



MATERIAL SAFETY DATA SHEET

TITAN FLUROXYPYR 200 EC HERBICIDE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Titan Fluroxypyr 200 EC Herbicide
Product Code	-
Other Names	-
Product Use	Agricultural Herbicide
Company Name	Titan Ag Pty Ltd
Address	3/14 Narabang Way Belrose NSW 2085
Telephone Number	02 9986 2943
Emergency Telephone	02 9986 2943

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE. NON DANGEROUS GOODS.

Classified as hazardous according to the criteria of ASCC.

Hazards	Xn - Harmful N - Dangerous for the Environment
Risk Phrases	R50 - Very toxic to aquatic organisms. R53 - May cause long-term adverse effects in the aquatic environment. R65 - Harmful: May cause lung damage if swallowed.
Safety Phrases	S2 - Keep out of reach of children. S23 - Do not breathe gas/fumes/vapour/spray S24 - Avoid contact with skin. S60 - This material and its container must be disposed of as hazardous waste. S61 - Avoid release to the environment. Refer to special instructions/Material Safety Data Sheets. S62 - If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient (common name)	CAS Number	Proportion
fluroxypyr methylheptyl ester	81406-37-3	30%
aromatic hydrocarbons	64742-94-5	58%
other ingredients deemed not to be hazardous	proprietary	12%

4. FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.
Ingestion	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep

	head below hips to prevent aspiration of liquid into lungs. Can cause chemical pneumonitis and pulmonary oedema. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure. Seek immediate medical attention.
Skin	Remove contaminated clothing and wash affected areas with soap and water. Seek medical attention if symptoms persist. Launder clothing before reuse.
Eyes	In case of eye contact, check for and remove any contact lenses. Immediately irrigate eyes with plenty of running water for at least 15 minutes, keeping eyelids open. Seek medical attention if irritation becomes painful or lasts more than a few minutes.

5. FIRE FIGHTING MEASURES

	For major fires call the Fire Brigade. Ensure that an escape path is available from any fire.
Suitable Extinguishing Media	Carbon dioxide, dry chemical, foam and water fog.
Hazardous Combustion Products	Oxides of carbon, nitrogen and sulphur.
Firefighting Equipment	Wear ASCC approved self-contained breathing apparatus and full protective clothing.
Unusual Fire or Explosion Hazards	Combustible product – C1. There is a moderate risk of an explosion if commercial quantities of this product are involved in a fire. Violent steam generation or eruption may occur if direct water stream is applied on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.
Hazchem Code	Not allocated.

6. ACCIDENTAL RELEASE MEASURES

Spills	In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing. Contain spill and absorb with earth, clay, sand, or other absorbent material and collect into labelled containers for disposal. Launder protective clothing before re-use.
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7. HANDLING AND STORAGE

Handling	Avoid contact with eyes and skin. Do not inhale spray mist. Use of safe work practices is recommended. Observe good personal hygiene.
Storage	Store in the closed, original container in a dry, well ventilated area, as cool as possible (preferably below 30°C). Do not store for prolonged periods in direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs. Make sure that the product does not come into contact with strong oxidising agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards (ASCC)	Total hydrocarbons: TWA: 17 ppm / 100 mg/m ³ STEL: - ppm / - mg/m ³
Engineering Controls	Local exhaust ventilation is recommended when vapours and mists can be released in excess of established airborne exposure limits.
Respiratory Protection	Use an ASCC approved full face supplied air respirator if high airborne concentrations of the material are present. See Australian Standards AS/NZS 1715 and 1716 for more information.
Eye Protection	Protective glasses or goggles and face shield.
Skin Protection	Elbow-length gloves and protective clothing.
Hygienic Practices	Food, beverages and tobacco products should not be stored or consumed where this material is in use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown to black liquid.
Odour	Mild solvent odour.
Solubility in Water	Emulsifiable (Active ingredient has solubility of about 1 mg/L at 25°C)
Boiling Point	No information available
Freezing Point	No information available
Vapour Pressure	135 x 10 ⁻³ mPa at 20°C
Vapour Density (Air = 1)	No information available
Specific Gravity	0.98 at 20°C
pH	No information available
Volatility	No information available
Odour Threshold	No information available
Evaporation Rate	No information available
Autoignition Temperature	No information available
Flash Point (PMCC)	67°C
Upper Flammability Limit	No information available
Lower Flammability Limit	No information available
Coefficient Oil/Water Distribution	-1.24 (pH unknown – log P octanol/water)

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal storage conditions.
Incompatible Materials	Strong acids, bases and oxidising agents.
Hazardous Decomposition Products	Oxides of carbon, nitrogen and hydrogen chloride gas and other compounds of chlorine.
Hazardous Polymerization Conditions to Avoid	Will not occur. Heat, flames and spark. Keep away from sources of ignition.



MATERIAL SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

Toxicity	Fluroxypyr MHE: Oral LD ₅₀ (rat) > 5000mg/kg Dermal LD ₅₀ (rabbit) > 2000mg/kg Inhalation LC ₅₀ (rat) > 1.0mg/L
Routes of Exposure	Inhalation, ingestion, eye and skin
Health effects from likely routes of exposure	Inhalation: Can cause irritation to the respiratory tract, headaches and dizziness, and other central nervous system effects. Ingestion: Harmful if swallowed. Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination. Eye: Can cause eye irritation. Skin: Can cause skin irritation.
Effects of Overexposure	Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. Prolonged contact with the concentrate may cause damage to the eye.
Existing Conditions Aggravated by Exposure	No information available
Carcinogenicity	No (ASCC, NTP, IARC)

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fluroxypyr MHE: Fish: LC ₅₀ (rainbow trout) > 100mg/L Birds: LC ₅₀ (Bobwhite quail) >2000 mg/kg LD ₅₀ (mallard duck) >2000 mg/kg Bees: Oral LD ₅₀ = 100µg/bee Harmful to aquatic organisms. Not toxic to birds and bees.
Mobility	This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

13. DISPOSAL CONSIDERATIONS

Disposal methods and containers	Instructions concerning the disposal of this product and its containers are given on the product label. Dispose according to applicable local and state government regulations.
Special precautions for landfill or incineration	Please consult your state Land Waste Management Authority for more information



MATERIAL SAFETY DATA SHEET

14. TRANSPORT INFORMATION

Not classified as a dangerous good according to the Australian Code for the Transport of Dangerous goods by road or rail.

UN Number	Not applicable
Proper Shipping Name	Not applicable
Dangerous Goods Class	Not applicable
Hazchem Code	Not applicable
Packing Group	Not applicable
Special Precautions	Not applicable

15. REGULATORY INFORMATION

Fluroxypyr methylheptyl ester and aromatic hydrocarbons are listed in the Australian Inventory of Chemical Substances (AICS).

SUSDP Classification: 5

16. OTHER INFORMATION

Last Revision of MSDS	Rev 1.0 (04/03/2008)
Prepared by	MSDS.COM.AU Pty Ltd www.msds.com.au
Abbreviations Used	IARC: International Agency for Research on Cancer ASCC: Australian Safety and Compensation Council NTP: National Toxicology Program (U.S.) OSHA: Occupational Safety and Health Administration (U.S.) STEL: Short term exposure limit TWA: Time weighted average

Emergency Contacts

Titan Ag Pty Ltd	02 9986 2943
Titan Ag Pty Ltd – Emergency Number	02 9986 2943
Police and Fire Brigade	000
Poisons Information Centre	13 11 26

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Please read instructions / label before using product.