

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Tebuthiuron 200 Herbicide**

Other Names: Tebuthiuron. Group C Herbicide. Substituted urea.
Use: A granular woody weed herbicide for non-cropland areas.
Company: Titan Ag Pty Ltd
Address: 15/16 Princes Street, Newport NSW 2106
ACN/ABN: 122 081 574
Telephone Number: 03 9822 1321
Email: enquiries@apparentag.com.au
Emergency Contact: 0411 227 338

SECTION 2

HAZARDS IDENTIFICATION

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

Not subjected to the ADG code when transported in Australia by Road or Rail in packages 500 kg (L) or less; or in IBC's (refer to SP AU01). However, if transported by Air or Sea, this provision does not apply. Then the product is classed as a Dangerous Good (Class 9 Environmentally Hazardous) by IATA and IMDG respectively. See Section 14 of this SDS for details.

Globally Harmonised System (GHS) classification of the substance/mixture:

Acute toxicity – Oral: Hazard Category 4.
Eye damage/irritation: Hazard Category 2B.
Carcinogenicity: Hazard Category 1.
Specific Target Organ Toxicity (Repeated Exposure): Hazard Category 1.
Hazardous to the Aquatic Environment – Long-Term (Chronic) Hazard: Hazard Category 1.

Signal Word: DANGER.

Hazard Statements:

H302 Harmful if swallowed.
H320 Causes eye irritation.
H350 May cause cancer by inhalation.
H372 Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.
H410 Very toxic to aquatic life with long-lasting effects.

Precautionary statements:

Prevention:

P201 Do not handle until all safety precautions have been read and understood.
P264 Wash hands, arms and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P260 Do not breathe dust.
P264 Wash hands, arms and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Response (Cont):

P308 + P313	If exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with national regulations.

Pictograms:



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Tebuthiuron	34014-18-1	20% w/w
Quartz (crystalline silica)	14808-60-7	15- 40% w/w
Other ingredients determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: If swallowed do NOT induce vomiting. Wash mouth out with water. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.

Eye contact: Gently brush granules away and immediately rinse with water until product is removed. If irritation occurs and persists, seek medical advice.

Skin contact: Gently brush granules away and wash area with running water and mild soap. If irritation occurs and persists, seek medical advice. Remove contaminated clothing and launder before re-use.

Inhalation: Remove to fresh air and observe until recovered. If effects persist, seek medical advice.

Advice to Doctor: Treat symptomatically. No specific antidote.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Generally considered a low risk.

Extinguishing media: Use extinguishing media suited to burning material. If waterfog or fine water spray is used, ensure all runoff is contained. Contain all runoff.

Hazards from combustion products: Product will decompose when burnt and will emit toxic fumes. Fire-fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke. There is no risk of explosion.

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

SECTION 6

ACCIDENTAL RELEASE MEASURES

Emergency procedures: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves. If there is a significant chance of that dust is likely to build up in the cleanup area, the use of a respirator is recommended.

In the case of spillage, stop leak if safe to do so, and contain spill. Prevent spillage entering drains or watercourses. Contain and absorb spilled material with absorbent material such as sand, clay, cat litter or material such as vermiculite. Collect recoverable product for use as labelled on the product. Vacuum, shovel or pump contaminated spilled material into an approved container and dispose of waste as per the requirements of Local or State Waste Management Authorities. Keep out animals and unprotected persons. Launder protective clothing before storage or re-use.

If a significant quantity of material enters drains, advise emergency services. Keep out animals and unprotected persons. Thoroughly launder protective clothing before storage or re-use.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

SECTION 7

HANDLING AND STORAGE

Precautions for Safe Handling: Harmful if swallowed. Will irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container and preparing the product and using the prepared product, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves. Wash hands after use. After each day's use wash gloves and contaminated clothing.

