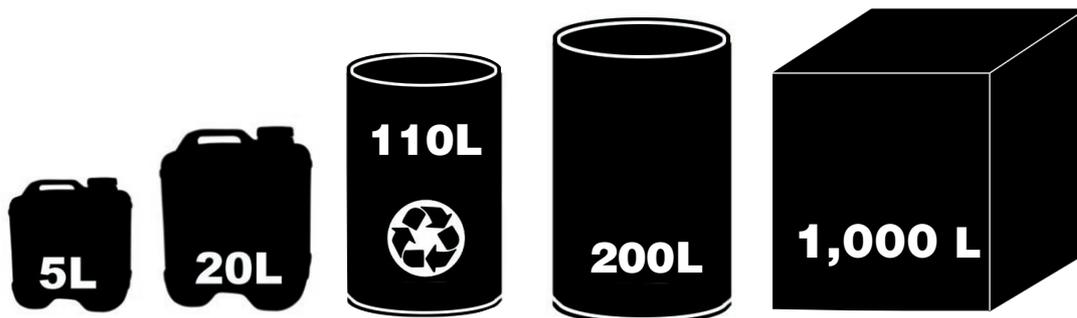


## PACK SIZES



ACTIVE CONSTITUENT: 625 g/L 2,4-D present as the dimethylamine and diethanolamine salts  
GROUP I HERBICIDE

For the control of broadleaf weeds in fallow before direct drilling or sowing of cereals and pastures; and in cereal crops, pastures, sugarcane, peanuts, and non-agricultural areas

This is a PHENOXY HERBICIDE that can cause severe damage to susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.

## MAJOR FEATURES

- Highly concentrated formulation means lower application rates, with more area treated from fewer containers.
- Does not leave any lasting soil residues that may limit subsequent crop or pasture rotations.
- A low-cost herbicide that controls a wide spectrum of broadleaf weeds; Ideal alternative herbicide for integrated weed management of wild radish in cereals.
- Wide application window in cereals (after 5 leaf/2 tiller stage through tillering up to jointing - usually from 8 to 14 weeks after sowing)
- Useful for 'Spray grazing' to maximize legume seed set in permanent pastures, and reducing broadleaf weed seed set in pastures that precede broadacre crops.
- Controls small vines and broadleaf weeds in sugar cane at the plant stage and when banding at the early ratoon stage.
- Suitable for high clearance and aerial application in mature sugar cane to prevent vine growth smothering developing plants.

**FOR THE FULL LABEL SEE THE WEBSITE AT [WWW.RYGEL.COM.AU](http://WWW.RYGEL.COM.AU)  
OR CONTACT RYGEL ON 1800 722 235.  
ALWAYS FOLLOW LABEL INSTRUCTIONS.**



## OVERVIEW

Rygel Amicide 625 is 25% stronger than previous formulations. It contains 2,4-D, the world's most widely used herbicide for managing broadleaf weeds. Amicide 625 is not affected by soil pH, does not bio-accumulate in the environment, and is non-volatile. The development of resistance to Group B herbicides has proven Amicide 625 to be an excellent option for post-emergent control of wild radish in cereals.

## RECOMMENDED USES

Rygel Amicide 625 may be used for selective post-emergent control of an extensive range of weeds in wheat, barley, triticale, oats, cereal rye, millet, sugar cane, peanuts and pastures (including the spray-grazing technique). Amicide 625 may also be used for knockdown control of broadleaf weeds before sowing cereals and pastures, and in non-agricultural situations such as roadsides, rights-of-way and industrial areas. Refer to label for all instructions and directions for use.

## APPLICATION

Boom Spraying - Use 30-120L/ha of water. Aerial Spraying - Use 10-90L/ha of water.

## DRIFT WARNING

DO NOT apply under weather conditions or from spraying equipment that may cause spray drift onto nearby susceptible plants / crops, cropping lands or pastures. Avoid spray drift onto susceptible crops such as cotton, tobacco, tomatoes, vines, fruit trees, vegetables, legume crops and pasture, oilseed crops and susceptible trees (eg Kurrajongs, Belahs and Eucalypts). DO NOT use unless wind speed is more than 3 kilometres per hour and less than 15 kilometres per hour as measured at the application site. DO NOT apply with smaller than coarse to very coarse spray droplets according to the ASAE S572 definition for standard nozzles.

