobwhite quail
Test substance: the value mentioned relates to the active ingredient oxadiazon

Toxicity to other organisms: LD50: 1040 mg/kg
Mallard duck
Test substance: the value mentioned relates to the active ingredient oxadiazon

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, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

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14. Transport information

ADR/RID

UN no: 1993
Class: 3
Packing group: III
Hazard no: 30
Description of the goods: 1993 FLAMMABLE LIQUID, N.O.S. (non viscous)
(CYCLOHEXANONE)

ADNR

UN no: 1993
Class: 3
Item: 5
Letter: c
Description of the goods: 1993 Flammable liquid, n.o.s.
(CYCLOHEXANONE)

IMDG

UN no: 1993
Class: 3
Packing group: III
EmS: 3-07
Marine pollutant: P
Description of the goods: FLAMMABLE LIQUID, N.O.S. (non viscous)
(OXADIAZON 25.4% /CYCLOHEXANONE)

IATA

UN no: 1993
Class: 3
Packing group: III
Description of the goods: Flammable liquid, n.o.s.
(OXADIAZON 25.4% /CYCLOHEXANONE)

CDG CPL

UN no: 1993
Class: 3
Packing group: III
Hazard identification no: 30
Emergency action code: 3Y
Proper shipping name: FLAMMABLE LIQUID, N.O.S.
(CYCLOHEXANONE)

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15. Regulatory information

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP3

Hazard symbols: Xn Harmful
N Dangerous for the environment

Risk phrases: R10 Flammable
R36/38 Irritating to eyes and skin
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65 Harmful: may cause lung damage if swallowed
R67 Vapours may cause drowsiness and dizziness

Safety phrases: S35 This material and its container must be disposed of in a safe way
S57 Use appropriate containment to avoid environmental contamination
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

16. Other information

Text of R phrases mentioned in section 2:

R10 Flammable
R20 Harmful by inhalation
R36/38 Irritating to eyes and skin
R37/38 Irritating to respiratory system and skin
R41 Risk of serious damage 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
R65 Harmful: may cause lung damage if swallowed
R66 Repeated exposure may cause drowsiness and dizziness
R67 Vapours may cause drowsiness and dizziness

Disclaimer

The above information is intended to give general health and safety guidance on the storage and transport of the substance or product to which it relates. It is not intended to apply to the use of the substance or product for which purposes the substance or product label and any appropriate technical usage literature available should be consulted and any relevant licences, 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.
