



## MATERIAL SAFETY DATA SHEET

### TITAN TEBUTHIURON 200 HERBICIDE

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

<b>Product Name</b>	Titan Tebuthiuron 200 Herbicide
<b>Product Code</b>	-
<b>Other Names</b>	-
<b>Product Use</b>	For the control of regrowth trees and woody weeds.
<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 N - Dangerous for the Environment
<b>Risk Phrases</b>	R22 - Harmful if swallowed. R50 - Very toxic to aquatic organisms. R53 - May cause long-term adverse effects in the aquatic environment.
<b>Safety Phrases</b>	S2 - Keep out of reach of children. S37 - Wear suitable gloves. 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.

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<b>Ingredient (common name)</b>	<b>CAS Number</b>	<b>Proportion</b>
Tebuthiuron	200	20%
Quartz (crystalline silica)	14808-60-7	15-40%
Ingredients deemed not to be hazardous	-	40-65%

#### 4. FIRST AID MEASURES

<b>Inhalation</b>	If inhaled remove victim to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Seek medical attention if symptoms persist.
<b>Ingestion</b>	If swallowed, do not induce vomiting. Immediately rinse mouth with water. Where vomiting occurs naturally have victim place head below hip level in order to reduce risk of aspiration. Never give anything by mouth to an unconscious person. Seek immediate



## MATERIAL SAFETY DATA SHEET

<b>Skin</b>	medical attention. If skin or hair contact occurs, immediately remove contaminated clothing and wash skin and hair thoroughly. Seek medical attention if symptoms persist.
<b>Eyes</b>	If in eyes, hold eyelids apart and flush the eye continuously with large amounts of water for at least 15 minutes. Seek medical attention if symptoms persist.

### 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. Foam, water fog or carbon dioxide.
<b>Hazardous Combustion Products</b>	Oxides of nitrogen and sulphur.
<b>Firefighting Equipment</b>	Wear ASCC approved self-contained breathing apparatus and full protective clothing.
<b>Unusual Fire or Explosion Hazards</b>	Non-flammable solid.
<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 including eye/face protection. Stop leak if safe to do so, and contain spill. Recover the product by sweeping up or vacuuming without raising dust. Collect in sealed containers for disposal. Final clean-up with water and detergent is advised. Launder protective clothing before storage or re-use.
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### 7. HANDLING AND STORAGE

<b>Handling</b>	Exercise normal care in handling. Avoid unnecessary skin and eye contact.
<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, animal food or foodstuffs.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Standards (ASCC)</b>	<b>Quartz:</b> TWA: -ppm / 0.1mg/m <sup>3</sup> STEL: - ppm / - mg/m <sup>3</sup>
<b>Engineering Controls</b>	Use local exhaust ventilation, or other engineering controls to

<b>Respiratory Protection</b>	maintain airborne levels below recommended exposure limits. Controls should be sufficient so that applicable occupational exposure limits are not exceeded.
<b>Eye Protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. See Australian Standards AS/NZS 1715 and 1716 for more information.
<b>Skin Protection</b>	Protective glasses or goggles and face shield.
<b>Hygienic Practices</b>	Impervious elbow-length gloves, cotton overalls and washable hat. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Grey pellets
<b>Odour</b>	No information available
<b>Solubility in water</b>	No information available
<b>Boiling Point</b>	No information available
<b>Melting Point</b>	No information available
<b>Vapour Pressure</b>	0.27mPa @ 25°C
<b>Vapour Density</b>	960-1120g/kg
<b>Flash Point (closed cup)</b>	Not applicable
<b>Flammable Limit – Lower</b>	Not applicable
<b>Flammable Limit – Upper</b>	Not applicable

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Incompatible Materials</b>	Strong acids and alkalis.
<b>Hazardous Decomposition Products</b>	Oxides of nitrogen and sulphur.
<b>Hazardous Polymerization</b>	Will not occur.
<b>Conditions to Avoid</b>	No information available.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicity</b>	<p><b>Tebuthiuron:</b>          Acute oral LD<sub>50</sub> (rat) = 644mg/kg          Acute oral LD<sub>50</sub> (mice) = 579mg/kg          Acute oral LD<sub>50</sub> (rabbit) = 286mg/kg          Acute dermal LD<sub>50</sub> (rabbit) &gt;200mg/kg</p> <p><b>Amorphous silica:</b>          IVNLD<sub>50</sub> (rat) = 15 mg/kg (intravenous)          TCLo (mouse) = 352 mg/m<sup>3</sup> (inhalation)</p>
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<b>Routes of Exposure</b>	<b>Reproductive Effects:</b> No reproductive toxicity.
<b>Health effects from likely routes of exposure</b>	<b>Teratogenic Effects:</b> No evidence of teratogenic effects.
	<b>Mutagenic Effects:</b> No evidence of mutagenic effects.
	<b>Carcinogenic Effects:</b> Tebuthiuron did not cause cancer in laboratory animals
	Inhalation, ingestion, eye and skin
	Inhalation: At room temperature, exposure to vapour is minimal due to low volatility; a single exposure is not likely to be hazardous.
	Ingestion: Low toxicity if swallowed. Small amounts swallowed incidental or as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.
	Eye: Can cause slight eye irritation. May cause slight corneal injury.
	Skin: Can cause skin irritation and allergic disorders. Prolonged skin contact is unlikely to result in absorption of harmful amounts.
<b>Effects of Overexposure</b>	No information available.
<b>Existing Conditions</b>	No information available.
<b>Aggravated by Exposure</b>	
<b>Carcinogenicity</b>	<b>Respirable crystalline silica</b> Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by IARC and NTP as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to a respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

**12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	<b>Aquatic Organisms:</b> Tebuthiuron is slightly to practically non-toxic to fish and other aquatic species. LC <sub>50</sub> 96hr (Rainbow trout) = 87-144 mg/L LC <sub>50</sub> 96hr (Bluegill sunfish) = 87-112mg/L LC <sub>50</sub> 48hr (Daphnia) = 225mg/L Highly toxic to algae (EC <sub>50</sub> <1mg/L)
	<b>Birds:</b> Tebuthiuron is practically nontoxic to birds. Oral LD <sub>50</sub> ( Bob-white quail) >2500 mg/kg Oral LD <sub>50</sub> (Mallard duck) >2500 mg/kg
	<b>Bees:</b> Tebuthiuron is slightly toxic to bees with a reported contact LD <sub>50</sub> of 30 mg/bee.
<b>Mobility</b>	Mobile in soil. Not expected to bio-accumulate.



## MATERIAL SAFETY DATA SHEET

### 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

### 15. REGULATORY INFORMATION

Tebuthiuron and quartz (crystalline silica) are listed in the Australian Inventory of Chemical Substances (AICS).

**SUSDP Classification: S6**

### 16. OTHER INFORMATION

<b>Last Revision of MSDS</b>	Rev 1.0 (21/08/2008)
<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.