



# PROSPER<sup>®</sup> TRIO



Reg. No. 15-B-81-4-B-60-25-B-45-43

CONTENTS: 25 L



## DANGER POISON

### COMPOSITION:

	mass/volume
Spiroxamine .....	250 g/l
Tebuconazole.....	167 g/l
Triadimenol.....	43 g/l

Chemical Group : Spiroxamine.....spiroketalamine  
 Tebuconazole.....triazole  
 Triadimenol.....triazole

**A systemic emulsifiable concentrate fungicide for the control of  
 powdery mildew, leaf blotch, yellow (stripe) rust,  
 leaf (brown) rust in wheat and  
 crown rust in oats**

Packed For:  
 Bayer Zimbabwe (Pvt) Ltd  
 P.O. Box AY 78, Amby, Harare, Zimbabwe.  
 Tel. 4487211/487242

**IN CASE OF POISONING PLEASE PHONE: +27(0) 861 555 777**

Manufactured by: Bayer AG, Germany  
**Prosper<sup>®</sup>** is a registered trademark of the Bayer Group

# Bayer

Batch No.: See on pack  
 Date of Manufacture: See on pack

Zim/0421/Prosper Trio 25L/Sales Panel -  
 Code: ZW85344234C



**HARMFUL**



FRONT

## TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

### PRECAUTIONS

1. **HANDLE WITH CARE;** avoid any contact, poisonous by swallowing or inhalation.
2. May cause skin burn or skin irritation in case of skin contact.
3. **DO NOT** eat, drink or smoke whilst mixing, applying or before washing hands and face.
4. **WEAR PROTECTIVE CLOTHING,** i.e. overalls, rubber gloves, and rubber boots and a facemask while mixing, spraying and cleaning up.
5. **DO NOT** inhale fumes or spray mist.
6. Remove protective clothing on completion of spraying, wash thoroughly with soap and water, and wash contaminated clothing daily.
7. Avoid drift of spray on to other crops, grazing, rivers, dams and areas not under treatment.
8. Clean applicator after use, dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
9. **KEEP APART FROM FOOD AND FEEDSTUFFS.**
10. **KEEP OUT OF REACH OF CHILDREN, UNINFORMED PERSONS AND ANIMALS.**
11. **STORE IN A COOL, DRY PLACE IN ORIGINAL CONTAINER AND KEEP UNDER LOCK AND KEY.**
12. **TOXIC TO FISH AND WILD LIFE. DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS AND WATERWAYS.**
13. **SPILLAGE** - Use protective clothing when dealing with spillages. Prevent entry into drains, water or soil. Soak up spilled product with absorbent material such as dry soil, sawdust or sand and place into a labeled closable container for safe disposal. Use damp cloth to clean the floor and contaminated parts. Place used cleaning materials into closable container for safe disposal. Bury container in a disposable pit away from water sources or arable land.
14. **CONTAINER DISPOSAL** - Triple rinse container emptying washings into spray tank and spray onto crop. Perforate and flatten rinsed container to make it unusable or burn it and bury crushed container or ashes in a recommended disposal pit in a secure location away from water sources or arable land. **DO NOT** use empty container for any other purpose.
15. **RE-ENTRY:** Do not enter treated area within 1 day after treatment unless wearing protective clothing.

### SYMPTOMS OF POISONING

No specific symptoms known.

### FIRST AID

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

Move out of dangerous area. Place and transport victim in stable position (lying sideways).

**Inhalation:** Move to fresh air. Keep patient warm and 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. Call a physician or poison control center immediately.

**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:** Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

## **NOTE TO PHYSICIAN**

### **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.

**Antidote:** There is no specific antidote.

## **WARRANTY**

Although this remedy has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of dilution water; compatibility with other substances not indicated on the label and the occurrence of resistance of the pathogen against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

## **RESISTANCE MANAGEMENT:**

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with registered products from different fungicide group codes.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

**DIRECTIONS FOR USE:** USE ONLY AS DIRECTED

## **COMPATIBILITY:**

**Prosper Trio** can be mixed with most commonly used insecticides. However, a pre-test on the physical compatibility and a plant safety test is recommended before wide spread use of such a combination.

