



**PROSPER EC500**

Version 2 / ZA  
102000007367

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Revision Date: 08.08.2017  
Print Date: 08.08.2017

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

**1.1 Product identifier**

**Trade name** PROSPER EC500  
**Product code (UVP)** 06280714

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

**Use** Fungicide

**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.**

Acute toxicity: Category 4

H302 Harmful if swallowed.  
H332 Harmful if inhaled.

Skin irritation: Category 2

H315 Causes skin irritation.

Serious eye damage: Category 1

H318 Causes serious eye damage.

Skin sensitisation: Category 1

H317 May cause an allergic skin reaction.

Specific target organ toxicity - repeated exposure: Category 2

H373 May cause damage to organs (Eyes) through prolonged or repeated exposure.

Reproductive toxicity: Category 2

H361d Suspected of damaging the unborn child.

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.



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**2.2 Label elements**

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

|| Hazard label for supply/use required.

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

- Spiroxamine
- Benzyl alcohol
- Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)



|| **Signal word:** Danger

**Hazard statements**

- || H302 + H332 Harmful if swallowed or if inhaled.  
 || H315 Causes skin irritation.  
 || H317 May cause an allergic skin reaction.  
 || H318 Causes serious eye damage.  
 || H361d Suspected of damaging the unborn child.  
 || H373 May cause damage to organs (Eyes) through prolonged or repeated exposure.  
 || 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**

- || P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 || P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 || P305 + P351 + IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 || P338 Immediately call a POISON CENTER/doctor/ physician.  
 || 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)  
Spiroxamine 500 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	
Spiroxamine	118134-30-8	Acute Tox. 4, H302 Acute Tox. 4, H312	49,80

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		Acute Tox. 4, H332 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT RE 2, H373 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	
Benzyl alcohol	100-51-6	Acute Tox. 4, H332 Acute Tox. 4, H302 Eye Irrit. 2, H319	> 25
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 3, H412	> 5,00 – < 20
Ethoxylated polyarylphenol	99734-09-5	Aquatic Chronic 3, H412	> 1,00 – < 25,00

**Further information**

Spiroxamine	118134-30-8	M-Factor: 100 (acute), 100 (chronic)
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7	M-Factor: 1 (acute)

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**

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

**4.2 Most important symptoms and effects, both acute and delayed****Symptoms** No symptoms known or expected.**4.3 Indication of any immediate medical attention and special treatment needed**



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**Treatment** Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. 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

**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released:, Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>)

**5.3 Advice for firefighters**

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

**Further information** Contain the spread of the fire-fighting media. 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** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**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** Use only in area provided with appropriate exhaust ventilation.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

**7.2 Conditions for safe storage, including any incompatibilities**



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<b>Requirements for storage areas and containers</b>	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.
<b>Advice on common storage</b>	Keep away from food, drink and animal feedingstuffs.
<b>Suitable materials</b>	HDPE (high density polyethylene)
<b>7.3 Specific end use(s)</b>	Refer to the label and/or leaflet.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

No control parameters known.

**8.2 Exposure controls**

**Respiratory protection**

If product is handled while not enclosed, and if contact may occur: 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, drinking, smoking or using the toilet.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 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) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).

**Skin and body protection**

Wear standard coveralls and Category 3 Type 4 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.

**General protective measures**

If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals



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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

<b>Form</b>	Liquid, clear to slightly turbid
<b>Colour</b>	yellow to brown
<b>Odour</b>	aromatic
<b>pH</b>	9,4 at ca. 1 % (23 °C) (deionized water)
<b>Flash point</b>	108 °C
<b>Ignition temperature</b>	265 °C
<b>Auto-ignition temperature</b>	The product is not self-ignitable.
<b>Density</b>	ca. 1,00 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	emulsifiable
<b>Partition coefficient: n-octanol/water</b>	Spiroxamine: log Pow: 2,8 - 3,0 at 20 °C at pH 7
<b>Viscosity, dynamic</b>	82 mPa.s at 20 °C Velocity gradient 150 /s
<b>Viscosity, kinematic</b>	82 mm <sup>2</sup> /s at 20 °C
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

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**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.

**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**

**Acute oral toxicity** LD50 (Rat) > 500 - < 1.000 mg/kg  
Test conducted with a similar formulation.

**Acute inhalation toxicity** LC50 (Rat) 2,323 mg/l



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	Exposure time: 4 h Determined in the form of a respirable aerosol. Test conducted with a similar formulation.
<b>Acute dermal toxicity</b>	LD50 (Rat) > 2.000 mg/kg Test conducted with a similar formulation.
<b>Skin irritation</b>	Irritating to skin. (Rabbit) Test conducted with a similar formulation.
<b>Eye irritation</b>	Severe eye irritation. (Rabbit) Test conducted with a similar formulation.
<b>Sensitisation</b>	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test Sensitising (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

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

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

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

Spiroxamine caused specific target organ toxicity in experimental animal studies in dogs in the following organ(s): Eyes.

**Assessment mutagenicity**

Spiroxamine was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

Spiroxamine was not carcinogenic in lifetime feeding studies in rats and mice.

**Assessment toxicity to reproduction**

Spiroxamine 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 Spiroxamine is related to parental toxicity.

**Assessment developmental toxicity**

Spiroxamine caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Spiroxamine are related to maternal toxicity.

**Aspiration hazard**

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

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**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity**

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 11,5 mg/l Exposure time: 96 h Test conducted with a similar formulation.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 10,3 mg/l Exposure time: 48 h Test conducted with a similar formulation.
<b>Toxicity to aquatic plants</b>	EC50 (Desmodesmus subspicatus (green algae)) 0,029 mg/l Growth rate; Exposure time: 72 h Test conducted with a similar formulation.



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**12.2 Persistence and degradability**

**Biodegradability** Spiroxamine:  
Not rapidly biodegradable

**Koc** Spiroxamine: Koc: 2415

**12.3 Bioaccumulative potential**

**Bioaccumulation** Spiroxamine: Bioconcentration factor (BCF) 87  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Spiroxamine: Slightly mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment** Spiroxamine: 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.

**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** Not completely emptied packagings should be disposed of as hazardous waste.

**SECTION 14: TRANSPORT INFORMATION**

**SANS 10231**

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

**IMDG**

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

**IATA**

14.1 UN number	<b>3082</b>
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14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(SPIROXAMINE, BENZYLALCOHOL SOLUTION )

14.3 Transport hazard class(es) 9

14.4 Packing group III

14.5 Environm. Hazardous Mark YES

**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.

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Further information**

WHO-classification: II (Moderately hazardous)

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

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very 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)



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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

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.

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