



AGRO-ALLIANCE (AUSTRALIA) PTY LTD

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(AUSTRALIA) PTY LTD
A.B.N.11 130 864 603

2, Mavron Street, Ashwood, VIC 3147, Australia
Tel: +61 3 86442677 / 86442679 Fax: +61 3 98073883 Email: info@agroalliance.com.au

Section 1 - Identification of Chemical Product and Company

Glyphosate, N-(phosphonomethyl)glycine, Group M Herbicide

Trade Name: Agro-Essence Glyphosate 510 Herbicide

Product Use: Water soluble herbicide for non-selective control of many annual and perennial weeds.

Company: Agro-Alliance (Australia) Pty Ltd.

Address: 2, Mavron Street, Ashwood VIC 3147, Australia

Telephone Number: +61 03 86442677 / 86442679

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Website: www.agroalliance.com.au

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Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Not classified as hazardous according to the criteria of ASCC. Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: Not Hazardous - No criteria found.

Safety Phrases: S23, S36, S24/25. Do not breathe spray mists. Wear suitable protective clothing. Avoid contact with skin and eyes.

Section 3 - Composition/Information on Ingredients

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Glyphosate acid	1071-83-6	510 g/L
IPA (isopropylamine)	75-31-0	178g/L
Other nonhazardous ingredients	secret	to 100



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Section 4 - First Aid Measures

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (phone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

FIRST AID

Inhalation:

First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed, while holding the eyelid(s) open. Obtain medical advice immediately if irritation occurs. Take special care if exposed person is wearing contact lenses.

Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

SYMPTOM Reduced urination, Cough, Diarrhea, Drowsiness, and Swallowing difficulty, etc.

ADVICE TO DOCTOR

This product is not an inhibitor of cholinesterase. No specific antidote. Treat symptomatically.

Section 5 - Fire Fighting Measures

FIRE AND EXPLOSION HAZARDS

There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. This product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products from this product are likely to be irritating if inhaled.

EXTINGUISHING MEDIA

Not Combustible. Use extinguishing media suited to burning materials.

FIRE FIGHTING

If a significant quantity of this product is involved in a fire, call the fire brigade.

FIRE INCOMPATIBILITY None.

HAZCHEM 2X PERSONAL PROTECTIVE EQUIPMENT.



Section 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..

Section 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..

Section 8 - Exposure Controls and Personal Protection

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: AS/NZS 1715

Protective Gloves: AS 2161

Occupational Protective Clothing: AS/NZS 4501 set 2008

Industrial Eye Protection: AS1336 and AS/NZS 1337

Occupational Protective Footwear: AS/NZS2210

SWA Exposure Limits	TWA (mg/m3)	STEL (mg/m3)
Glyphosate IPA	not set	not set



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.

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.

Section 9 - Physical and Chemical Properties:

Appearance: Clear, semi-viscous 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: 1.212-1.222

Solubility in water: Completely soluble

Flash Point: None

Flammability: Non combustible material

Corrosiveness: Slightly corrosive to metal container



pH: 4.5 – 5.5

Viscosity: 266-294cps (RVT 2 at 20rpm)

Autoignition temp: Not applicable - does not burn..

Section 10 - Stability and Reactivity

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.

Incompatibilities: Strong oxidising agents.

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

Polymerisation: This product will not undergo polymerisation reactions.

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..

Section 11 - Toxicological Information

ACUTE TOXICITY

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.

EFFECTS OF ACUTE EXPOSURE

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.

EFFECT OF LONG TERM EXPOSURE

Reproductive Effects:

Most of the field and laboratory evidence shows that glyphosate produces no reproductive changes in test animals. It is unlikely that the compound would produce any reproductive effects in humans.

Teratogenic Effects:

In a teratology study with rabbits, the maternal NOEL was 175 mg/kg/day and no developmental toxicity was observed in the fetuses at the highest dose tested (350 mg/kg/day). Rats given doses up to 3,500 mg/kg on days 6 to 19 of pregnancy had offspring with no teratogenic effects, but other toxic effects were observed in both the mothers and the fetuses. No toxic effects to the fetuses occurred at 1,000 mg/kg/day.

Mutagenic Effects:

The compound does not cause mutations in microbes. The tests on eight different kinds of bacterial strains and on yeast cells were all negative. The compound poses little mutagenic risk to humans.

Carcinogenic Effects:

Rats and dogs and mice fed glyphosate over a wide range of doses showed no cancer related effects directly due to the compound. EPA has stated that there is sufficient evidence to conclude that glyphosate is not carcinogenic in humans.

Organ Toxicity:

Glyphosate caused no changes in the rate of body weight gain, in blood, nor in kidneys or liver. The studies were conducted at doses up to 500 mg/kg



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Section 12 - Ecological Information

ECOTOXICITY DATA

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.

ENVIRONMENTAL FATE

Breakdown in soil and groundwater:

Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Reported field half-lives range from 1 to 174 days. It is strongly adsorbed to most soils, even those with lower organic and clay content.

Breakdown in water:

In water, glyphosate is strongly adsorbed to suspended organic and mineral matter and is broken down primarily by microorganisms. Its half-life in pond water ranges from 12 days to 10 weeks.

Breakdown in vegetation:

Glyphosate may be translocated throughout the plant, including to the roots. It is extensively metabolized by some plants, while remaining intact in others.

OTHER PRECAUTIONS

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

Section 13 - Disposal Considerations

DO NOT re-use container. 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 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt. **DO NOT** allow product to enter waterways.



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Section 14 - Transport Information

ADG Code

Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail. No special transport conditions are necessary unless required by other regulations. It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

Hazchem Code 2X (Australia)

U.N. Number 3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (GLPHOSATE 510G/L) IMO Class 9 Packing Group III

Section 15 - Regulatory Information

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...

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.



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Please read all labels carefully before using product.

This MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2001(2003)]