



Section 1 - Identification of Chemical Product and Company

Oxyflurofen. Group G Herbicide. A diphenyl-ether herbicide

Trade Name: Agro-Essence Oxyflurofen 240 Herbicide
Product Use: A selective agricultural emulsifiable concentrate herbicide
Company: Agro-Alliance (Australia) Pty Ltd.
Address: 2, Mavron Street, Ashwood VIC 3147, Australia
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Section 2 - Hazards Identification

Classified as hazardous according to criteria of Safe Work Australia.

Not classified as a Dangerous Good according to the ADG Code

Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin.

R65 Harmful: May cause lung damage if swallowed

Safety Phrases: S2 Keep out of reach of children.

S13 Keep away from food, drink and other animal foodstuffs.

S23 Do not breathe spray.

S24/25 Avoid contact with skin and eyes.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection..

Section 3 - Composition/Information on Ingredients

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Oxyflurofen	42874-03-3	240 g/L
Liquid Hydrocarbon	64742-94-5	606 g/L
N-methyl pyrrolidone	872-50-4	108 g/L
Other ingredients determined not to be hazardous		Balance

Trace quantities of impurities are possible.



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Section 4 - First Aid Measures

FIRST AID

Ingestion: If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126. If swallowed do NOT induce vomiting. Wash mouth out with water and give water to drink.

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. If irritation persists, seek medical advice.

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

Inhalation: Remove to fresh air and observe until recovered. If irritation or symptoms persists more than about 30 minutes, seek medical advice.

Advice to Doctor: Oxyfluorfen has generally low acute toxicity. Inert ingredients contain aromatic solvents which may produce a chemical pneumonitis; therefore, vomiting is not recommended, and lavage requires intubation. Activated charcoal and cathartics will assist gastrointestinal tract evacuation. Treat symptomatically. No specific antidote is available.

Section 5 - Fire Fighting Measures

Extinguishing media: This product is a combustible liquid (C1). Flash point 98°C. Extinguish fire using foam, carbon dioxide, or dry agent. If waterspray is used, contain all runoff. Contain all runoff.

Hazards from combustion products: Will produce toxic and noxious vapours (eg. Hydrogen chloride, carbon monoxide and hydrogen fluoride) when burnt. There is a risk of containers exploding if large quantities are involved in a fire. Will not polymerise.

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 cotton overalls buttoned to the neck and wrist, washable hat, elbow length butyl rubber gloves and goggles.

In the case of spillage, stop leak if safe to do so, and contain spill. and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. 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. Contain all runoff.

Section 7 - Handling and Storage

Precautions for Safe Handling: No smoking, eating or drinking should be allowed where material is used or stored. Wear protective equipment to prevent skin and eye contamination. When opening the container and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow length butyl rubber gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Conditions for Safe Storage: Store product in the closed, original container in a cool, well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight.

This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements. This product is a Schedule 5 Poison (S5) and must be stored in accordance with the relevant Health Department regulations. Oxyfluorfen 240 Herbicide is not classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Section 8 - Exposure Controls and Personal Protection

Exposure Guidelines:

Exposure guidelines have been established for N-methyl pyrrolidone by safe Work Australia.



Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
N-methyl pyrrolidone (Skin*)	1.03 mg/m ³ (25 ppm)	309 mg/m ³ (75 ppm)

TWA = Time-weight Average STEL = Short term Exposure Limit

* The 'skin' notation refers to the potential for dermal absorption of the material including mucous membranes and the eyes by contact with vapours or direct skin contact.

Biological Limit Values: No biological limit allocated.

Engineering controls: Use in ventilated areas to keep airborne levels below the exposure guidelines. Keep containers closed when not in use.

Personal Protective equipment (PPE): When opening the container and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow length butyl rubber gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Section 9 - Physical and Chemical Properties:

Appearance: Amber liquid.

Odour: Sweet odour.

Boiling point: No data available.

Freezing point: No data available.

Specific Gravity: 1.1 ± 0.1.

Solubility in Water: Emulsifies in water. Not soluble.

pH: 7 to 7.5.

