



# MATERIAL SAFETY DATA SHEET

## Rygel Rygrex Selective Herbicide

### 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

**Supplier:** Profeng Australia Pty Ltd  
**ACN:** 156 055 533  
**Street Address:** 103 Ordish Road, Dandenong South, Vic 3175  
**Telephone:** (03) 9768 2803  
**Facsimile:** (03) 9768 2804  
**Product name:** Rygel Pre-Seed 250 Herbicide

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

**Product name:** Rygel Rygrex Selective Herbicide  
**Product Use:** A herbicide for control of certain broadleaf weeds in winter cereals and clover.

### 2. HAZARDS IDENTIFICATION

#### Statement of Hazardous Nature

This product is classified as: Xn, Harmful. N, Dangerous to the environment. Hazardous according to the criteria of SWA. 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:** R65, R66, R20/21/22, R51/53. Harmful: May cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Harmful by inhalation, in contact with skin, and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S2, S13, S20, S23, S38, S46, S60, S61, S62, S24/25, S36/37/39. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. When using, do not eat or drink. Do not breathe vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment. If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label. This material and its container must be disposed of as

hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

**SUSMP Classification:** S5  
**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.  
**UN Number:** None allocated  
**Pictogram:**



**Signal word** Danger

**Hazard statement(s)**

H227 Combustible liquid.  
H304 May be fatal if swallowed and enters airways  
H411 Toxic to aquatic life with long lasting effects

**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**

Ingredients	CAS No	Conc. %
MCPA present as the ethyl hexyl ester	29450-45-1	250 g/L
Diflufenican	83164-33-4	25 g/L
Other Ingredient		to 100%

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

**4. FIRST AID MEASURES****General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 11 26 from anywhere in Australia and is available at all times. Have this MSDS with you when you call.

**Inhalation:** Remove affected person to fresh air until recovered. If symptoms develop or



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persist, seek medical advice

**Skin Contact:** Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

**Eye Contact:** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice immediately.

**Ingestion:** Rinse mouth and then drink plenty of water. If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient

**Advice to Doctor:** Treat symptomatically. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

### 5. FIRE-FIGHTING MEASURES

**Fire and Explosion Hazards:** If involved in a fire, it will emit oxides of carbon, oxides of nitrogen and possibly hydrogen fluoride or phosgene.

**Extinguishing Media:** Water fog, foam, carbon dioxide or dry chemical

**Special Protective Equipment for fire fighters:** Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

**Other Information** STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

### 6. ACCIDENTAL RELEASE MEASURES

#### Spills & Disposal

Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.

#### Personal Protection

For appropriate personal protective equipment (PPE), refer Section 8.

#### Clean-up Methods - Large Spillages

Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, attempt to recover as much spilt material from sumps and banded areas before absorbing remaining material into vermiculite or other absorbent.

#### Environmental Precautions

This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Use earthen bunds or absorbent bunding to prevent spreading of spillage. Prevent from entering drains, waterways or sewers.

### 7. HANDLING AND STORAGE

#### Conditions for Safe Storage



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Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

### Unsuitable Materials

Rubber components present in some spraying units may be affected by exposure to the solvents in Rygex. Wash spray unit thoroughly with boom cleaner and fresh water after use.

### Other Information

Do not use on or in situations where damage to susceptible crops or plants such as cotton, tobacco, tomatoes, flowers, vines, fruit trees or other susceptible crop plants may result from direct application or drift. Sprayed weeds may become more palatable to stock and a higher intake of some weeds may result in stock poisoning and death from causes such as nitrate poisoning. Care should be taken especially where capeweed, Paterson's curse and variegated thistles predominate in the pasture.

Always read the label and any attached leaflet before use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### National Exposure Standards

No exposure standard has been established for this product. Permissible Exposure Level (PEL) for diflufenican recommended by the manufacturer is 2.3 mg/m<sup>3</sup>.

NOHSC has set the following exposure standard for N-methyl pyrrolidone: TLV (TWA) 103 mg/m<sup>3</sup>, STEL 309 mg/m<sup>3</sup>. SK

'SK' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

### Engineering Controls

Handle in well ventilated areas, generally natural ventilation is adequate.

### Personal Protective Equipment

When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles.

### Hygiene Measures

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

After each day's use, wash contaminated clothing and safety equipment.

