



## PROSARO

Version 6 / IRL  
102000007908

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Revision Date: 09.12.2015

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

### 1.1 Product identifier

Trade name                                  PROSARO  
Product code (UVP)                      05676428, 81782423

### 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 CropScience Ltd  
  Bayer Ltd  
  The Atrium, Blackthorn Road  
  Sandyford  
  Dublin 18  
  Ireland  
  
Telephone                                      +353-1-2999313  
Responsible Department                  Email: ukinfo@bayercropscience.com

### 1.4 Emergency telephone no.

Emergency telephone no.                1800-409-399

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## 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.

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  
H335    May cause respiratory irritation.

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.

### 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:

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- Tebuconazole
- Prothioconazole
- N,N-Dimethyl decanamide

**Signal word:** Warning**Hazard statements**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
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.
EUH208	Contains 2-[2-(1-chlorocyclopropyl)-2-hydroxy-3-phenylpropyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione. May produce an allergic reaction.

**Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P501	Dispose of contents/container to a licensed waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

**2.3 Other hazards**

No other hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures****Chemical nature**Emulsifiable concentrate (EC)  
Prothioconazole/Tebuconazole 125:125 /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	
Prothioconazole	178928-70-6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	12.76
Tebuconazole	107534-96-3 403-640-2	Acute Tox. 4, H302 Aquatic Acute 1, H400 Repr. 2, H361d Aquatic Chronic 1, H410	12.76
N,N-Dimethyl decanamide	14433-76-2	Skin Irrit. 2, H315 Eye Irrit. 2, H319	> 20

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	238-405-1	STOT SE 3, H335 Aquatic Chronic 3, H412	
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**Further information**

Prothioconazole	178928-70-6	M-Factor: 10 (acute)
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>	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. Get medical attention if irritation develops and persists.
<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**

**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.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media**

<b>Suitable</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable</b>	High volume water jet



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<b>5.2 Special hazards arising from the substance or mixture</b>	In the event of fire the following may be released:., Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Sulphur oxides, Nitrogen oxides (NOx)
<b>5.3 Advice for firefighters</b>	
<b>Special protective equipment for fire-fighters</b>	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
<b>Further information</b>	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. If the product contaminates rivers and lakes or drains inform respective authorities.

### 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

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. 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

**Requirements for storage areas and containers** 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. Protect from frost. Keep away from direct sunlight.

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

**Suitable materials** HDPE (high density polyethylene)

**7.3 Specific end uses** Refer to the label and/or leaflet.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Prothioconazole	178928-70-6	1.4 mg/m <sup>3</sup> (SK-ABS)		OES BCS*
Tebuconazole	107534-96-3	0.2 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

#### 8.2 Exposure controls

##### Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

##### Respiratory protection

Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 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).

##### 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.

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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>	tan
<b>Odour</b>	aromatic
<b>pH</b>	5.0 - 7.0 at 1 % (23 °C) (deionized water)
<b>Flash point</b>	> 148 °C
<b>Density</b>	ca. 0.98 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	emulsifiable
<b>Partition coefficient: n-octanol/water</b>	Prothioconazole: log Pow: 3.82 at 20 °C at pH 7 Tebuconazole: log Pow: 3.7 N,N-Dimethyldecanamide: log Pow: 2.46
<b>Viscosity, dynamic</b>	49.9 mPa.s at 20 °C
<b>Surface tension</b>	ca. 29.1 mN/m at 20 °C
<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.**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.**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute oral toxicity** LD50 (rat) > 2,500 mg/kg**Acute inhalation toxicity** LC50 (rat) > 5.153 mg/l  
Exposure time: 4 h  
Irritating to respiratory system.**Acute dermal toxicity** LD50 (rat) > 4,000 mg/kg

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<b>Skin irritation</b>	Irritating to skin. (rabbit)
<b>Eye irritation</b>	Irritating to eyes. (rabbit)
<b>Sensitisation</b>	Non-sensitizing. (guinea pig) OECD Test Guideline 406

**Assessment repeated dose toxicity**

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

**Assessment mutagenicity**

Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence 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.  
 N,N-Dimethyldecanamide was not genotoxic in a battery of in vitro tests.

**Assessment carcinogenicity**

Prothioconazole 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.  
 N,N-Dimethyldecanamide is not considered carcinogenic.

**Assessment toxicity to reproduction**

Prothioconazole 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 Prothioconazole 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.  
 N,N-Dimethyldecanamide is not considered a reproductive toxicant at non-maternally toxic dose levels.

**Assessment developmental toxicity**

Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole 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.  
 N,N-Dimethyldecanamide did not cause developmental toxicity in rats and rabbits.

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

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 3.94 mg/l  
Exposure time: 96 h

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 8.8 mg/l  
Exposure time: 48 h

**Chronic toxicity to aquatic invertebrates** NOEC (Daphnia (water flea)): 0.010 mg/l  
Exposure time: 21 d  
The value mentioned relates to the active ingredient tebuconazole.

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**Toxicity to aquatic plants** IC50 (Raphidocelis subcapitata (freshwater green alga)) 9.5 mg/l  
Growth rate; Exposure time: 72 h  
EC50 (Skeletonema costatum) 0.046 mg/l  
Growth rate; Exposure time: 72 h  
The value mentioned relates to the active ingredient prothioconazole.

**12.2 Persistence and degradability**

**Biodegradability** Prothioconazole:  
not rapidly biodegradable  
Tebuconazole:  
not rapidly biodegradable  
N,N-Dimethyldecanamide:  
rapidly biodegradable

**Koc** Prothioconazole: Koc: 1765  
Tebuconazole: Koc: 769

**12.3 Bioaccumulative potential**

**Bioaccumulation** Prothioconazole: Bioconcentration factor (BCF) 19  
Does not bioaccumulate.  
Tebuconazole: Bioconcentration factor (BCF) 35 - 59  
Does not bioaccumulate.  
N,N-Dimethyldecanamide:  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Prothioconazole: Slightly mobile in soils  
Tebuconazole: Slightly mobile in soils  
N,N-Dimethyldecanamide: Slightly mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment** Prothioconazole: 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).  
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**

**Product** It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.





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<b>Contaminated packaging</b>	Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Follow advice on product label and/or leaflet.
<b>Contaminated packaging</b>	Not completely emptied packagings should be disposed of as hazardous waste.
<b>Waste key for the unused product</b>	<b>02 01 08*</b> agrochemical waste containing dangerous substances

## SECTION 14: TRANSPORT INFORMATION

### ADR/RID/ADN

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

### IMDG

14.1 UN number	<b>3082</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE 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>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE 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.



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## SECTION 15: REGULATORY INFORMATION

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

#### Republic of Ireland Regulations

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

#### Supply and Use

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)  
European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)  
European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)  
2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

#### Waste Treatment

Landfill Directive  
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

#### Further information

WHO-classification: III (Slightly hazardous)

### 15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

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## SECTION 16: OTHER INFORMATION

### Text of the hazard statements mentioned in Section 3

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
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
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration



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EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
ELV	Exposure Limit Value
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
SI	Statutory Instrument
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:** Section 2: Hazards Identification.

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