MATERIAL SAFETY DATA SHEET

Rygel MCPA 500 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 11 26.

Product name: Rygel MCPA 500 Selective Herbicide
Product Type: Group I Herbicide
Formulation type: Soluble liquid
Chemical type: Aryloxyalkanoic acid

Product Use: For selective control of broadleaf weeds in cereals, linseed, pastures, sugarcane and turf as per Directions for Use table

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS No	Proportion
MCPA (present as the dimethylamine salt)	94-74-6	500 g/L
Other ingredients (considered non-hazardous)		Balance

3. HAZARDS IDENTIFICATION

Hazard Classification
HAZARDOUS SUBSTANCE. - according to the criteria of NOHSC
NON-DANGEROUS GOODS. - according to the Australia Dangerous Goods Code

Risk Phrase(s)
R22 Harmful if swallowed.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
Safety Phrase(s) S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S25 Avoid contact with eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 Wear suitable gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information Poisons Schedule S6

4. FIRST AID MEASURES

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. Do not give anything by mouth to a semi-conscious or unconscious person. 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.

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 immediately.
First Aid Facilities If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).
Advice to Doctor Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
Hazards from Combustion Products
May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.
Special Protective Equipment for fire fighters
Breathable air apparatus should be worn when fighting a fire in which this product is involved.
Specific Hazards Considered low risk due to water content, however upon evaporation of water the product is combustible.
Hazchem Code None Allocated

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 bunded 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.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Do NOT spray in high winds.
Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.
Conditions for Safe Storage
Store in the closed, original container in a cool, well ventilated area.
Do not store for prolonged periods in direct sunlight.
Tank Cleaning See label for detailed information on cleaning of spray equipment.
Other Information Always read the label and any attached leaflet before use.
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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards
No exposure standards have been set for this product or the active ingredients.
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 rubber 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	Clear, red-brown liquid
Odour	Ammonia like odour
Solubility in Water	Soluble in water
Specific Gravity	1.133
pH Value	8-9
Vapour Pressure	Negligible
Volatile Component	36%
Octanol/Water Partition Coefficient	Kow Log P is -0.71 at pH7 (MCPA acid)
Flash Point	None
Flammability	Not flammable
Other Information	pKa is 3.07

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.
Hazardous Polymerization Hazardous polymerisation is not possible.
Incompatible Materials
Reaction of the concentrate or spray mix with acids will precipitate solid MCPA 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.

11. TOXICOLOGICAL INFORMATION

Toxicology 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. 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 concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
Skin Unless removed immediately, will cause irritation. Prolonged contact with the concentrate may result in absorption of MCPA in harmful amounts.
Eye The concentrate will cause severe irritation and possible damage unless washed off immediately.
Chronic Effects Liver and kidney damage has been noted in laboratory animals that have been fed excessive doses of MCPA.
Carcinogenicity The weight of the evidence is that MCPA is not carcinogenic.
Acute Toxicity - Oral The following data is for the active ingredient, MCPA dimethylamine salt.
LD50 (rat) 1876 mg/kg
Acute Toxicity - Dermal
LD50 (rat) >2000 mg/kg
Acute Toxicity - Inhalation
LC50 (rat) (4hr) >1.69 mg/L
Eye Irritation MCPA dimethylamine salt is a severe eye irritant.
Skin Irritation The product is a skin irritant.
Skin Sensitisation Product is not a skin sensitiser.
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, 'ADI List', TGA, September 2005).

12. ECOLOGICAL INFORMATION

Mobility Rapid degradation in soil prevents significant downward movement under normal conditions.
Known Harmful Effects on the Environment
MCPA dimethylamine salt products do not appear to pose any threat to birds.
MCPA dimethylamine salt products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.
Other Precautions Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Environ. Protection Spray drift can cause damage, read the label for more information.
Acute Toxicity – Fish
LC50 (96 hr) for rainbow trout is 50 mg/L for MCPA dimethylamine salt
Acute Toxicity - Daphnia
EC50 (48 hr) for daphnia is >190 mg/L for MCPA dimethylamine salt.
Acute Toxicity - Algae LC50 for algae is >392 mg/L.
Acute Toxicity - Other Organisms
Birds: Not toxic to birds. LD50 for bobwhite quail is 270 mg/kg
Bees: Not toxic to bees. LD50 >200 µg/bee.

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.
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.

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
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.

15. REGULATORY INFORMATION

Poisons Schedule S6
Packaging & Labelling
POISON
KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category Harmful, Irritant
AICS (Australia) All of the components in this product are listed on the Australian 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. **Rygel Australia Pty Ltd** will not be responsible for any damages that may result from reliance on the information contained herein.

Contact:	Peter Howat	Mobile	0417 921 501
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National Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia).