

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Rygel

Brushmaster Herbicide

Active Constituent: 600g/kg METSULFURON

For the control of brush and broadleaf weeds in native pastures, rights of way, commercial and industrial areas.

APVMA Approval No: 59273/0105

Pack Size: 200g, 500g, 1kg, 2kg

GENERAL INSTRUCTIONS – BRUSH APPLICATIONS, ESTABLISHED PASTURES AND PASTURE RENOVATION

Rygel Brushmaster Herbicide is a selective herbicide, which is rapidly absorbed by root and leaves.

- Always add a surfactant/wetting agent.
- Best results are achieved when:
 1. Application is made to actively growing plants, which are not stressed by any factors such as dry weather conditions, waterlogging etc.
 2. Plants to be treated are thoroughly covered. This is essential to achieve maximum herbicide uptake.
- Regrowth may occur if the product is applied when plants are stressed or if complete spray coverage is not achieved. If regrowth does occur, re-treatment at the rates on this label is recommended. For blackberries re-treatment should only be undertaken if plants are at least 1 metre tall. This may not be until 2 years after the initial application. Legumes will be removed from pasture if over sprayed with Rygel Brushmaster Herbicide.
- Legumes are extremely sensitive to Rygel Brushmaster Herbicide and will be removed from the pasture if over sprayed.
- Introduced grass species may be severely damaged if over sprayed.
- Application to weeds that are not actively due to adverse conditions may result in weeds only being stunted or suppressed.
- Some grasses will be damaged in pasture sprayed with this product and biomass production may be reduced for several months.
- If weeds have been previously sprayed with other herbicides or if the weeds have been burned or slashed ensure 2 years have elapsed before treating with Rygel Brushmaster Herbicide.
- It is recommended that this product not be applied to bushes bearing mature blackberries due to the collection of blackberries for food purposes.
- Some temporary yellowing and some stunting may occur when used on Perennial Phalaris and/ or established Perennial cocksfoot.
- ALL grasses and legumes can be damaged and/or removed by a Rygel Brushmaster/glyphosate mixture.
- The following weeds will not be controlled: Barley grass (*Hordeum leporinum*), Brome

grass (*Bromus unioloides*), Silvergrass (*Vulpia spp.*), Winter Grass (*Poa annua*).

- Best results will be achieved if weeds are allowed to recover from grazing prior to herbicide application to allow for adequate uptake of the product. Sorrel and Docks particularly require new leaf growth.

INSTRUCTIONS SPECIFIC TO ESTABLISHED PASTURES AND PASTURE RENOVATION

- Some sorrel seedlings may germinate after the break the following year.
- Un-germinated clover will not be affected but seed set of clover in the year following application will be significantly reduced. If seed banks are not large, it may be necessary to re-sow clover.
- For Pasture Topping situations this product may be mixed with glyphosate but ensure crop rotation recommendations are observed. Refer to the Directions for Use for each Target weed on each product label.

SPRAY PREPARATION

Rygel Brushmaster Herbicide is a dry flowable granule, which must be mixed with clean water. Always add a wetting agent/ surfactant. (See "Use of surfactant/wetting agent" below)

1. Partially fill the spray tank with water.
2. With the agitation system engaged, add the required amount of product (as per Directions for Use Table) to the tank using only the measuring device provided.
3. Add the remainder of the water.
4. Always maintain agitation to keep the product in suspension. If the spray solution is allowed to stand, thoroughly re-agitate before using.

USE OF SURFACTANT/ WETTING AGENT

Rygel Brushmaster Herbicide alone - It is important that a surfactant/ wetting agent is **ALWAYS** used with this product. If no specific wetting agent/ surfactant is recommended in the directions for use table use a non-ionic surfactant (100%) at 100mL/ 100L of final spray volume.
Rygel Brushmaster Herbicide tank mixed with glyphosate - Use a non-ionic surfactant when mixing with glyphosate herbicide. In some tank mix situations the use of Rygel Organowett Penetrant is recommended. This recommendation must be strictly followed in order to achieve adequate weed control.

Gas gun applications - Rygel Organowett Penetrant should be added at the rate of 10mL/ 5L or 200mL/100L of final spray volume.

