

MATERIAL SAFETY DATA SHEET**Banish 450 Herbicide****1. IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY**

Product Name:	Banish 450 Herbicide
Distributor:	Agricrop Pty Ltd
ABN:	84 100 473 309
Street Address:	255 Port Road Hindmarsh, SA 5007
Telephone:	07 3348 4113
Facsimile:	07 3348 2702
Emergency Telephone Number:	1800 033 111 (all Hours)
Substance:	Amino Acid Derivative
Chemical Family:	Water solution of herbicide and surfactant. Glyphosate is N-phosphonomethyl glycine
Product Use:	Water soluble herbicide for non-selective control of many annual and perennial weeds.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS No	Conc. %
Glyphosate, (present as the Isopropylamine salt)	1071-83-6	45
Surfactant	secret	5-15
Water	7732-18-5	to 100

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

3. HAZARDS IDENTIFICATION

SUSDP Classification:	S5
ADG Classification:	None Allocated. Not a Dangerous Good.

4. FIRST AID MEASURES

Ingestion:	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. Do not give anything by mouth to a semi-conscious or unconscious person. Give a glass of water.
Eye contact:	If product in eyes, wash material from them with running water. If they begin watering or reddening, take special care in washing thoroughly
Skin contact:	If skin contact occurs, thoroughly wash contacted areas. No further measures should normally be required unless irritation is noticed. If irritation persists, seek medical attention.
Inhalation:	No first aid measures normally required. However, if vapours or mists have been inhaled, and irritation has developed, remove to fresh air and observe until recovered.
Notes to physician:	Treat symptomatically. Note the nature of this product.

MATERIAL SAFETY DATA SHEET

5. FIRE-FIGHTING MEASURES

Fire & Explosion Hazards:

The product is not flammable. If involved in a fire, use extinguishing agent suitable for the material on fire.

Suitable extinguishing media: Water spray, foam, dry chemical, carbon dioxide and/or any Class B extinguishing agent.

Precautions for Firefighters and Special Protective Equipment:

When fighting fires involving significant quantities of this product, wear safety boots, non-flammable overalls, gloves, hat, goggles and respirator. All skin areas should be covered.

Unusual Fire & Explosion Hazards: This product, or spray solutions of this product, may react with galvanized steel or unlined steel (except stainless steel) containers and tanks, to produce hydrogen gas, which may form a highly combustible gas mixture.

Hazards from combustion products: Not combustible, however after evaporation of aqueous component residual material may burn. Product of combustion may include carbon dioxide, carbon monoxide, smoke and fumes.

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.

Final clean up with degreasing agent or detergent is advised.

Environmental Precautions

Prevent from entering drains, waterways or sewers.

7. HANDLING AND STORAGE

Handling: Keep exposure to this product to a minimum, and minimise 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.

No special storage and transport requirements. This product has no UN classification.

Storage: This product is a S5 Poison. Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

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 Glyphosate is set at 0.3mg/kg/day. The corresponding NOEL (No-observable-effect-level) is set at 30mg/kg/day. Values taken from Australian ADI List, January 2001.

Engineering Controls:

Use good occupational work practice with adequate ventilation. Natural ventilation should be adequate under normal use conditions.

Personal Protection:

Respiratory Protection: It is usually safe to not use a dust mask or respirator protection on account of this product. However, if the product is being used in dusty or confined conditions, use of a mask or respirator may be preferred.

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

Eye Protection: When preparing product for use, wear face shield or goggles.

Clothing: When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.

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.

MATERIAL SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear blue coloured liquid
Odour:	Odourless to slight amine odour
Melting/softening point:	Approximately 0°C
Boiling point:	Approximately 100°C at 100kPa
Volatile materials:	Water component. Active ingredient is considered non-volatile
Vapour pressure:	2.37 kPa at 20 °C (water vapour pressure)
Flashpoint:	Does not burn
Specific gravity:	1.17 approx
Solubility in water:	Completely soluble
Flash Point:	None
Flammability:	Non combustible material
Ignition Temperature:	N/A
Corrosiveness:	Not corrosive
pH:	4.9 – 5.3

10. STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or decompose under normal storage conditions.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30 °C.

