



**RONSTAR EC250**

Version 3 / ZA  
102000016887

1/11  
Revision Date: 03.12.2018  
Print Date: 03.12.2018

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

**Trade name** RONSTAR EC250  
**Product code (UVP)** 79397992

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**Use** Herbicide

**1.3 Details of the supplier of the safety data sheet**

**Supplier** Bayer (Pty) Ltd.  
27 Wrench Road, P.O. Box 143  
1600 Isando  
South Africa  
**Telephone** +27 (011) 921 5911  
**Telefax** +27 (011) 921 5766  
**Responsible Department** QHSE - Nigel, South Africa  
+27 (011) 365 8675 (during business hours only)

**1.4 Emergency telephone no.**

**Emergency telephone no.** +27 (0861) 555 777 (Western Cape Poisons Helpline)  
**Global Incident Response Hotline (24h)** +1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division)

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**

Flammable liquids: Category 3  
H226 Flammable liquid and vapour.  
Aspiration hazard: Category 1  
H304 May be fatal if swallowed and enters airways.  
Skin irritation: Category 2  
H315 Causes skin irritation.  
Eye irritation: Category 2  
H319 Causes serious eye irritation.  
Specific target organ toxicity - single exposure: Category 3  
H336 May cause drowsiness or dizziness.  
Acute aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.  
Chronic aquatic toxicity: Category 1  
H410 Very toxic to aquatic life with long lasting effects.

**2.2 Label elements**

**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.**



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Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Oxadiazon
- 2-Methylpropan-1-ol
- Solvent Naphtha (petroleum), heavy aromatic,<1% Naphthalene



Signal word: Danger

**Hazard statements**

- H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.  
 H410 Very toxic to aquatic life with long lasting effects.  
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

**Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.  
 P331 Do NOT induce vomiting.  
 P391 Collect spillage.  
 P501 Dispose of contents/container in accordance with local regulation.

**2.3 Other hazards**

No other hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

**Chemical nature**

Emulsifiable concentrate (EC)  
Oxadiazon 250 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Oxadiazon	19666-30-9	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	25,3
Solvent Naphtha (petroleum), heavy aromatic,<1% Naphthalene	64742-94-5 01-2119463583-34-xxxx	Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411	> 25,00

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Cyclohexanone	108-94-1 01-2119453616-35-XXXX	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Flam. Liq. 3, H226	> 10,0 – < 25,00
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8 01-2119964467-24-xxxx	Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	> 1,00 – < 5,00
Ethoxylated polyarylphenol	99734-09-5	Aquatic Chronic 3, H412	> 1,00 – < 25,00
2-Methylpropan-1-ol	78-83-1 01-2119484609-23-XXXX	Flam. Liq. 3, H226 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335 Skin Irrit. 2, H315	> 1,00 – < 5,00

**Further information**

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures****General advice**

Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely. When symptoms persist or in all cases of doubt seek medical advice.

**Inhalation**

Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.

**Skin contact**

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

**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. Call a physician or poison control center immediately.

**Ingestion**

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

**4.2 Most important symptoms and effects, both acute and delayed****Symptoms**

When inhaled or swallowed depending on the time and amount, it can give rise to the following symptoms: Headaches, Giddiness, Tiredness, Nausea, Vomit, Heart beat disturbance, Intoxication, Unconsciousness, Breathing stop, Death., Aspiration may cause pulmonary oedema and pneumonitis., Symptoms and hazards refer to the solvent.

**4.3 Indication of any immediate medical attention and special treatment needed****Risks**

Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

**Treatment**

Local treatment: Initial treatment: symptomatic.



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Systemic treatment: Initial treatment: symptomatic. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote.

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**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

**5.3 Advice for firefighters**

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.

**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 diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**Precautions** Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. Remove all sources of ignition.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Check also for any local site procedures.

**6.4 Reference to other sections** 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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**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Use only in area provided with appropriate exhaust ventilation.

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- Advice on protection against fire and explosion** Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of electrostatic charge. Use only explosion-proof equipment.
- Hygiene measures** Avoid contact with skin, eyes and clothing. Remove contaminated clothing immediately and dispose of safely. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. When using, do not eat, drink or smoke.
- 7.2 Conditions for safe storage, including any incompatibilities**
- Requirements for storage areas and containers** Store in original container. Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep away from direct sunlight.
- Advice on common storage** Keep away from food, drink and animal feedingstuffs.
- Suitable materials** Coex EVOH (1000L IBC)
- 7.3 Specific end use(s)** Refer to the label and/or leaflet.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Oxadiazon	19666-30-9	0,3 mg/m <sup>3</sup> (TWA)		OES BCS*
2-Methylpropan-1-ol	78-83-1	225 mg/m <sup>3</sup> /75 ppm (STEL)	1995	ZA REL
2-Methylpropan-1-ol	78-83-1	150 mg/m <sup>3</sup> /50 ppm (TWA)	1995	ZA REL
Cyclohexanone	108-94-1	100 mg/m <sup>3</sup> /25 ppm (TWA)	1995	ZA REL
Cyclohexanone	108-94-1	400 mg/m <sup>3</sup> /100 ppm (STEL)	1995	ZA REL

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**8.2 Exposure controls**

- Respiratory protection** Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. 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** Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.  
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating,

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drinking, smoking or using the toilet.

Material Nitrile rubber

Rate of permeability &gt; 480 min

Glove thickness &gt; 0,4 mm

Protective index Class 6

Directive Protective gloves complying with EN 374.