Where a mineral spray oil is recommended use 1L/100L of final spray volume (i.e. 1% volume/volume). A non-ionic surfactant should still be used with this mixture. Always read the instructions on the companion product label when tank mixing.

APPLICATION EQUIPMENT

Rygel Brushmaster Herbicide may be applied by air, handgun, boom spray or gas gun according to the Directions For Use Table.

Handgun - Ensure complete and uniform coverage of all canes and foliage. Pressures of 550-750 kPa (80-100 psi) are recommended depending on size of bushes and target species. As an example: Use No 4 or 5 spray nozzle for individual bushes or broadleaf weeds less than 1 metre high. Use No 5 or 6 spray nozzle for bushes 1-2 m high and No 7 or 8 spray nozzle for large bushes 2-3 metres high or for bushes with a large diameter. When using 3g Rygel Brushmaster Herbicide + 400mL of Glyphosate 360 Herbicide pressures of greater than 800 kPa should be used to assist penetration. NOTE: For blackberry regrowth use the large spray nozzle/ high volume with as wide a cone setting as possible. Use even, side by side spray pattern moving from the base to the top of the bush. For blackberries it is important that runners at the side and top of the bush are treated and that spray penetrates larger bushes to wet the foliage and canes.

Boom Spray - Ensure the boom is properly calibrated to a constant speed or rate of delivery for thorough coverage and uniform spray pattern. Fan nozzles using pressures of 240 to 280 kPa are recommended. Adjust the boom height to ensure correct spray overlap. Apply in a minimum of 150L prepared spray per hectare. Increase to 200L/ha or more for dense stands.

Gas Gun - Ensure thorough coverage. The use of a suitable dye is recommended to allow the operator to see which plants have been treated.

Aerial Application - (by helicopter only) Use a properly calibrated helicopter using the half overlap opposite pass technique. Apply a minimum of 100L/ha on blackberries and 60L/ha on *Mimosa pigra* up to a maximum of 200L prepared spray per hectare. Use a VMD of 300 microns. High temperatures and/or low humidity may cause excessive evaporation of droplets and may reduce results. Where bushes are large or terrain is steep, higher water volumes are necessary to ensure adequate coverage. Avoid spraying in conditions that favour temperature inversions or in still conditions. Turn off boom when passing over creeks, dams or waterways. Avoid spraying where drift can move onto crop areas that are likely to be planted to crops and non-target pastures as injury may occur. Do not apply when temperatures exceed 30°C (except when treating *M. pigra*).

TANK MIXES WITH GLYPHOSATE HERBICIDE
In certain situations such as the presence of harder to kill species or in follow-up treatment situations a tank mix with glyphosate may provide improved weed control (see directions for use table).

COMPATIBILITY

This product is compatible with glyphosate formulations and commonly used pasture herbicides such as MCPA amine, MCPA ester, 2,4-D amine, dicamba, clopyralid, fluroxypyr, and commonly used insecticides such as chlorpyrifos and omethoate. Always refer to the companion product label for instructions/ restrictions.

CROP ROTATION RECOMMENDATIONS

Many crop species are sensitive to metsulfuron-methyl. The product is broken down in the soil mainly by chemical hydrolysis and to a lesser degree by soil microbes. Other factors that affect breakdown are soil pH, soil moisture and temperature. Breakdown is faster in warm, wet acid soils and slowest in alkaline, cold, dry soils.

Legumes will be removed from pasture if they are over sprayed with the product.

Other species, which are sensitive to metsulfuron methyl, are:
Barley, Canola, Cereal Rye, Chickpeas, Faba Beans, Japanese Millet, Linseed, Lupins, Lucerne, Maize, Medics, Oats, Panorama Millet, Peas, Safflower, Sorghum, Soybeans, Sub Clover, Sunflower, Triticale, Wheat, White French Millet.