Incompatibilities: Strong oxidising agents.

Fire Decomposition: If involved in a strong fire can release nitrogen oxides and oxides of phosphorus.

Polymerisation: Hazardous polymerisation is not possible.

Materials to Avoid Corrosive to mild steel, galvanised and zinc.

Non corrosive to stainless steel, polyethylene and plastics.

Do not mix, store or apply the product or spray solutions of the product in galvanised steel or unlined steel (except stainless steel) containers or spray tanks.

Hazardous Reaction Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Such contact may release isopropylamine vapour with a strong fish like odour, which is an irritant to eyes. Isopropylamine is moderately toxic, LD50 (oral, rat) is 820 mg/kg and a TLV of 5 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 When applying the product as a spray avoid breathing in spray mists. May cause irritation to mucous membranes and respiratory tract.

Ingestion The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Possible symptoms of exposure include: nausea, vomiting and gastrointestinal discomfort and diarrhoea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema.

Skin The concentrated product may cause slight irritation on contact. Prolonged contact is likely to result in irritation.

Skin Irritation Slight irritant.

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

Eye Irritation Slight irritant

Acute Toxicity - Oral LD50 (rat) >5000 mg/kg for a similar product

Acute Toxicity – Dermal LD50 (rabbit) >5000 mg/kg for a similar product

Acute Toxicity – Inhalation LC50 (rat) (4hr) >1.3 mg/L

LC50 concentration not reached.

Other Information The Australian Acceptable Daily Intake (ADI) for glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 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).

MATERIAL SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

Environmental Fate:

Breakdown in Soil: Glyphosate is strongly adsorbed by soil and therefore becomes practically immobile. Microbial activity is the major cause of soil degradation with liberation of carbon dioxide. Half-life is typically 47 days.

Breakdown in Water: Glyphosate is strongly adsorbed to suspended organic and mineral matter and is broken down primarily by micro-organisms. The half-life in pond water ranges from 12 days to 10 weeks.

Other Precautions Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.

Environ. Protection Glyphosate is a non-selective contact herbicide. Spray drift can cause damage.

Acute Toxicity – Fish

Not toxic to fish.

LC50 (96 hr) for rainbow trout is >989 mg/L

LC50 (96 hr) for carp is >895 mg/L

The above data is for the formulated product.

Acute Toxicity – Other Organisms

Birds: Not toxic to birds. LD50 for mallard ducks and bobwhite quail (diet) is >5,620 mg/kg

Bees: Not toxic to bees. LD50 >100 µg/bee.

13. DISPOSAL CONSIDERATIONS

Disposal: Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

14. TRANSPORT INFORMATION

Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian 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.

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

15. REGULATORY INFORMATION

Risk Phrase	R36 Irritating to eyes
Safety Phrase	S25 Avoid contact with eyes S39 Wear eye/face protection

Poisons Schedule S5

Packaging & Labelling

CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

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

MATERIAL SAFETY DATA SHEET

16. OTHER INFORMATION

All due care and skill, so far as practicable, has been applied in the preparation and collation of the information in this MSDS. Each user of the Product named in this MSDS should read and consider the information contained in this MSDS in the context of how the Product will be stored, handled, used or applied in the workplace. In all circumstances, it is the responsibility of the user of the Product to ensure that they have sought out the relevant safety data appropriate to their particular situation. Nothing contained in this MSDS shall be construed as a representation or recommendation to the user about the suitability or otherwise of the Product named in this MSDS for the user's particular situation. If the user requires any clarification or further information, the user should contact Agricrop.

**CONTACT POINT: Agricrop Pty Ltd
255 Port Road, Hindmarsh, SA 5007**

Telephone: 07 3348 4113 - Facsimile: 07 3348 2702

National Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia)

Please read all labels carefully before using product.