Flashpoint (°C): 98°C.

Flammability: Combustible liquid (C1).

Poisons Schedule: S5.

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: Avoid heat sources - combustible liquid (C1).

Incompatible materials: Strong oxidizing agent such as chlorates, nitrates, peroxides etc.

Hazardous decomposition products: None under normal conditions. In a fire toxic



and noxious gases are likely to be released.

Hazardous reactions: Material is not known to polymerize

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, however if swallowed in large amounts the liquid hydrocarbon/N-methyl pyrrolidone content may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. The estimated Acute Oral LD50 (rat) > 2000 mg/kg.

Eye: This product maybe irritating to the eyes. May cause slight corneal injury. Vapour may cause eye irritation experienced as discomfort and redness.

Skin: This product is irritating to the skin causing pain and redness. Skin contact may cause allergic skin reaction. The estimated dermal LD50 > 2000 mg/kg.

Inhaled: Inhalation of mists or sprays may produce respiratory irritation. Due to the liquid hydrocarbon content inhalation may cause central nervous system effects. Excessive exposure effect may include anaesthetic or narcotic effects; dizziness and drowsiness.

Long Term Exposure: In animal studies, oxyfluorfen has shown no evidence of mutagenic effects.

Teratogenic effects: In a developmental study with rabbits, 30 mg/kg/day, the highest dose tested, produced an increase in fused sternal bones in the foetuses as well as toxic effects on the mothers.

These data suggest oxyfluorfen may have teratogenic effects, but only at very high doses.

Carcinogenic effects: In a 20-month study with mice doses at and above 3 mg/kg/day produced nonsignificant increases in both benign and malignant liver tumours in male mice. No increased tumour formation was seen in female mice at any dose. No carcinogenic effects were observed in a 2-year study with rats fed doses 2 mg/kg/day, nor in dogs at doses of 3 mg/kg/day. These data suggest that Oxyfluorfen is not



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carcinogenic.

Organ toxicity: The liver appears to be the main target organ, based on long-term feeding studies

Section 12 - Ecological Information

Environmental Toxicology: No information is available for the product. The following information refers to the active ingredient, oxyfluorfen. Oxyfluorfen is practically non-toxic to birds. The oral LD50 is greater than 2000 mg/kg for bobwhite quail and 4000 mg/kg for Mallard ducks. The dietary LC50 (8 day) is greater than 5000 mg/kg for bobwhite quail and 4000 mg/kg for Mallard ducks. Oxyfluorfen is highly toxic to fish and aquatic organisms. The LC50, the concentration in water at which half of the test animals died, ranges from 32 to about 410 µg/L. Oxyfluorfen is not toxic to bees. DO NOT contaminate streams, rivers or water courses with product or used containers.

Environmental Fate: No information is available for the product. The following information refers to the active ingredient, oxyfluorfen. The half-life of oxyfluorfen in soil is 30-40 days depending on the soil.

Oxyfluorfen is not subject to microbial degradation or hydrolysis. Degradation is by photo-degradation and evaporation/co-distillation in moist soils. Oxyfluorfen is strongly absorbed to soil and not readily mobile. Oxyfluorfen degrades rapidly in water by light.

Section 13 - Disposal Considerations

Spills and Disposal:

1. After Spill or accident:

Clear area of all unprotected personnel. Wear full protective clothing and equipment including chemical resistant butyl rubber gloves (see section 8). Dispose of drummed waste and decontamination solution in accordance with the requirements of Local Authorities or State Waste Management Authorities. Do not cut or weld metal containers. Prevent spill from spreading or entering waterways, sewers or underground drains.

2. Disposal of empty containers after intended use:

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 deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn, cut or saw empty containers, as there is the possibility that fumes inside the container maybe ignited and cause the container to explode.

Section 14 - Transport Information

Road & Rail Transport: Oxyfluorfen 240 Herbicide is not classified as 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 in accordance with the relevant Health Department regulations. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940.

Marine and Air Transport: Product is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 24% Oxyfluorfen)

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. 66891.

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 classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA)..



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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.

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)]