



## MATERIAL SAFETY DATA SHEET

### TITAN PICLORAM + TRICLOPYR 400 HERBICIDE

#### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	Titan Picloram + Triclopyr 400 Herbicide
<b>Product Code</b>	-
<b>Other Names</b>	-
<b>Product Use</b>	Agricultural Herbicide
<b>Company Name</b>	Titan Ag Pty Ltd
<b>Address</b>	3/14 Narabang Way Belrose NSW 2085
<b>Telephone Number</b>	02 9986 2943
<b>Emergency Telephone</b>	02 9986 2943

#### 2. HAZARDS IDENTIFICATION

##### HAZARDOUS SUBSTANCE. NON DANGEROUS GOODS.

Classified as hazardous according to the criteria of ASCC.

<b>Hazards</b>	Xn - Harmful
<b>Risk Phrases</b>	R36/38 - Irritating to eyes and skin. R43 - May cause sensitisation by skin contact. R65 - Harmful: May cause lung damage if swallowed.
<b>Safety Phrases</b>	S2 - Keep out of reach of children. S24/25 - Avoid contact with skin and eyes. S35 - This material and its container must be disposed of in a safe way. 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

<b>Ingredient (common name)</b>	<b>CAS Number</b>	<b>Proportion</b>
triclopyr butoxyethyl ester	64700-56-7	36.5%
picloram	1918-02-1	8.8
other ingredients deemed not to be hazardous	proprietary	60-80%

#### 4. FIRST AID MEASURES

<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
<b>Ingestion</b>	If swallowed, do not induce vomiting. Do not give any liquid. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
<b>Skin</b>	Remove contaminated clothing and wash affected areas with soap and water. Seek medical attention if symptoms persist. Launder



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<b>Eyes</b>	clothing before reuse. 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 symptoms persist.
<b>Medical Advice</b>	No specific antidote. Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	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.
<b>Hazardous Combustion Products</b>	Oxides of sulphur, carbon and nitrogen. Hydrogen chloride and cyanide compounds may be formed.
<b>Firefighting Equipment</b>	Wear ASCC approved self-contained breathing apparatus and full protective clothing.
<b>Unusual Fire or Explosion Hazards</b>	<b>Combustible – C1.</b>
<b>Hazchem Code</b>	2X

### 6. ACCIDENTAL RELEASE MEASURES

<b>Spills</b>	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

<b>Handling</b>	Avoid contact with eyes and skin. Do not inhale spray mist. Use of safe work practices is recommended. Observe good personal hygiene.
<b>Storage</b>	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

<b>Exposure Standards (ASCC)</b>	<b>Picloram:</b> TWA: - ppm / 10 mg/m <sup>3</sup> STEL: - ppm / - mg/m <sup>3</sup>
<b>Engineering Controls</b>	Local exhaust ventilation is recommended when vapours and mists can be released in excess of established airborne exposure limits.
<b>Respiratory Protection</b>	Use an ASCC approved full face supplied air respirator if high airborne concentrations of the material are present. See Australian

<b>Eye Protection</b>	Standards AS/NZS 1715 and 1716 for more information.
<b>Skin Protection</b>	Protective glasses or goggles and face shield.
<b>Hygienic Practices</b>	Elbow-length gloves and protective clothing. 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

<b>Appearance</b>	Brown liquid
<b>Odour</b>	Ester odour
<b>Solubility in Water</b>	Emulsifiable
<b>Boiling Point</b>	~ 200°C
<b>Freezing Point</b>	No information available
<b>Vapour Pressure</b>	No information available
<b>Vapour Density (Air = 1)</b>	1.15g/mL at 20°C
<b>pH</b>	6.65 – 8.5 (5% v/v water emulsion)
<b>Flash Point (PMCC)</b>	82°C
<b>Upper Flammability Limit</b>	No information available
<b>Lower Flammability Limit</b>	No information available

### 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal storage conditions. Combustible.
<b>Incompatible Materials</b>	Oxidizing materials and strong acids.
<b>Hazardous Decomposition Products</b>	Oxides of sulphur, carbon and nitrogen. Hydrogen chloride and cyanide compounds may be formed.
<b>Hazardous Polymerization</b>	Will not occur.
<b>Conditions to Avoid</b>	No information available.

