

# MATERIAL SAFETY DATA SHEET

## Rygel Amine 625 Selective Herbicide

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

**Supplier:** Profeng Australia Pty  
**A.C.N.:** 156 055 533  
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**Product name:** Rygel Amine 625 Selective Herbicide  
**Product Type:** Group I Herbicide  
**Formulation type:** Aqueous concentrate  
**Chemical type:** Aryloxyalkanoic acid.

**Product Use:** For the control of broadleaf weeds in fallow before direct drilling or sowing of cereal crops and pastures; and in cereal crops, pastures, sugar cane, peanuts and non-agricultural areas as per the Directions of Use.

### 2. HAZARDS IDENTIFICATION

#### Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. Hazardous according to the criteria of SWA. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

**Risk Phrases:** R20/21/22, R36/38. Harmful by inhalation, in contact with skin, and if swallowed. Irritating to eyes and skin.

**Safety Phrases** S20, S23, S24/25, S36/37. When using, do not eat or drink. Do not breathe mists. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

**Pictogram:**



**Signal word** Warning

**Hazard statement(s)**



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H302 Harmful if swallowed

H315 Causes skin irritation

H320 Causes eye irritation

### Precautionary statement(s)

P262 Do not get in eyes, on skin, or on clothing

P402+P404 Store in a dry place. Store in a closed container

P501 Dispose of contents/ container to an approved waste disposal plant

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion
2,4-D present as dimethylamine and diethanolamine salts		625 g/L
water		380 g/L

### 4. FIRST AID MEASURES

**Inhalation** If symptoms develop or persist, seek medical advice. Remove affected person to fresh air until recovered.

**Ingestion** If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia). Give a glass 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.

The above first aid instructions are mandated by the Commonwealth Department of Health and Aged Care via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 1 tablespoon) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.

**Skin** If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water. Remove contaminated clothing and launder before re-use.

**Eye** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice if irritation develops or persists.

**Advice to Doctor** Treat symptomatically. No specific antidote.



## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media** If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material. None required but use water spray to cool containers or personnel threatened by fire.

### **Hazardous Combustion Products**

Non-combustible. May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

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

**Other Information** Hazchem code has not been assigned. Prevent 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 in sealed open top containers for disposal. On-site disposal of concentrate is not acceptable. Dispose of at a landfill in accordance with local regulations.

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

### **Environmental Precautions**

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

### **Clean-up Methods - Large Spillages**

Place damaged containers in recovery bins (if available) and return to manufacturer.

## 7. HANDLING AND STORAGE

**Handling** Do NOT spray in high winds. Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers. No special precautions are necessary when handling sealed containers. For personal protective equipment (PPE) and hygiene advice, refer Section 8.

**Storage** Store in the closed, original container in a cool, well ventilated area. Do not store near oxidisers. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

**Other Information** Equipment that has been used for this chemical should not be used for the application of other materials to sensitive plants, unless it has been well washed out with hot soapy water or 1% solution of ammonia, followed by several clear water rinses.

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.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Standards:**

No exposure limits have been established for this product.

**Engineering Controls:**

Use with adequate ventilation

Use local mechanical exhaust ventilation at sources of air contamination such as open process

**Personal protection:**

Avoid contact with eyes, skin and clothing.

Avoid breathing spray mist.

Respiratory Protection: Avoid breathing mist. Respiratory protection should not be required for normal use/handling.

Protective Gloves: Impermeable protective gloves should be worn when you are using this product, to prevent irritation.

Eye Protection: Protective eyewear should be worn to prevent eye contact during mixing/pouring operations or other activities in which eye contact with undiluted material are likely to occur. Have eye flushing equipment available.

Clothing: Clean overalls or protective clothing should be worn, preferably with an apron. Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear, red-brown liquid with ammoniacal odour
<b>Melting Point:</b>	<0°C
<b>Solubility in Water:</b>	Soluble in water.
<b>Boiling Point:</b>	>100°C (for water)
<b>Specific Gravity (H<sub>2</sub>O=1)</b>	1.254
<b>pH:</b>	8.5 - 9.5
<b>Vapour Pressure:</b>	16mm Hg (for water), 2,4-D amine salt is non volatile.
<b>Volatile Component:</b>	30%
<b>Flash Point:</b>	Non flammable
<b>Flammability:</b>	Non combustible material
<b>Ignition Temperature:</b>	N/A
<b>Flammable Limits LEL:</b>	Non flammable
<b>Explosion Properties:</b>	N/A

**10. STABILITY AND REACTIVITY**

**Stability** Stable under normal conditions.

**Hazardous Polymerization**

Hazardous polymerisation is not possible.

