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MATERIAL SAFETY DATA SHEET

Rygel Propiconazole 250 EC Systemic Fungicide

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Supplier:	Profeng Australia Pty Ltd
A.C.N.:	156 055 533
Street Address:	103 Ordish Road, Dandenong South, Vic 3175
Telephone:	(03) 9768 2803
Facsimile:	(03) 9768 2804
Email:	info@profeng.com.au

Emergency telephone number: National Poisons Information Centre: Phone Australia 13 11 26.

Product name: Rygel Propiconazole 250 EC Systemic Fungicide

Recommended Use For the control of certain fungal diseases of Bananas, Oats, Peanuts, Perennial Ryegrass, Pineapples, Stone Fruit, Sugar cane, Wheat and other crops.

2. HAZARDS IDENTIFICATION

Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. Hazardous according to the criteria of SWA Australia. Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code. However, this is a C1 Combustible Liquid so must be stored and handled as specified in AS 1940 “The storage and handling of flammable and combustible liquids.”

Risk Phrases	R22, R52, R36/37/38. Harmful if swallowed. Harmful to aquatic organisms. Irritating to eyes, respiratory system and skin.
Safety Phrases	S20, S23, S38, S61, S24/25, S36/39. When using, do not eat or drink. Do not breathe vapours or spray mist. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes. Wear suitable protective clothing and eye/face protection.
SUSMP Classification	S6
ADG Classification	None allocated. Not a Dangerous Good under the ADG Code.

UN Number None allocated

Pictogram

Signal word Danger

Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H402	Harmful to aquatic life

Precautionary statement(s)

P264	Wash contacted areas thoroughly after handling.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity	CAS No	Conc. %
Propiconazole	60207-90-1	250 g/L
Liquid Hydrocarbon		600 g/L
Other ingredients (considered non-hazardous)	Balance	

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. FIRST AID MEASURES

Ingestion: Give plenty of water or milk to drink and do not induce vomiting. Seek medical assistance.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. In all cases of eye contamination it is advisable to seek immediate medical assistance.

Skin contact: Wash contaminated skin with plenty of water. Remove contaminated clothing and wash before reuse. If irritation persists seek medical advice.

Inhalation: Remove victim from exposure. Seek medical assistance if symptoms persist.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Fire and Explosion Hazards: This product is classified as flammable. There is a slight risk of an explosion from this product if commercial quantities are involved in a fire. Violent

steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Preferred extinguishing media are carbon dioxide, dry chemical, foam, and water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: >64°C
Upper Flammability Limit: No data.
Lower Flammability Limit: No data.
Autoignition temperature: No data.
Flammability Class: Flammable

6. ACCIDENTAL RELEASE MEASURES

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

7. HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and

make sure that those measures are followed.
The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:
Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.
Exposure Limits TWA (mg/m^3) STEL (mg/m^3)
Exposure limits have not been established by NOHSC for any of the significant ingredients in this product.
The ADI for propiconazole is set at 0.04mg/kg/day. The corresponding NOEL is set at 4mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2004.
No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.
Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.
Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.
Skin Protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types.
Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.
Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour: Clear, amber coloured liquid.
Odour: Characteristic odour.
Boiling Point: Not available.
Freezing/Melting Point: No specific data. Liquid at normal temperatures.
Volatiles: No specific data. Expected to be low at 100°C.
Vapour Pressure: No data. Expected to be low at 20°C
Vapour Density: No data.
Specific Gravity: Approx 1.0 at 20°C
Water Solubility: Emulsifiable.
pH: No data.
Volatility: No data.
Odour Threshold: No data.
Evaporation Rate: No data.
Coeff Oil/water distribution: No data
Autoignition temp: No data.

10. STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
Conditions to Avoid: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.
Incompatibilities: strong oxidising agents.
Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

11. TOXICOLOGICAL INFORMATION

Toxicity: For propiconazole:
LD50 Oral (Rat) 1,517mg/kg LD50 Oral (Mouse) 1,419mg/kg
LD50 Dermal (Rat) >4,000mg/kg LD50 Dermal (Rabbit) >6,000mg/kg
LC50 Inhalation (Rat, 4hr) >5,800mg/m3

12. ECOLOGICAL INFORMATION

This product is biodegradable. It will not accumulate in the soil or water or cause long term

problems.

For Propiconazole:

Birds: LD_{50} Japanese quail: 2223mg/kg LD_{50} Bobwhite quail: >2825mg/kg LD_{50} mallard ducks: >2510mg/kg

Fish: LC_{50} carp: 6.8mg/L LC_{50} rainbow trout: 5.3mg/L LC_{50} golden orfe: 5.1mg/L

Algae: EC_{50} 0.02-13.6mg/L

Bees: not toxic to bees

Daphnia: EC_{50} 4.8mg/L

After oral administration to the rat, propiconazole is rapidly absorbed and also rapidly and almost completely eliminated with urine and faeces. Residues in tissues were generally low and there was no evidence for accumulation or retention of propiconazole or its metabolites. The major sites of enzymatic attack are the propyl side-chain and the cleavage of the dioxolane ring, together with some attack at the 2,4-dichlorophenyl and 1,2,4-triazole rings. In the mouse, the major metabolic pathway is via cleavage of the dioxolane ring.

Plants: Degradation proceeds through hydroxylation of the n-propyl side-chain and deketalisation of the dioloxane ring. After cleavage of triazole, triazole-alanine is formed as the main metabolite. Metabolites are conjugated mostly as glucosides.

The main degradation pathways are hydroxylation of the propyl side-chain and the dioxolane ring, and finally formation of the 1,2,4-triazole. Koc (ads) 950mL/g, immobile in soil.

13. DISPOSAL CONSIDERATIONS

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details for your area.

14. TRANSPORT INFORMATION

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredients: Propiconazole, liquid hydrocarbon, are mentioned in the SUSMP.

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16. OTHER INFORMATION

All information contained in this document is as accurate as possible based on information submitted by raw material suppliers. **Profeng Australia Pty Ltd** will not be responsible for any damages that may result from reliance on the information contained herein.