## **METHOD OF APPLICATION:**

### **Ground Application:**

- **Prosper Trio** may be applied with conventional high volume spray equipment. Calibrate the apparatus before application to ensure that the correct dosage is applied. The distribution of the spray volume must be uniform throughout the target area. Ensure good coverage of the whole plant by using enough water and suitable spraying equipment.
- **Apply the recommended dosage rate of Prosper Trio in 200 - 300 liters water per hectare.**

## **MIXING INSTRUCTIONS:**

Pour the required quantity of **Prosper Trio** into the water while agitating.

Do not allow the **Prosper Trio** spray mixture to stand any length of time before using.

**APPLICATION TABLE:**

CROP / DISEASE	DOSAGE RATE	REMARKS
<b>WHEAT</b>		(1) <b>Prosper Trio</b> should be applied at the first signs of infection before 5 % infection level is reached. (2) A second application 21 days after the initial application is recommended for wheat with a high yield potential, particularly in cases where the initial application was made early (first node stage) or when other diseases develop later in the season. (3) In cases where the <b>wheat will not be grazed</b> , the <b>hay may not be used as animal feed</b> and disease development occurs late, <b>Prosper Trio</b> can be applied as late as the early milk stage of the wheat. THE CROP MAY NOT BE GRAZED AND THE HAY MAY NOT BE USED AS ANIMAL FEED. ALSO DO NOT HARVEST GRAIN WITHIN 56 DAYS OF LAST APPLICATION.
Powdery mildew ( <i>Erysiphe graminis</i> )	<b>GROUND &amp; AERIAL APPLICATION</b> 500 ml / ha	Spray as soon as symptoms are noticed. Repeat application should symptoms reappear.
Leaf blotch (Speckled) ( <i>Septoria tritici</i> )	<b>GROUND &amp; AERIAL APPLICATION</b> 500 ml / ha	Application must be made not later than the appearance of the flag leaf.
Yellow (stripe) rust ( <i>Puccinia striiformis</i> )	<b>GROUND &amp; AERIAL APPLICATION</b> 500 ml / ha	Apply when first symptoms are noticed. Repeat application if symptoms reappear.
Leaf (brown) rust ( <i>Puccinia triticina</i> = <i>Puccinia recondita</i> )	<b>GROUND &amp; AERIAL APPLICATION</b> 500 ml / ha	Spray as soon as symptoms are noticed. Repeat application should symptoms reappear.
<b>OATS</b> Crown rust ( <i>Puccinia coronata</i> )	<b>GROUND &amp; AERIAL APPLICATION</b> 300 ml / ha	Apply first application at the first signs of infection. Apply second application when infection increases or 28 days after the first application. <b>NB. THE CROP MAY NOT BE GRAZED AND THE HAY MAY NOT BE USED AS ANIMAL FEED. ALSO DO NOT HARVEST GRAIN WITHIN 56 DAYS OF LAST APPLICATION.</b>

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

**1.1 Product identifier**

**Trade name** PROSPER TRIO EC460  
**Product code (UVP)** 06353711

**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.

Acute toxicity: Category 4

H332 Harmful if inhaled.

Skin corrosion: Category 1B

H314 Causes severe skin burns and eye damage.

Specific target organ toxicity - single exposure: Category 3

H335 May cause respiratory irritation.

Reproductive toxicity: Category 1B

H360 May damage fertility or the unborn child.

Effects on or via lactation

H362 May cause harm to breast-fed children.

Specific target organ toxicity - repeated exposure: Category 2

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

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1



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**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.**

Hazard label for supply/use required.

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

- Spiroxamine
- Tebuconazole
- Triadimenol
- N,N-Dimethyl decanamide



**Signal word:** Danger

**Hazard statements**

- H302 + H332** Harmful if swallowed or if inhaled.  
**H314** Causes severe skin burns and eye damage.  
**H335** May cause respiratory irritation.  
**H360** May damage fertility or the unborn child.  
**H362** May cause harm to breast-fed children.  
**H373** May cause damage to organs (Eye) through prolonged or repeated exposure.  
**H410** Very toxic to aquatic life with long lasting effects.  
Restricted to professional users.  
**EUH401** To avoid risks to human health and the environment, comply with the instructions for use.  
**EUH208** Contains Spiroxamine. May produce an allergic reaction.

