

MATERIAL SAFETY DATA SHEET

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Date of Issue: January 2013
MSDS No. FMC/CLO300/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FMC Clopyralid 300 Herbicide

Other Names: Clopyralid, a Group I Herbicide. Pyridinecarboxylic acid derivative.
Use: Agricultural herbicide for the control of a wide range of broadleaf weeds.
Company: FMC Crop Protection Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9222 **Fax Number:** 07 3908 9221
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as Hazardous according to criteria of the Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

Risk Phrases: R43 May cause sensitisation by skin contact.
Safety Phrases: S2 Keep out of reach of children.
S13 Keep away from food, drink and other animal foodstuffs.
S24/25 Avoid contact with skin and eyes.
S36/37 Wear suitable protective clothing, gloves and eye/face protection.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Clopyralid (present as the triisopropanolamine salt)	1702-17-6*	300 g/L
Other non hazardous ingredients		Balance

* this CAS number is for clopyrald. No CAS is available for the clopyralid present as the triisopropanolamine salt.

SECTION 4 FIRST AID MEASURES

Ingestion: If poisoning occurs, contact a doctor or the Poisons Information Centre phone Australia 13 11 26.
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 until product is removed. Seek medical advice if irritation persists.
Inhalation: Remove affected person to fresh air until recovered.
Advice to Doctor: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Not flammable. Choose extinguishing media to suit the burning material. If waterfog or fine water spray is used ensure all runoff is contained..

Extinguishing media: Foam, CO₂ or dry chemical. Soft stream water fog or fine water spray if no alternatives. Contain all runoff.

SECTION 5 FIRE FIGHTING MEASURES (Continued)

Hazards from combustion products: There is no risk of an explosion from this product under normal circumstances if involved in a fire. Product is unlikely to decompose until heated to dryness. On further heating will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke.

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

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Avoid contact with eyes and skin. **DO NOT** inhale spray mist. Wear elbow-length PVC gloves and face shield. Large spills should be dyked or covered to prevent dispersal. Vacuum, shovel or pump spilled material into an approved container and dispose of as listed below. Keep out unprotected persons and animals.

Material and methods for containment and cleanup procedures: 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. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale the spray mist. When preparing the spray, wear elbow-length PVC gloves and face shield. 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 contaminated clothing.

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in the closed original container, in a cool well ventilated area, out of direct sunlight. Store in a room or place away from children, animals, food, feed stuffs, seed and fertilizers. 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.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

Exposure guidelines have not been established for this product by safe Work Australia.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas only. Use local exhaust at all process locations. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use.

Personal Protective equipment (PPE):

General: When opening the container, preparing the spray wear a PVC or rubber apron, cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield. Wash thoroughly before smoking, eating or using toilet facilities. Wash hands after use.

Respiratory Protection: Generally not required. Use of a respirator may be required in certain circumstances. If an inhalation risk exists, wear a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (Australian Standards).

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to dark greenish coloured liquid.
Boiling Point:	~ 100°C at 100 kPa.
Solubility in Water:	Soluble in water.
Specific Gravity:	~ 1.2 @ 20°C
Vapour Pressure:	1.33 mPa at 24°C for clopyralid acid.
Flash Point:	Not applicable. Not flammable.
Flammability:	Non combustible material.
Poison Schedule:	This product is a schedule 5 (S5) poison.
Formulation type:	Soluble concentrate.

SECTION 10 | STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture. This product is unlikely to spontaneously decompose.

Conditions to avoid: Do not store for prolonged periods in direct sunlight.

Incompatible materials: Strong acids, strong bases and strong oxidising agents.

Hazardous decomposition products: Product is unlikely to decompose until heated to dryness. On further heating will emit toxic fumes.

Hazardous reactions: No special considerations. Not known to polymerise.

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.

Ingestion: The concentrate is of low toxicity if swallowed. The acute oral LD₅₀ (rat) > 5000 mg/kg for a similar formulation. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.

Skin: A mild skin irritant. Low dermal toxicity. Acute dermal LD₅₀ > 2000 mg/kg for a similar formulation.

Eye: The concentrate may cause irritation of the eyes.

Inhalation: The components of the product are of low volatility and no adverse effects are expected from handling the concentrate. When applying the product as a spray avoid breathing in spray mist. Acute dermal LD₅₀ (rat) > 2000 mg/kg for a similar formulation.

Chronic Effects

Data indicates no reproductive, mutagenic or carcinogenic effects.

SECTION 12 | ECOLOGICAL INFORMATION

Environmental Toxicology: No data is available on this product. The following is data for the active ingredient, clopyralid. LC₅₀ (96 hr) for rainbow trout is 103.5 mg/L. LC₅₀ (96 hr) for bluegill sunfish is 125.4 mg/L and EC₅₀ (48hr) is 225 mg/L. Birds: slightly toxic to birds on an acute basis LD₅₀ is 1465 mg/kg, but practically non-toxic on a dietary basis LC₅₀ > 5000 mg/kg. Bees: Not toxic to bees LD₅₀ >100 µg/bee. Toxic to aquatic organisms - algae LC₅₀ 6.9 mg/L.

Environmental Properties: Half life in soil is typically 8 - 66 days. Rapid degradation in soil prevents significant downward movement under normal conditions. Based completely on information for clopyralid acid, Clopyralid is weakly sorbed (Mean Koc ~5 mL/g) indicating potential for mobility. Degradation is retarded under cold conditions or very dry soils. Clopyralid degrades slowly in water/sediment systems (t_{1/2} = 143-182 days). Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: Isolate and post spill area. Wear prescribed protective clothing and equipment – see section 8. Large spills should be dyked or covered to prevent dispersal. 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. 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 (ChemClear®).

Disposal of empty containers: Triple or preferably pressure rinse containers before disposal. Add rinsings to tank mix. Do not dispose of undiluted chemicals on-site. 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 empty containers or product.

SECTION 14 TRANSPORT INFORMATION

Transport Information: It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Marine and Air Transport: Apparent Clopyralid 300 Herbicide is classified as 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 Clopyralid). Hazchem code ●3Z. Hazard Identification Number (HIN) 90.

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of the Safe Work Australia. (Xi - irritant). 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. 67808.

This product is not classified as a Dangerous Good according to the ADG Code for packs less than 3000 litres (SP AU01) (7th Ed).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 25 January 2013. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code: Australian Dangerous Goods Code (for the transport of Dangerous Goods by Road and Rail).

ASCC: Australian Safety & Compensation Council (formally known as the National Occupational Health & Safety Commission (NOHSC)).

SECTION 16 OTHER INFORMATION (Continued)

- Carcinogen: An agent which is responsible for the formation of a cancer.
- Genotoxic: Capable of causing damage to genetic material, such as DNA.
- Lacrimation: The production, secretion, and shedding of tears.
- Lavage: A general term referring to cleaning or rinsing.
- NOHSC: National Occupational Health and Safety Commission.
- Pneumonitis: A general term that refers to inflammation of lung tissue.
- PPE: Personal protective equipment.
- Teratogen: An agent capable of causing abnormalities in a developing foetus.
- TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.
- Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia Website. (2013).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Standard for the Uniform Scheduling of Medicines and Poisons. No. 3. Medicines and Poisons Scheduling Secretariat. June 2012.

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 should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End of MSDS