### 11. TOXICOLOGICAL INFORMATION

<b>Toxicity</b>	<p><b>Picloram:</b>            Oral LD<sub>50</sub> (rat) &gt; 5000 - 8200mg/kg            Oral LD<sub>50</sub> (mice) = 2000 - 4000mg/kg            Dermal LD<sub>50</sub> (rabbit) &gt; 4000mg/kg            Inhalation LC<sub>50</sub> &gt; 0.35mg/L – 4 hours</p> <p><b>Triclopyr (butoxyethyl ester):</b>            Oral LD<sub>50</sub> (rat) &gt; 2000mg/kg</p>
<b>Routes of Exposure</b>	Inhalation, ingestion, eye and skin
<b>Health effects from likely routes of exposure</b>	<p>Inhalation: No adverse effects are anticipated from single exposure.</p> <p>Ingestion: Low toxicity if swallowed. Aspiration into the lungs may occur during ingestion or vomiting, causing chemical pneumonitis and lung damage or even death.</p> <p>Eye: Can cause moderate eye irritation. Corneal injury is unlikely.</p> <p>Skin: May cause skin irritation.</p>
<b>Effects of Overexposure</b>	Prolonged contact with skin may cause skin irritation, redness and



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<b>Existing Conditions</b>	allergic skin reactions in some individuals.
<b>Aggravated by Exposure</b>	No information available.
<b>Carcinogenicity</b>	No (ASCC, NTP, IARC)

### 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	<p><b>Aquatic organisms:</b></p> <p><b>Picloram:</b> LC<sub>50</sub> (rainbow trout) = 19.3mg/L – 96 hour LC<sub>50</sub> (bluegill sunfish) = 14.5 mg/L – 96 hour LC<sub>50</sub> (<i>Daphnia magna</i>) = 50 mg/L – 48 hour</p> <p><b>Birds:</b> LD<sub>50</sub> (mallard duck) &gt;2000 - 5000 mg/kg</p> <p><b>Triclopyr (butoxyethyl ester):</b> LD<sub>50</sub> (rainbow trout) = 0.74mg/L – 96 hour LD<sub>50</sub> (bluegill sunfish) = 0.87 mg/L – 96 hour</p> <p><b>Birds:</b> LD<sub>50</sub> (mallard duck) = 1698 mg/kg Picloram is slightly to moderately toxic to fish and aquatic invertebrates and is slightly to practically nontoxic to birds. Triclopyr is slightly to practically nontoxic to the aquatic organisms and birds and nontoxic to bees.</p>
<b>Mobility</b>	<p>Picloram is quickly degraded by light and more slowly in soil with half-lives of 30 to 90 days. Picloram has a high potential for mobility in soil. Picloram has a moderate potential for bioaccumulation. Triclopyr has a half life in soil of approx 46 days. Triclopyr has a moderate potential for bioaccumulation.</p>

### 13. DISPOSAL CONSIDERATIONS

<b>Disposal methods and containers</b>	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.
<b>Special precautions for landfill or incineration</b>	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.

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



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### 15. REGULATORY INFORMATION

Triclopyr butoxyethyl ester and picloram are listed in the Australian Inventory of Chemical Substances (AICS).

**SUSDP Classification: 6**

### 16. OTHER INFORMATION

<b>Last Revision of MSDS</b>	Rev 1.0 (04/03/2008)
<b>Prepared by</b>	MSDS.COM.AU Pty Ltd <a href="http://www.msds.com.au">www.msds.com.au</a>
<b>Abbreviations Used</b>	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

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

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Please read instructions / label before using product.