



MATERIAL SAFETY DATA SHEET

TITAN CLOPYRALID 300 HERBICIDE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Titan Clopyralid 300 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

Risk Phrases

Safety Phrases

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R51 - Toxic to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.
S2 - Keep out of reach of children.
S24/25 - Avoid contact with skin and eyes.
S61 - Avoid release to the environment. Refer to special instructions/Material Safety Data Sheets.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient (common name)	CAS Number	Proportion
clopyralid, tri isopropanolamine salt	2302-17-2	~ 51%
other ingredients deemed not to be hazardous	proprietary	~ 49%

4. FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Ingestion	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. 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 immediate medical attention.
Medical Advice	No specific antidote. Treat symptomatically.



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5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	For major fires call the Fire Brigade. Ensure that an escape path is available from any fire. Water fog, foam, carbon dioxide and dry chemical.
Hazardous Combustion Products	Noxious fumes under fire conditions – hydrogen chloride and others.
Firefighting Equipment	Wear ASCC approved self-contained breathing apparatus and full protective clothing.
Unusual Fire or Explosion Hazards	There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
Hazchem Code	2X

6. ACCIDENTAL RELEASE MEASURES

Spills	In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing. Stop leak when safe to do so. Dike the area if the spills are large. Otherwise absorb the spill with sand, soil, sawdust or other absorbent material and collect into labelled containers for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water. 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. Do not store for prolonged periods in direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards (ASCC)	No exposure standards set.
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.



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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	Green or blue liquid
Odour	Odourless
Solubility in Water	Miscible
Boiling Point	100 - 105°C
Freezing Point	No information available
Vapour Pressure	1.2×10^{-5} mmHg at 20°C
Specific Gravity	1.17 at 20°C
pH	6-8 (undiluted)
Flash Point (PMCC)	Does not flash
Upper Flammability Limit	No information available
Lower Flammability Limit	No information available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal storage conditions.
Incompatible Materials	Acids, bases and oxidizing materials.
Hazardous Decomposition Products	Noxious fumes under fire conditions – hydrogen chloride and others.
Hazardous Polymerization	Will not occur.
Conditions to Avoid	None known.

11. TOXICOLOGICAL INFORMATION

Toxicity	Clopyralid (technical): Oral LD ₅₀ (male rat) > 3738mg/kg Dermal LD ₅₀ (rabbit) = > 2000mg/kg Inhalation LC ₅₀ (rat) = > 1000mg/m ³ for 4 hours
Routes of Exposure	Inhalation, ingestion, eye and skin
Health effects from likely routes of exposure	Inhalation: No adverse effects are anticipated from single exposure to vapour or mist. Ingestion: No evidence of adverse effects in the short term ingestion. Swallowing large amounts may cause injury. Eye: Can cause slight eye irritation. Skin: May cause mild skin irritation.
Effects of Overexposure Existing Conditions Aggravated by Exposure Carcinogenicity	Prolonged skin contact may cause skin irritation with redness. No information available. No (ASCC, NTP, IARC)

12. ECOLOGICAL INFORMATION

Ecotoxicity	Clopyralid (technical): Aquatic organisms LC ₅₀ (rainbow trout) = 103.5mg/L – 96 hours LC ₅₀ (<i>Daphnia magna</i>) = 225mg/L – 48 hours LC ₅₀ (green algae) = 6.9mg/L – 96 hours Birds: LD ₅₀ (mallard duck) = 1465 mg/kg – acute basis This product is toxic to aquatic organisms and slightly toxic to birds.
Mobility	This product is not readily biodegradable. It rapidly degrades to CO ₂ in the soil (field half-life is 2-24 days), while slowly in water/sediment systems (half-life is 143-182 days).

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

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

Asulam sodium salt and water are listed in the Australian Inventory of Chemical Substances (AICS).

SUSDP: 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



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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.