Conditions for Safe Storage: Not classified as a Dangerous Good. Store in the closed original container in a dry, cool well-ventilated area out of direct sunlight. DO NOT store near food, feedstuffs, fertilisers or seed. Do not dispose of granules on-site.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Exposure guidelines have not been established for this product by Safe Work Australia, however an exposure standard has been established for one of the ingredients in this product.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Quartz (crystalline silica)	0.05 mg/m ³	Not established

TWA = Time-weight Average STEL = Short term Exposure Limit

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and that dusts are minimised.

Personal Protective Equipment (PPE):

General: When opening the container and preparing the product and using the prepared product, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves. Wash hands after use. After each day's use wash gloves and contaminated clothing.

Personal Hygiene: Harmful if swallowed. Will irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. 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:	Grey pellets (granules).
Odour:	No data available.
Boiling point:	No data available.
Freezing point:	No data available.
Specific Gravity:	No data available.
Solubility in Water:	Disperses in water.
pH:	No data available.
Flammability:	Not flammable.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	This product is a schedule 6 (S6) poison.
Formulation type:	Granular.

SECTION 10**STABILITY AND REACTIVITY**

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Keep cool and dry until ready to use. Protect from sunlight.

Incompatible materials: Strong acids and alkalis.

Hazardous decomposition products: This product will decompose when burnt. Carbon dioxide, carbon monoxide, nitrogen and its compounds and oxides, smoke and silicone compounds.

Hazardous reactions: Polymerisation is unlikely.

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.

Potential Health Effects:

ACUTE EFFECTS

Swallowed: Slight to moderate toxicity. Acute Oral LD₅₀ (rats) = 644 mg/kg (tebuthiuron). Expected product Acute Oral LD₅₀ > 2000 mg/kg.

Eye: The granules can cause physical discomfort if in the eye causing irritation, stinging, reddening and watering of the eyes. May cause slight corneal damage.

Skin: May cause skin irritation and allergic disorders. Acute dermal LD₅₀ > 2,000 mg/kg (rabbits).

Inhaled: As this is a granule and exposure to vapour is minimal due to low volatility, a single exposure is not expected to be hazardous.

Long Term Exposure:

Chronic toxicity: Decreases in body weight gain and red-blood cell counts, along with minor effects on the pancreas were seen in rats fed 125 mg/kg/day for 3 months. Exposure of rats to dietary doses of tebuthiuron as high as 80 mg/kg/day for 2 years was well tolerated, with no indication of cumulative toxicity or serious effects. Similarly, no toxic effects were observed in mice exposed to doses as high as 200 mg/kg/day for most of their lifetime, or in dogs given doses of 25 mg/kg/day for 1 year.

Reproductive effects: The reproductive capacity of rats fed dietary concentrations of tebuthiuron as high as 56 mg/kg/day was unimpaired through three successive generations, and no abnormalities were detected in either parents or offspring. Tebuthiuron administered to pregnant rabbits at doses as high as 25 mg/kg/day, and to rats at doses as high as 180 mg/kg/day, produced no adverse effects on either the mothers or offspring. Based on these data, it is unlikely that tebuthiuron causes reproductive effects.

Teratogenic effects: No teratogenic effects were observed when rats were fed tebuthiuron at 180 mg/kg/day. A rabbit teratology study was also negative at 25 mg/kg/day, the highest dose tested. Based on these data, it is unlikely that tebuthiuron causes birth defects.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Mutagenic effects: The Ames mutagenicity assay for tebuthiuron was negative, as were assays for structural chromosome aberrations using mouse micronuclei. Based on these data, it appears that tebuthiuron is not mutagenic.

Carcinogenic effects: No tumour related effects were observed in a 2-year rat feeding study of tebuthiuron at doses up to and including 80 mg/kg/day, the highest dose tested. A 2-year oncogenic study on mice was negative at 200 mg/kg/day, the highest dose tested. These data indicate that tebuthiuron is not carcinogenic. This product contains quartz which may contain crystalline silica which has been known to cause cancer in humans.

Organ toxicity: Damage to the pancreas has been observed in animal studies as a result of exposure to tebuthiuron. Other targeted organs are the kidneys and blood.