## EQUIPMENT MAINTENANCE & USAGE

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, or products such as Spray-Sure Spray Tank Cleaner, followed by several clear water rinses.

## COMPATIBILITY

This product can be tank mixed with dicamba, diuron, chlorsulfuron, paraquat/diquat, paraquat, 22DPA, atrazine and picloram, and the fungicide propiconazole.

## SAFETY DIRECTIONS

Poisonous if swallowed. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray, wear PVC or rubber apron, elbow length PVC gloves and face shield. When using the prepared spray, wear face shield. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, face shield and contaminated clothing.

## FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: Australia 13 11 26).

## MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet (MSDS).

# Rygel Amine 625 Selective Herbicide

Classified as hazardous according to the criteria of NOHSC

## 1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

**Supplier:** Rygel Australia Pty Ltd  
**ACN:** 106 839 007  
**Street Address:** 103 Ordish Road, Dandenong South, Vic 3175  
**Telephone:** (03) 9768 2803  
**Facsimile:** (03) 9768 2804  
**Emergency telephone number:** National Poisons Information Centre: Dial 13 1126.

**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. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical Characterization</b>	Liquid		
<b>Recommended use:</b>	Herbicide		
<b>Chemical Entity</b>		<b>CAS No</b>	<b>Proportion</b>
2,4-D present as dimethylamine and diethanolamine salts			625 g/L
Water			380 g/L

## 3. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed.

**Other Information** Poisons Schedule 5

## 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.

# MATERIAL SAFETY DATA SHEET

**Skin contact:** If skin contact occurs, remove contaminated clothing and wash skin thoroughly with 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 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 Limits:** No exposure standard for this product has been set; however, an exposure standard has been set for 2,4-D acid at 10 mg/m<sup>3</sup>.

**Respiratory Protection:** Do not inhale spray mist.

**Personal Protective Equipment:** When preparing spray, wear PVC or rubber apron, elbow length PVC gloves and face shield. When using the prepared spray, wear face shield.

**Engineering Controls:** Natural ventilation is sufficient when handling concentrate and preparing spray solution.

**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.

# MATERIAL SAFETY DATA SHEET

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, red-brown liquid with ammoniacal odour  
**Melting Point:** <0°C  
**Solubility in Water:** Soluble in water  
**Boiling Point:** >100°C (for water)  
**Specific Gravity (H<sub>2</sub>O=1):** 1.254  
**pH:** 8.5 - 9.5  
**Vapour Pressure:** 16mm Hg (for water), 2,4-D amine salt is non volatile  
**Volatile Component:** 30%  
**Flash Point:** Non flammable  
**Flammability:** Non combustible material  
**Ignition Temperature:** N/A  
**Flammable Limits LEL:** Non flammable  
**Explosion Properties:** 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, LD50 (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:** LD50 (rat) 699 mg/kg for 2,4-dichlorophenoxyacetic acid LD50 (rat) 700 mg/kg for dimethylamine LD50 (rat) 710 mg/kg for diethanolamine

**Acute Toxicity - Dermal:** LD50 (rabbit) >2000 mg/kg

**Acute Toxicity - Inhalation:** LC50 (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.

# MATERIAL SAFETY DATA SHEET

## 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. LC50 (96 hr) for (rainbow trout) is ~100 mg/L.

### Acute Toxicity - Daphnia

LC50 (48 hr) for 2,4-D amines is 184 mg/L.

### Acute Toxicity – Other Organisms

Birds: Not toxic to birds. LD50 for (mallard ducks) is >1000 mg/kg

Bees: Not toxic to bees. LD50 104.5 g/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 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

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

**U.N. Number:** None Allocated

**Proper Shipping Name:** None Allocated

**DG Class:** None Allocated

**Hazchem Code:** None Allocated

**Packing Group:** None Allocated

**Storage and Transport :** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**IMDG UN No.:** Not a marine pollutant.

## 15. REGULATORY INFORMATION

**Risk Phrase** R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

**Safety Phrase** S2 Keep out of reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

**Poisons Schedule** S5

**Hazard Category** Harmful