**Precautionary statements**

- P201** Obtain special instructions before use.  
**P263** Avoid contact during pregnancy/ while nursing.  
**P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**P302 + P352** IF ON SKIN: Wash with plenty of water/ soap.  
**P337 + P313** If eye irritation persists: Get medical advice/ attention.  
**P312** Call a POISON CENTER/doctor/physician if you feel unwell.  
**P501** Dispose of contents/container in accordance with local regulation.

**2.3 Other hazards**

No other hazards known.

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

**3.2 Mixtures**

**Chemical nature**

Emulsifiable concentrate (EC)  
Spiroxamine 250 g/l, Tebuconazole 167 g/l, Triadimenol 43 g/l

**Hazardous components**

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



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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 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	25,2
Tebuconazole	107534-96-3	Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	16,8
Triadimenol	55219-65-3	Acute Tox. 4, H302 Repr. 1B, H360 Lact., H362 Aquatic Chronic 2, H411	4,3
gamma-Butyrolactone	96-48-0	Acute Tox. 4, H302 Eye Dam. 1, H318 STOT SE 3, H336	> 1 – < 15
N,N-Dimethyl decanamide	14433-76-2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412	> 20
Alkylaryl polyglycol ether	104376-75-2	Aquatic Chronic 3, H412	> 1 – < 25

## Further information

Spiroxamine	118134-30-8	M-Factor: 100 (acute), 100 (chronic)
		M-Factor: 100 (acute), 100 (chronic)
Tebuconazole	107534-96-3	M-Factor: 1 (acute), 10 (chronic)

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>	Remove contaminated clothing immediately and dispose of safely. Move out of dangerous area. Place and transport victim in stable position (lying sideways).
<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. Call a physician or poison control center immediately.
<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.



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**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

**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**

**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** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**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), Hydrogen chloride (HCl), Nitrogen oxides (NOx)

**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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**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.



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Print Date: 10.01.2018**Advice on protection against fire and explosion** No special precautions required.**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). Wash hands before breaks and immediately after handling the product.**7.2 Conditions for safe storage, including any incompatibilities****Requirements for storage areas and containers** Store in a place accessible by authorized persons only. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from frost.**Advice on common storage** Keep away from food, drink and animal feedingstuffs.**Suitable materials** HDPE (high density polyethylene)  
Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)**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
Tebuconazole	107534-96-3	0,2 mg/m <sup>3</sup> (SK-ABS)		OES BCS*
Triadimenol	55219-65-3	1,6 mg/m <sup>3</sup> (TWA)		OES BCS*

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

**8.2 Exposure controls****Respiratory protection** Wear a compressed air respirator (continuous flow) conforming to European norm EN14594 or EN14563-1 or equivalent or an organic gas and vapour filter mask (protection factor 20) conforming to EN1336 Type A filter 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

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	Protective index Directive	Class 6 Protective gloves complying with EN 374.
<b>Eye protection</b>	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).	
<b>Skin and body protection</b>	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.	
<b>General protective measures</b>	If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals	

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

<b>Form</b>	Liquid, clear
<b>Colour</b>	tan
<b>Odour</b>	aromatic
<b>pH</b>	7,0 - 9,0 at 1 % (23 °C) (deionized water)
<b>Flash point</b>	110 °C
<b>Auto-ignition temperature</b>	315 °C
<b>Density</b>	ca. 0,99 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  Tebuconazole: log Pow: 3,7 Triadimenol: log Pow: 3,08 - 3,28 N,N-Dimethyldecanamide: log Pow: 2,46
<b>Viscosity, dynamic</b>	15 mPa.s at 40 °C Velocity gradient 100 /s 35 mPa.s at 20 °C Velocity gradient 100 /s
<b>Viscosity, kinematic</b>	35,4 mm <sup>2</sup> /s at 20 °C
<b>Surface tension</b>	31,06 mN/m at 25 °C Determined as a 1% solution in distilled water.
<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** from 220 °C, Heating rate: 0,05 K/min  
Determined in glass.  
Endothermic.  
from 245 °C, Heating rate: 0,05 K/min  
Determined in glass.  
Exothermic decomposition.

**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** ATE (Mix) 1,5 mg/l  
Calculation method

**Acute dermal toxicity** LD50 (Rat) > 2.000 mg/kg  
Test conducted with a similar formulation.

**Skin irritation** corrosive (Rabbit)  
Test conducted with a similar formulation.

**Eye irritation** Severe eye irritation. (Rabbit)  
Test conducted with a similar formulation.

**Sensitisation** Non-sensitizing. (Guinea pig)  
OECD Test Guideline 406, Buehler test  
Test conducted with a similar formulation.