Fate in humans and animals: In rats, rabbits, dogs, mallards, and fish, tebuthiuron is readily absorbed into the bloodstream from the gastrointestinal tract, rapidly metabolized, and then excreted in the urine. Tests indicate that the herbicide is broken down and excreted within 72 hours, primarily as a variety of urinary metabolites.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Tebuthiuron is practically nontoxic to birds. Oral LD₅₀ values are greater than 2500 mg/kg in both mallard ducks and bobwhite quail. A 30-day feeding of 1000 ppm tebuthiuron to hens had no effect. Tebuthiuron is slightly to practically non-toxic to fish and other aquatic species. 96-hour LC₅₀ values are 87 to 144 mg/L in rainbow trout, and 87 to 112 mg/L in bluegill sunfish. The reported 96-hour LC₅₀ values are greater than 160 mg/L in goldfish and fathead minnow. The 48-hour LC₅₀ in Daphnia, an aquatic invertebrate, is 225 mg/L. The LC₅₀ in fiddler crab is greater than 320 mg/L; the LD₅₀ in pink shrimp is more than 48 mg/L. Tebuthiuron is slightly toxic to bees with an LD₅₀ of 30 mg/bee. Highly toxic to algae EC₅₀ < 1 mg/L.

Environmental Fate: Tebuthiuron is highly persistent in soil. Reported field half-lives are from 12 to 15 months in areas with over 40 inches annual rainfall, with longer half-lives expected in drier areas or in soils with high organic matter content. Tebuthiuron is broken down slowly in the soil through microbial degradation. Photodecomposition, or breakdown by sunlight, is negligible, as is volatilization (or evaporation from the soil surface). It is poorly bound to soil, suggesting high mobility. In field studies, however, little or no lateral movement has been seen in soils with appreciable clay or organic matter content. Neither tebuthiuron nor its degradation products have been detected below the top 24 inches of soil in field studies. It was found in some groundwater samples in Western US states (Texas, California, Missouri, Oklahoma, and Washington) at levels up to 3.8 ug/L. No degradation was observed in a 33 day study of photolysis of tebuthiuron in water. Tebuthiuron is readily absorbed through roots and translocated to other plant parts. It produces its effect by inhibiting photosynthesis, the process by which plants receive light from the sun and convert it into energy. Low persistence in the air DT₅₀ = 14.7 hours.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. Keep material out of streams and sewers. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty containers: Shake bag remainder into application equipment. Do not dispose of granules on site. Puncture and deliver empty packaging 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

Road & Rail Transport: Apparent Tebuthiuron 200 Herbicide is exempt from classification as a Dangerous Good in packs less than 500 kg (L) or less; or in IBC's under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3077. (See special provision AU01).

SECTION 14 TRANSPORT INFORMATION (Continued)

Road & Rail Transport: Apparent Tebuthiuron 200 Herbicide is exempt from classification as a Dangerous Marine and Air Transport: Apparent Tebuthiuron 200 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 3077, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Tebuthiuron). Hazchem code 2Z. Hazard Identification Number (HIN) 90. Australian Standards Initial Emergency Response Guide No. 47.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 6 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 69904.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xi: Irritant. This product is not classified as a Dangerous Good according to the ADG Code (7th Ed).

This product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

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: 13 May 2020. Valid until 13 May 2025. (5 year update).

Key to abbreviations and acronyms used in this SDS:

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

Ataxia: Inability to control the coordinate movements of the muscles.

Bradycardia: Is a resting heart rate of under 60 beats per minute (adults).

Carcinogen An agent which is responsible for the formation of a cancer.

Genotoxic Capable of causing damage to genetic material, such as DNA.

HSIS Hazardous Substances information System.

Lacrimation The production, secretion, and shedding of tears.

Lavage A general term referring to cleaning or rinsing.

Mutagen An agent capable of producing a mutation.

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. "Hazardous Chemicals Information System". Safe Work Australia HCIS website. (2020).
2. "Classifying Hazardous Substances" Safe Work Australia. August 2018.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

This SDS 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 SDS 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 SDS.