SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Prosaro® 420 SC Foliar Fungicide
Other names	none
Product code (UVP)	79545347
Chemical Group	triazole
Recommended use	Fungicide
Chemical Formulation	Suspension concentrate (=flowable concentrate)(SC)
Company	Bayer Cropscience Pty Ltd –ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrase(s)	R63 - Possible risk of harm to the unborn child.
S-phrase(s)	See sections 4, 5, 6, 7, 8, 10, 12, 13.
ADG Classification	"Dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Prothioconazole:Tebuconazole 210:210g/l

Chemical Name	CAS-No.	Concentration [%]
Prothioconazole	178928-70-6	18.75
Tebuconazole	107534-96-3	18.75
Polyethylene-polypropylene copolymer	9003-11-6	5.00
Glycerine	56-81-5	3.00
Synthetic amorphous silica	112926-00-8	<= 1.00
Other ingredients (non-hazardous) to 100%		

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

Inhalation

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

Skin contact

Take off contaminated clothing and shoes immediately. 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

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Call a physician or poison control center immediately.

Ingestion

Rinse mouth. Do NOT induce vomiting. Keep patient warm and at rest. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Notes to physician

Treatment

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.
Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Water
Foam
Carbon dioxide (CO2)
Dry chemical

Hazards from combustion products

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)

Precautions for fire-fighting

Wear self-contained breathing apparatus and protective suit.
Evacuate personnel to safe areas.
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.

Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.
Keep unauthorized people away.
Use personal protective equipment.

Environmental precautions

Contain contaminated water and fire fighting water.
Do not allow to get into surface water, drains and ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

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.

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.

SECTION 7. HANDLING AND STORAGE

Handling

Hygiene measures

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product.
Before removing gloves clean them with soap and water.
Remove soiled clothing immediately and clean thoroughly before using again.
Wash thoroughly and put on clean clothing.

Storage

Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.
Store in original container and out of the reach of children, preferably in a locked storage area.
Protect from freezing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Glycerine (Mist.)	56-81-5	10 mg/m3 (TWA)	08 2005	AU OEL
Glycerine (Inspirable dust.)	56-81-5	10 mg/m3 (TWA)	08 2005	AU OEL
Synthetic amorphous silica (Inspirable fraction.)	112926-00-8	10 mg/m3 (TWA)	08 2005	AU OEL

For further details on the Occupational Exposure Standards, see Section 16.

Biological limit values

none

Personal protective equipment - End user

Respiratory protection	AS/NZS 1715/1716 approved respirator
Hand protection	Elbow-length PVC or nitrile gloves
Eye protection	Goggles
Skin and body protection	Cotton overall buttoned to the neck and wrist Washable hat

Engineering Controls

Advice on safe handling
Handle and open container in a manner as to prevent spillage.
Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	suspension
Colour	white to light beige
Odour	no data available

Safety data

pH	7.5 - 7.9 at 10 % (23 °C) aqueous suspension
Flash point	Not relevant; aqueous solution
Ignition temperature	no data available
Upper explosion limit	no data available
Lower explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	ca. 1.12 g/cm³ at 20 °C
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Viscosity, dynamic	200 - 380 mPa.s at 20 °C Velocity gradient 39.1 /s

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.

Conditions to avoid	Heat, flames and sparks.
Conditions to avoid	Elevated temperatures
Materials to avoid	Oxidizing agents
Hazardous Decomposition Products	Hydrogen chloride (HCl) Hydrogen cyanide (hydrocyanic acid) Carbon monoxide Sulphur oxides Nitrogen oxides (NOx)
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Harmful if inhaled. Avoid inhalation of vapour or mist.
Skin	Irritating to skin. Harmful if absorbed through skin. Avoid contact with skin and clothing.
Eye	May cause eye irritation. Avoid contact with eyes.
Ingestion	Harmful if swallowed. Do not take internally.
Acute oral toxicity	LD50 (rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 2.18 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. Highest attainable concentration. No deaths
Acute dermal toxicity	LD50 (rat) > 5,050 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	Minimally irritating. (rabbit)
Sensitisation	Non-sensitizing. (guinea pig)
Chronic 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.

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.

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.

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.

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 1.83 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient prothioconazole.
Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 5.7 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient tebuconazole.
Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 4.4 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient tebuconazole.
Toxicity to aquatic invertebrates	LC50 (Water flea (Daphnia magna)) 1.3 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient prothioconazole.
Toxicity to aquatic invertebrates	LC50 (Water flea (Daphnia magna)) 4.2 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient tebuconazole.
Toxicity to aquatic plants	EC50 (Selenastrum capricornutum) 2.18 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole.

Toxicity to aquatic plants	EC50 (Pseudokirchneriella subcapitata) 3.8 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient tebuconazole.
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient prothioconazole.
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) 1,988 mg/kg The value mentioned relates to the active ingredient tebuconazole.

Additional ecological information
no data available

Biodegradability	Not readily biodegradable. The value mentioned relates to the active ingredient prothioconazole.
Stability in soil	. Slightly mobile in soils The value mentioned relates to the active ingredient prothioconazole. . Slightly mobile in soils The value mentioned relates to the active ingredient tebuconazole.
Bioaccumulation	Bioconcentration factor (BCF): 78 The value mentioned relates to the active ingredient tebuconazole.

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:
Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	**3082**

Class	9
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-F
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)

IATA

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, PROTHIOCONAZOLE SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 63243

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Prosaro® is a registered trademark of the Bayer Group.

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

Further details on the Occupational Exposure Standards mentioned in Section 8:

CEILING: Ceiling Limit Value

OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.

STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.

SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.

TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

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

END OF SDS