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

Spiroxamine: Based on available data, the classification criteria are not met.  
Tebuconazole: Based on available data, the classification criteria are not met.  
Triadimenol: Based on available data, the classification criteria are not met.  
N,N-Dimethyldecan-1-amide: May cause respiratory irritation.

**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.  
Tebuconazole did not cause specific target organ toxicity in experimental animal studies.  
Triadimenol did not cause specific target organ toxicity in experimental animal studies.

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N,N-Dimethyldecanamide did not cause specific target organ toxicity in experimental animal studies.

**Assessment mutagenicity**

Spiroxamine was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Triadimenol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
N,N-Dimethyldecanamide was not genotoxic in a battery of in vitro tests.

**Assessment carcinogenicity**

Spiroxamine was not carcinogenic in lifetime feeding studies in rats and mice.  
Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.  
Triadimenol caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The increased tumour incidence is not considered to be treatment related.  
N,N-Dimethyldecanamide is not considered carcinogenic.

**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.  
Tebuconazole 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 Tebuconazole is related to parental toxicity.  
Triadimenol caused reduced fertility, reduced lactation rate. The reproduction toxicity seen with Triadimenol is related to parental toxicity.  
N,N-Dimethyldecanamide is not considered a reproductive toxicant at non-maternally toxic dose levels.

**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.  
Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.  
Triadimenol caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triadimenol are related to maternal toxicity.  
N,N-Dimethyldecanamide did not cause developmental toxicity in rats and rabbits.

**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)) 13,1 mg/l Exposure time: 96 h Test conducted with a similar formulation.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 5,4 mg/l Exposure time: 48 h Test conducted with a similar formulation.
<b>Chronic toxicity to aquatic invertebrates</b>	NOEC (Daphnia (water flea)): 0,010 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient tebuconazole.
<b>Toxicity to aquatic plants</b>	EC50 (Desmodesmus subspicatus (green algae)) $\geq$ 560 $\mu$ g/l Growth rate; Exposure time: 72 h Test conducted with a similar formulation.



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EC50 (Lemna gibba (gibbous duckweed)) 0,237 mg/l  
Growth rate; Exposure time: 7 d  
The value mentioned relates to the active ingredient tebuconazole.

**12.2 Persistence and degradability**

**Biodegradability** Spiroxamine:  
Not rapidly biodegradable  
Tebuconazole:  
Not rapidly biodegradable  
Triadimenol:  
Not rapidly biodegradable  
N,N-Dimethyldecanamide:  
rapidly biodegradable

**Koc** Spiroxamine: Koc: 2415  
Tebuconazole: Koc: 769  
Triadimenol: Koc: 273

**12.3 Bioaccumulative potential**

**Bioaccumulation** Spiroxamine: Bioconcentration factor (BCF) 87  
Does not bioaccumulate.  
Tebuconazole: Bioconcentration factor (BCF) 35 - 59  
Does not bioaccumulate.  
Triadimenol: Bioconcentration factor (BCF) 21  
Does not bioaccumulate.  
N,N-Dimethyldecanamide:  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Spiroxamine: Slightly mobile in soils  
Tebuconazole: Slightly mobile in soils  
Triadimenol: Moderately mobile in soils  
N,N-Dimethyldecanamide: 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).  
Tebuconazole: 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).  
Triadimenol: 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).  
N,N-Dimethyldecanamide: 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**

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<b>Product</b>	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.
<b>Contaminated packaging</b>	Not completely emptied packagings should be disposed of as hazardous waste.

### SECTION 14: TRANSPORT INFORMATION

#### SANS 10231

14.1 UN number	<b>1760</b>
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (SPIROXAMINE, N,N-DIMETHYLDECANAMIDE SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

#### IMDG

14.1 UN number	<b>1760</b>
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (SPIROXAMINE, N,N-DIMETHYLDECANAMIDE SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Marine pollutant	YES

#### IATA

14.1 UN number	<b>1760</b>
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (SPIROXAMINE, N,N-DIMETHYLDECANAMIDE SOLUTION )
14.3 Transport hazard class(es)	8
14.4 Packing 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.

### 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.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H362	May cause harm to breast-fed children.
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.
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

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:** The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients.

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