**Eye protection**

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection**

Wear standard coveralls and Category 3 Type 6 suit.

If there is a risk of significant exposure, consider a higher protective type 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.

If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

<b>Form</b>	Liquid
<b>Colour</b>	yellow to red-brown
<b>Odour</b>	aromatic
<b>pH</b>	4,0 - 6,0 (1 %) (23 °C) (deionized water)
<b>Flash point</b>	45 - 56 °C
<b>Ignition temperature</b>	> 450 °C The data refer to solvent naphtha petroleum.
<b>Auto-ignition temperature</b>	430 °C
<b>Density</b>	ca. 0,99 g/cm <sup>3</sup> ( 20 °C)
<b>Water solubility</b>	miscible
<b>Partition coefficient: n-octanol/water</b>	Cyclohexanone: log Pow: 0,81
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity****Thermal decomposition** Stable under normal conditions.**10.2 Chemical stability** Stable under recommended storage conditions.**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.



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- 10.4 Conditions to avoid** Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** Store only in the original container.
- 10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

<b>Acute oral toxicity</b>	LD50 (Rat) > 2.000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 5,04 mg/l Exposure time: 4 h
<b>Acute dermal toxicity</b>	LD50 (Rat) > 2.000 mg/kg
<b>Skin corrosion/irritation</b>	Irritating to skin. (Rabbit)
<b>Serious eye damage/eye irritation</b>	Irritating to eyes. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

**Assessment STOT Specific target organ toxicity – single exposure**

Oxadiazon: Based on available data, the classification criteria are not met.  
Cyclohexanone: Based on available data, the classification criteria are not met.

**Assessment STOT Specific target organ toxicity – repeated exposure**

Oxadiazon caused specific target organ toxicity in experimental animal studies in the following organ(s):  
Liver, Blood. The observed effects do not appear to be relevant for humans.  
Cyclohexanone did not cause specific target organ toxicity in experimental animal studies.

**Assessment mutagenicity**

Oxadiazon was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.  
Cyclohexanone was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Oxadiazon caused at high dose levels an increased incidence of tumours in the following organ(s):  
Liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.  
Cyclohexanone is not considered carcinogenic.

**Assessment toxicity to reproduction**

Oxadiazon caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Oxadiazon is related to parental toxicity.  
Cyclohexanone did not cause reproductive toxicity in a two-generation study in rats.

**Assessment developmental toxicity**

Oxadiazon caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Oxadiazon are related to maternal toxicity.  
Cyclohexanone did not cause developmental toxicity in rats and rabbits.

**Aspiration hazard**

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May be fatal if swallowed and enters airways.

**Further information**

The toxicological data refer to a similar formulation.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 1,2 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient oxadiazon.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) > 2,4 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient oxadiazon.

**Toxicity to aquatic plants** ErC50 (Desmodesmus subspicatus (green algae)) 0,080 mg/l  
Growth rate; Exposure time: 72 h

**NOEC** (Desmodesmus subspicatus (green algae)) 0,010 mg/l  
Exposure time: 72 h

**12.2 Persistence and degradability**

**Biodegradability** Oxadiazon:  
Not rapidly biodegradable  
Cyclohexanone:  
rapidly biodegradable

**Koc** Oxadiazon: Koc: 1294  
Cyclohexanone: Koc: 15,15

**12.3 Bioaccumulative potential**

**Bioaccumulation** Oxadiazon: Bioconcentration factor (BCF) 243  
Does not bioaccumulate.  
Cyclohexanone: Bioconcentration factor (BCF) 129  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Oxadiazon: Slightly mobile in soils  
Cyclohexanone: Mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment** Oxadiazon: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).  
Cyclohexanone: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**12.6 Other adverse effects**

**Additional ecological information** No other effects to be mentioned.





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**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**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.

**Contaminated packaging** Triple rinse containers.  
Do not re-use empty containers.  
Not completely emptied packagings should be disposed of as hazardous waste.

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**SECTION 14: TRANSPORT INFORMATION**

**SANS 10231**

14.1 UN number **1993**  
14.2 Proper shipping name **FLAMMABLE LIQUID, N.O.S.**  
**(OXADIAZON, CYCLOHEXANONE SOLUTION)**  
14.3 Transport hazard class(es) **3**  
14.4 Packaging Group **III**  
14.5 Environm. Hazardous Mark **YES**

**IMDG**

14.1 UN number **1993**  
14.2 Proper shipping name **FLAMMABLE LIQUID, N.O.S.**  
**(OXADIAZON, CYCLOHEXANONE SOLUTION)**  
14.3 Transport hazard class(es) **3**  
14.4 Packaging Group **III**  
14.5 Marine pollutant **YES**

**IATA**

14.1 UN number **1993**  
14.2 Proper shipping name **FLAMMABLE LIQUID, N.O.S.**  
**(OXADIAZON, CYCLOHEXANONE SOLUTION )**  
14.3 Transport hazard class(es) **3**  
14.4 Packaging Group **III**  
14.5 Environm. Hazardous Mark **NO**

**14.6 Special precautions for user**

See sections 6 to 8 of this Safety Data Sheet.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

No transport in bulk according to the IBC Code.

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**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Further information**

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WHO-classification: III (Slightly hazardous)

**SECTION 16: OTHER INFORMATION****Text of the hazard statements mentioned in Section 3**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Abbreviations and acronyms**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

# SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



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The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. 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.

**Reason for Revision:** Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 4: First Aid Measures.

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