



## **Section 1 - Identification of Chemical Product and Company**

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

**Trade Name:** Agro-Essence Glyphosate 360 Herbicide

**Product Use:** A non-selective, systemic, liquid herbicide

**Company:** Agro-Alliance (Australia) Pty Ltd.

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

**Telephone Number:** +61 03 86442677 / 86442679

**Fax Number:** +61 03 98073883

**Website:** [www.agroalliance.com.au](http://www.agroalliance.com.au)

**Issue Date:** June, 2012

## **Section 2 - Hazards Identification**

Not Classified as hazardous according to criteria of Safe Work Australia.

Not classified as a Dangerous Good according to the ADG Code

## **Section 3 - Composition/Information on Ingredients**

**Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Glyphosate as the isopropylamine salt	38641-94-0	360 g/L
Other ingredients (including water) determined not to be hazardous		Balance.

## **Section 4 - First Aid Measures**

**FIRST AID**

**Ingestion:**

If swallowed do NOT induce vomiting. Give a glass of water. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.

**Eye contact:**

Immediately hold eyes open and flood with clean water. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. Seek medical advice.



## **Skin contact:**

Remove contaminated clothing. Wash skin with soap and water. If skin is irritated, seek medical advice.

## **Inhalation:**

Remove to fresh air and observe until recovered. If effects persist, seek medical advice.

**Advice to Doctor: Treat symptomatically..**

## **Section 5 - Fire Fighting Measures**

**Extinguishing media:** Not flammable. No risk of explosion if involved in a fire. Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff.

**Hazards from combustion products:** Product is likely to decompose after heating to dryness and continued strong heating and will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

**Precautions for fire-fighters and special protective equipment:** Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

## **Section 6 - Accidental Release Measures**

**Emergency procedures / Material and methods for containment and cleanup procedures:**

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, the use of a respirator is recommended.

In the case of spillage, stop leak if safe to do so, and contain spill. Absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and



Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons.

After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Thoroughly launder protective clothing before storage or re-use..

## **Section 7 - Handling and Storage**

**Precautions for Safe Handling:** No smoking, eating or drinking should be allowed where material is used or stored. When opening the container, preparing the spray wear elbow-length PVC gloves and face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

**Conditions for Safe Storage:** Not classified as a Dangerous Good. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations. Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. .

## **Section 8 - Exposure Controls and Personal Protection**

### **Exposure Guidelines:**

No exposure limits have been assigned by Safe Work Australia to the ingredients in this product.

**Biological Limit Values:** No biological limit allocated.

**Engineering controls:** Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and that vapours and mists are minimised.

### **Personal Protective equipment (PPE):**

**Skin:** When opening the container, preparing the spray wear elbow-length PVC gloves and face shield or goggles. After each day's use, wash contaminated clothing, gloves and face shield or goggles.

**Eye protection:** Eye/face protection is recommended such as a face shield or goggles.



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**Respiratory Protection:** Generally not required. Use of a respirator may be required in certain circumstances to protect from inhalation of spray mist.

## **Section 9 - Physical and Chemical Properties:**

**Appearance:** light yellow liquid.

**Odour:** Slight amine odour.

**Boiling point:** No data available - but expected to be approximately 100°C.

**Freezing point:** No data available - but expected to be approximately 0°C.

**Specific Gravity:** 1.1 at 20°C.

**Solubility in Water:** Soluble.

**pH:** 4.6 – 5.4.

**Flammability:** Not flammable.

**Flashpoint (°C):** Not flammable.

**Poisons Schedule:** S5.

**Corrosive hazard:** Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks since a highly flammable gas may be formed. Do not mix or store the product or spray solutions in galvanized steel or unlined steel (except stainless steel).

## **Section 10 - Stability and Reactivity**

**Chemical Stability:** Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

**Conditions to avoid:** Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks since a highly flammable gas may be formed. Do not mix or store the product or spray solutions in galvanized steel or unlined steel (except stainless steel).

**Incompatible materials:** As above.

**Hazardous decomposition products:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke.

**Hazardous reactions:** 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. Polymerisation is unlikely..

## **Section 11 - Toxicological Information**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

### **Potential Health Effects:**

#### **ACUTE EFFECTS**

**Swallowed:** Low toxicity. Direct ingestion may produce gastro-intestinal discomfort, nausea, vomiting and diarrhoea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema. Acute Oral LD50 > 5,000 mg/kg.

**Eye:** The concentrate is not expected to cause irritation of the eyes. May cause redness and discomfort. Prolonged contact with the concentrate may cause damage to the eye.

**Skin:** Unlikely to cause skin irritation, but may be irritating to the skin of sensitive persons. Acute dermal LD50 > 5,000 mg/kg.

**Inhaled:** Inhalation of mists or sprays may produce respiratory irritation.

### **Long Term Exposure:**

**Chronic toxicity:** Studies of glyphosate lasting up to 2 years, have been conducted with rats, dogs, mice, and rabbits, and with few exceptions no effects were observed. Laboratory studies show that glyphosate produces reproductive changes in test animals very rarely and then only at very high doses (over 150 mg/kg/day). It is unlikely that the compound would produce reproductive effects in humans.

Glyphosate does not appear to be teratogenic, mutagenic or carcinogenic

## **Section 12 - Ecological Information**

**Environmental Toxicology:** Glyphosate is not harmful to wild birds. The dietary LC50 in both mallards and bobwhite quail is greater than 4500 ppm. Technical glyphosate acid is



practically nontoxic to fish and may be slightly toxic to aquatic invertebrates. The reported 96-hour LC50 values for other aquatic species include greater than 10 mg/L in Atlantic oysters, 934 mg/L in fiddler crab, and 281 mg/L in shrimp. The 48-hour LC50 for glyphosate in Daphnia (water flea), an important food source for freshwater fish, is 780 mg/L. The surfactant used in this product has low toxicity to aquatic organisms. There is a very low potential for the compound to build up in the tissues of aquatic invertebrates or other aquatic organisms. Glyphosate is non-toxic to honeybees. It's oral and dermal LD50 is greater than 0.1 mg/bee. The reported contact LC50 values for earthworms in soil are greater than 5000 ppm.

**Environmental Fate:** Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Reported field half-lives ranged from 1 to 174 days. It is strongly adsorbed to most soils, even those with lower organic and clay content. 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. Glyphosate may be translocated throughout the plant, including to the roots. It is extensively metabolized in some plants, while remaining intact in others..

## **Section 13 - Disposal Considerations**

**Spills and Disposal:** Persons involved in cleanup require adequate skin protection - see section 8. In case of spillage, contain and absorb spilled material with absorbent material such as clay, sand or cat litter and dispose of waste as indicated below or in accordance to the Australian Standard 2507-Storage and Handling of Pesticides. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

**Disposal of empty containers:** 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, desirable vegetation and tree roots. Empty containers and product should not be burnt.



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## **Section 14 - Transport Information**

**Road & Rail Transport:** This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

**Marine and Air Transport:** Product is a not classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

## **Section 15 - Regulatory Information**

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 65706.

This product is not classified as a Hazardous Substance under the criteria of Safe Work Australia.

This product is not classified as a Dangerous Good according to the ADG Code (7thEd).

This product is not classified as a Dangerous Good according to International Maritime Dangerous

Goods (IMDG) Code and the International Air Transport Association (IATA)..

## **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.



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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.

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)]