The area sprayed with Rygel Brushmaster Herbicide may be replanted to the specified pasture species after the interval in the following table:

Soil pH*	Pasture Species	Rate g/ha	Minimum Rain-fall	Minimum Re-crop Interval
5.5 and below	Sub Clover ² and Haifa White Clover	5	150m m	12 weeks
		10		20 weeks
		15		20 weeks
	Cocksfoot and Phalaris	5		8 weeks
		10		8 weeks
		15		16 weeks
	Perennial Ryegrass and Fescue	5	100m m	16 weeks
		10		16 weeks
		15	150m m	20 weeks
5.6 - 6.5	Sub Clover ² , Haifa White Clover, Perennial Ryegrass and Fescue	Bioassay ³		

	Cocksfoot , Phalaris	5, 10	175mm	12 we eks
		15	Bioassay	
6.6 and abov e	Cocksfoot and Phalaris	Bioassay ³		

² Sub Clover varieties: Junee, Karridale, Seaton Park, Trikkala

³ Tolerance of species should be determined on a small scale before sowing commercial areas

* Soil pH is determined by laboratory analysis using 1:5 water suspension method.

For rates higher than 15 g/ha the following applies:

- For soils with a pH below 7 (1:5 soil:water method) a minimum of 12 months should elapse before over sowing treated areas with grasses or legumes. It is suggested that a small area be oversown 1-2 months prior to the planned time to check for possible harmful residues.
- For soils with pH greater than 7 DO NOT replant until a company representative has been contacted.

GENERAL INSTRUCTIONS RELATING TO ALL USES FOR RYGEL BRUSHMASTER HERBICIDE

RESISTANT WEEDS WARNING

Rygel Brushmaster Herbicide is a member of the sulfonylurea group of herbicides. Rygel Brushmaster Herbicide has the ALS inhibitor mode of action. For weed resistance management Rygel Brushmaster Herbicide is a Group B Herbicide. Some naturally occurring weed biotypes resistant to Rygel Brushmaster Herbicide and other Group B herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Rygel Brushmaster Herbicide or any other Group B herbicide.

Since the occurrence of resistant weeds is difficult to detect prior to use, Rygel Australia Pty Ltd accepts no liability for any losses that may result from the failure of Rygel Brushmaster Herbicide to control resistant weeds.

SPRAYER CLEANUP

Many plant species are sensitive to low concentrations of Rygel Brushmaster Herbicide. For this reason it is important to thoroughly clean spray tanks after use as small quantities of product remaining in the tank may cause injury to desirable pastures and crops if the tank is used for other spraying procedures. The following method of tank cleanup should be used:

1. Drain tank and flush tank, boom, and hoses for at least 10 minutes.
2. Fill the tank with clean water and add 300mL of household bleach (containing 4% chlorine) per 100L water. Flush through the hoses and

boom, allow to stand for 15 minutes with agitation system engaged, then drain.

3. Repeat Step 2.
4. Nozzles and screens should be removed and cleaned separately.
5. Remove traces of chlorine bleach by rinsing the tank thoroughly with clean water and flushing hoses and boom.

WARNING: DO NOT use chlorine bleach with ammonia. It is important that liquid fertilisers containing ammonia be rinsed from the application equipment before adding a chlorine bleach solution. If traces of ammonia are present it may react with the chlorine bleach releasing a gas with a musty chlorine odour, which may cause eye, nose, throat and lung irritation. DO NOT clean equipment in an enclosed area.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Do not contaminate streams, rivers or waterways with the chemical or used containers. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.

PROTECTION OF LIVESTOCK

There is a nil withholding period for this product and stock may continue to graze where the product has been used in pasture situations. It is recommended that stock are removed from the pasture for about 3 days to ensure product efficacy. Certain plants such as bracken are naturally toxic to stock. When toxic plants are present, it is recommended that grazing be delayed until complete browning of treated plants has occurred.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Do not apply or drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.

Do not apply under weather conditions, or from spraying equipment, that may cause drift onto nearby susceptible plants/crops, cropping lands or pastures.

STORAGE AND DISPOSAL

Keep out of reach of children.

DO NOT store the prepared spray for more than 2 days.

DO NOT store tank mixes with other products. Store in the closed original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

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 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.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet which is available from the supplier.

CONDITIONS OF SALE

The use of Rygel Brushmaster Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Rygel Australia Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Rygel Australia Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

In an Emergency Dial 000 Police or Fire Brigade