



MATERIAL SAFETY DATA SHEET

Rygel Metsulfuron 600 WG Herbicide

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Supplier: Profeng Australia Pty
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 Metsulfuron 600 WG Herbicide
Product Use: For the control of brush and broadleaf weeds in native pastures, rights of way, commercial and industrial areas and for the control of certain broadleaved weeds in winter cereal crops.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity	CAS No	Conc. %
Metsulfuron methyl	74223-64-6	60
Other Non-hazardous ingredients	Secret	to 100

This is a commercial product whose exact ratio of components may vary. Trace quantities of non hazardous ingredient are also possible.

3. HAZARDS IDENTIFICATION

SUSDP Classification: None allocated.
ADG Classification: None allocated. Not a dangerous good.
UN Number: None allocated.
Poisons Schedule: Not scheduled

4. FIRST AID MEASURES

General information:

If poisoning occurs, contact a Doctor or Poison Information Centre. Phone 13 11 26 from anywhere in Australia.



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

Ingestion Rinse mouth and then drink plenty of water. If vomiting occurs, give more water to drink to assist dilution. Do not give anything by mouth to a semi-conscious or unconscious person.

Skin Wash affected areas thoroughly with soap and 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.

5. FIRE-FIGHTING MEASURES

Fire & Explosion Hazards:

There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

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

Suitable extinguishing media: Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Flash Point: Not flammable

Upper Flammability Limit: No data

Lower Flammability Limit: No data

Autoignition Temperature: No data

Flammability Class: No data

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal

Recover the product by sweeping up or vacuuming without raising dust. Collect spilled material and waste in sealable open-top type containers for disposal.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8. Thoroughly launder protective clothing before storage 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 minimize the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that these measures are followed.

Storage: Ensure that containers of this product are kept tightly closed. Keep containers of this product in a well ventilated area. Make sure that the product does not come into contact



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with substances listed under "Material to avoid" in Section 10. Check packaging there may be further storage instructions on the label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits:

Exposure limits have not been established by NOHSC Australia for any of the significant ingredients in this product. The ADI (Acceptable Daily Intake) for metsulfuron methyl is set at 0.01mg/kg/day. The corresponding NOEL (No-observable-effect-level) is set at 1mg/kg/day. Values taken from Australian ADI List, January 2001.

Engineering Control in Ventilation:

No Special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimized.

Personal Protection:

Respiratory Protection: If the product is being used in dusty or confined conditions, use of a mask or respirator may be preferred.

Eye Protection: When preparing product for use, wear face shield or goggles. Failure to protect your eyes may cause harm. Emergency eye wash facilities are recommended in an area close to where this product is being used.

Skin Protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow length PVC gloves and facial protection should be worn when using this product, to prevent irritation. 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 goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Off white to tan water dispersible extruded granule
Odour:	No Odour
Melting/softening point:	No specific data. Solid at normal temperatures
Boiling point:	No specific data. Expected to decompose before boiling
Vapour pressure:	3.3×10^{-7} Pa @ 25°C (Metsulfuron methyl)
Flashpoint:	Does not burn
Solubility in water:	Soluble
Corrosiveness:	Not corrosive
pH:	No data
Flammability	Non combustible material
Partition co-efficient, n-octanol/water	Kow Log P is 0.0018 (pH7, 25°C for Metsulfuron methyl)
Other Information	pKa is 3.8 (20°C, Metsulfuron methyl)



10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions. Hydrolyses at pH<7.

Hazardous Polymerization: Hazardous polymerization is not possible.

Hazardous Reaction: keep away from strong oxidizing agents.

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: This product should be kept in a cool place, preferably below 30°C. Containers should be kept dry.

Incompatibilities: Water, strong oxidizing agents.

Fire Decomposition: If involved in a strong fire can release 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. Oxides of sulphur (sulphur dioxide is a respiratory hazard) and other sulphur compounds. Most will have a foul odour.

11. TOXICOLOGICAL INFORMATION

Inhalation: Not a likely route of exposure when handling the concentrate. May cause irritation to mucous membranes.

Ingestion: Low toxicity. However, swallowing large amounts of concentrate may cause nausea and vomiting.

Skin May irritate the skin.

Eye The concentrate may cause irritation of the eyes.

Chronic Effects Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Acute Toxicity-Oral-LD₅₀ (rat)>5000 mg/kg for metsulfuron methyl

Acute Toxicity-Dermal-LD₅₀ (rabbit)>2000 mg/kg for metsulfuron methyl

Acute Toxicity-Inhalation-LC₅₀ (rat)(4hr)>5mg/L for metsulfuron methyl

Other Information The Australia Acceptable Daily Intake (ADI) for metsulfuron methyl for a human is 0.01mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1mg/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, December 2004).

12. ECOLOGICAL INFORMATION

Acute Toxicity-Fish

LC₅₀ (96hr) for rainbow trout and bluegill sunfish is >150mg/L for metsulfuron-methyl

Acute Toxicity-Daphnia

EC₅₀ (48hr) for daphnia is >120mg/L for metsulfuron methyl.

Acute Toxicity-Other Organisms



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The following data is for the active ingredient, metsulfuron methyl.

Birds: Not toxic to birds. LD₅₀ for mallard duck is >2510mg/kg

LD₅₀ for bobwhite quail is >5620mg/kg

Bees: Not toxic to bees. LD₅₀>44.3µg/bee.

Environmental Fate:

Breakdown in Soil and Groundwater: The breakdown of metsulfuron methyl in soils is largely dependent on soil temperature, moisture content and pH. The chemical will degrade faster under acidic conditions and in soils with higher moisture content and higher temperature. Metsulfuron methyl has a higher mobility potential in alkaline soils than in acidic soils, as it is more soluble under alkaline conditions. Metsulfuron methyl is stable to photolysis, but will breakdown in ultraviolet light. Half-life estimates for metsulfuron methyl in soil are wide ranging from 14-180 days, with an overall average of reported values of 30 days. Reported half-life values (in days) for soil include: clay-178; sandy loam-102; clay loam-70, 14-28, 14-105; silty loam-120-180.

Breakdown in Surface Water: The dissipation time for metsulfuron methyl was investigated in a mixed wood/boreal forest lake. The DT50 or length of time required for half of the material to dissipate in water was > 48 days when high concentrations of metsulfuron methyl were applied and 29.1 days at concentrations that might be expected if the chemical was applied for forestry uses. Metsulfuron methyl is stable to hydrolysis at neutral and alkaline pHs and has half-life of 3 weeks at pH 5.0 25°C and > 30 days at 15°C.

Breakdown in Vegetation: Metsulfuron methyl is rapidly taken up by plants at the roots and on the foliage. The chemical is translocated throughout the plant but is not persistent. It is broken down to non-herbicidal products in tolerant plants.

13. DISPOSAL CONSIDERATIONS

Product Disposal On site disposal of the concentrated product is not acceptable. Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

Container Disposal Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. Dispose of in accordance with local regulations. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

U.N. Number None allocated

DG Class None allocated

Hazchem Code None allocated

Packing Group None allocated

Road and Rail Transport



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Not classified as Dangerous Goods by the criteria of the Australia Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Poisons Schedule Not Scheduled

Packaging & Labelling

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

AICS (Australia) All of the components in this product are listed on the Australia Inventory of Chemical Substances.

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.