### Requirements Concerning Special Training

NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical Description &amp; colour</b>	Clear, dark brown liquid
<b>Odour</b>	Distinctive strong ester odour



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<b>Melting Point</b>	<0°C
<b>Boiling Point</b>	between 176 - 200°C (solvent)
<b>Solubility in Water</b>	Forms an emulsion in water
<b>Specific Gravity</b>	1.063
<b>Vapour Pressure</b>	1.77 mPa for MCPA 2EHE @ 25°C; 4.25 x 10 <sup>-3</sup> mPa for diflufenican @ 25°C
<b>Ocanol /Water Partition Coefficient</b>	Kow Log P is 5.37 for MCPA 2EHE; 4.9 for diflufenican
<b>Flash point</b>	74.5°C
<b>Flammability</b>	Combustible liquid C1
<b>Flammable Limits – Lower</b>	0.8 for solvent
<b>Flammability Limits – Upper</b>	6.7% for solvent

### 10. STABILITY AND REACTIVITY

#### Chemical Stability

Stable under normal conditions.

#### Incompatible Materials

Avoid contact with rubber.

#### Hazardous Reactions

Keep away from strong oxidising agents. May react exothermically with strong alkalis and acids.

#### Hazardous Polymerization

Hazardous polymerisation is not possible.

### 11. TOXICOLOGICAL INFORMATION

**Toxicology Information:** No harmful effects are expected if the precautions on the label and this MSDS are followed.

**Inhalation:** May cause irritation to mucous membranes.

**Ingestion:** Possible symptoms of exposure include: nausea, vomiting and gastrointestinal discomfort and diarrhoea.

**Skin:** Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. Symptoms of over exposure may be similar to those described for ingestion.

**Eye:** The concentrate will cause irritation of the eyes.

**Chronic Effects:** Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive

**Reproductive Toxicity:** Data indicates no reproductive effects.

**Mutagenicity:** Data indicates no mutagenic effects.

**Acute Toxicity – Oral:** LD50 (rat) 1580 mg/kg for the formulated product

**Acute Toxicity – Dermal:** LD50 (rat) >2040 mg/kg for the formulated product



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**Acute Toxicity - Inhalation** LC50 (rat) (4hr) >4.5 mg/L for MCPA 2EHE LC50 (rat) (4hr) >5.11 mg/L for diflufenican

**Eye Irritation:** The product is an eye irritant.

**Skin Irritation:** Not a skin irritant.

**Skin Sensitisation:** Prolonged and repeated skin contact may result in skin sensitisation.

### Other Information

The Australian Acceptable Daily Intake (ADI) for MCPA for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', December 2008). ADI for diflufenican is 0.2 mg/kg/day, NOEL 16.3 mg/kg/day.

## 12. ECOLOGICAL INFORMATION

### Persistence / Degradability

Average field half-life of MCPA 2EHE is 24 days. Average field half-life of diflufenican is 100 – 200 days.

### Other Precautions

Do not contaminate dams, waterways or sewers with this product or the containers, which have held this product.

### Environmental Protection

Spray drift can cause damage, read the label for more information.

### Acute Toxicity - Fish

LC50 (96hr) for rainbow trout is 50mg/L for MCPA acid LC50 (96hr) for rainbow trout is 56 - 100 mg/L for diflufenican MCPA 2EHE has very low water solubility (0.1 mg/L) and rapidly hydrolyses in natural waters. The above data is for the hydrolysis product: MCPA acid. EC50 (48hr) for daphnia is >190 mg/L for MCPA acid.

**Acute Toxicity - Daphnia** EC50 (48hr) for daphnia is >10 mg/L for diflufenican.

LD50 for quail is 377 mg/kg for MCPA 2EHE

### Acute Toxicity - Other Organisms

LD50 for quail is >2150 mg/kg for diflufenican.

Not toxic to bees.

## 13. DISPOSAL CONSIDERATIONS

### Product Disposal

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities that hold periodic collections of unwanted chemicals (ChemClear®).

### Container Disposal





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Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm 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.

Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

### 14. TRANSPORT INFORMATION

It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

#### Storage and Transport

Considered non dangerous for road and rail transport (in packs less than 3000 kg or L) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.

For bulk shipments as Class 9, use UN 3082, HazChem code \*3Z.

<b>UN Number (Sea Transport)</b>	3082
<b>IMO Class/Packing Group</b>	Class 9
<b>IMO Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains MCPA 2 EHE)

### 15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

### 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.