**Materials to Avoid**

Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D acid and largely de-activate the product and cause blockages in spray equipment. The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour.

Dimethylamine is moderately toxic, LD<sub>50</sub> (oral, rat) is 700 mg/kg and a TLV of 10 ppm (TWA) has been set.

**Hazardous Reaction** Keep away from strong oxidising agents.

**11. TOXICOLOGICAL INFORMATION**

No harmful effects are expected if the precautions on the label and this MSDS are followed.

**Inhalation** The components of the product are of low volatility and no adverse effects are expected from handling the concentrate. The concentrate is considered harmful by inhalation by Worksafe Australia. A moderate hazard exists from inhalation of spray and care should be taken to avoid inhalation of spray mists.

**Ingestion** Not a likely route of exposure. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. However, swallowing of large amounts may cause injury. Ingestion of the product in relatively large amounts can result in headache,

nausea, lethargy, motor weakness and unco-ordination.

**Skin** Prolonged contact with the concentrate may cause irritation. Prolonged contact of the concentrate with skin will result in absorption of some 2,4-D which can be harmful.

**Eye** The concentrate will cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.

**Chronic Effects** Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D

presents a risk to the liver and kidneys.

**Carcinogenicity** The weight of the evidence is that 2,4-D is not carcinogenic.

**Acute Toxicity - Oral** LD<sub>50</sub> (rat) 699 mg/kg for 2,4-dichlorophenoxyacetic acid LD<sub>50</sub> (rat) 700 mg/kg for dimethylamine LD<sub>50</sub> (rat) 710 mg/kg for diethanolamine

**Acute Toxicity - Dermal**

LD<sub>50</sub> (rabbit) >2000 mg/kg

**Acute Toxicity - Inhalation**

LC<sub>50</sub> (rat) (4hr) >1.79 mg/L

**Skin Irritation** Not a skin irritant.

**Skin Sensitisation** Product is not a skin sensitiser.

**Other Information** The Australian Acceptable Daily Intake (ADI) for 2,4-D for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.0 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, 'ADI List', TGA, August 2003).

In trials using 2,4-D as a drug, studies on volunteers have shown that doses of between 5 and 36 mg/kg body weight do not cause any acute toxic effects. Formulated 2,4-D products can be absorbed by ingestion, inhalation (spray mist) and through the skin. A study of users (sprayers) has shown that absorption through the skin is the most common route. When used with good agricultural spraying practice and good personal hygiene, absorption of 2,4-D is very low.

## 12. ECOLOGICAL INFORMATION

### Known Harmful Effects on the Environment

2,4-D amine products do not appear to pose any threat to birds.

2,4-D amine products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.

### Environ. Protection Mobility

Rapid degradation in soil presents significant downward movement under normal conditions.

### Persistence /Degradability

Half life in soil is typically 7 days. Loss from soil is principally by microbial degradation.

### Acute Toxicity – Fish

Not toxic to fish. LC<sub>50</sub> (96 hr) for (rainbow trout) is ~100 mg/L.

### Acute Toxicity - Daphnia

LC<sub>50</sub> (48 hr) for 2,4-D amines is 184 mg/L.

### Acute Toxicity – Other Organisms

Birds: Not toxic to birds. LD<sub>50</sub> for (mallard ducks) is >1000 mg/kg

Bees: Not toxic to bees. LD<sub>50</sub> 104.5 µg/bee.

**Sewage Treatment** Not inhibitory in sewage system, 2,4-D is rapidly biodegraded

## 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 who hold periodic collections of unwanted chemicals (ChemCollect).

### Container Disposal

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





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on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage. If on-site container disposal is necessary, triple rinse empty container with water, add rinsate to the spray tank. Puncture top, sides and bottom, crush and bury in an approved landfill or bury with at least 500 mm of soil cover away from pasture and crop areas, water supplies and houses.

### 14. TRANSPORT INFORMATION

#### 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 who hold periodic collections of unwanted chemicals (ChemCollect).

#### Container Disposal

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### 15. REGULATORY INFORMATION

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: 2,4-D is mentioned in the SUSMP.

### 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.