

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Tight-Rope Herbicide**

Other Names: Isoxaflutole, Group H Herbicide.
Use: Herbicide for the control of various broadleaf weeds and grasses.
Company: Apparent Pty Ltd
Address: Suite G.08, 762 Toorak Road, Hawthorn East, Vic. 3123.
PO Box 3092, Cotham PO, Kew, Vic 3101
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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.**

GHS Classification:

Skin corrosion/irritation: Category 3.
Toxic to reproduction: Category 2.
Hazardous to the aquatic environment: Category 1.

Hazard statement:

H316 Causes mild skin irritation.
H361 Suspected of damaging fertility or the unborn child.
H400 Very toxic to aquatic life.

Signal Word: WARNING

Precautionary Statements:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention:
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P391 Collect spillage.

Storage and Disposal:

P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Pictogram:



SECTION 3**COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Isoxaflutole	141112-29-0	750 g/kg
Other ingredients determined not to be hazardous		Balance

SECTION 4**FIRST AID MEASURES****FIRST AID**

Ingestion: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, do not induce vomiting. Wash mouth out with water and give water to drink.

Eye contact: If in eyes, gently brush granules away immediately, and rinse with clean water until chemical is removed. Seek medical advice if irritation occurs. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained.

Skin contact: If on skin gently brush granules away. Wash skin with soap and water. Irritation of the skin is not expected, however if irritation occurs and persists, seek medical advice. Launder contaminated clothing before re-use.

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

Advice to Doctor: Treat symptomatically.

SECTION 5**FIRE FIGHTING MEASURES**

Specific Hazard: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Extinguishing media: Alcohol resistant foam, CO₂ or dry chemical. Soft stream water fog if no alternatives. Do not scatter spilled material with high pressure water jets. Contain all runoff.

Hazards from combustion products: On burning will emit toxic and irritant fumes. Fire will produce smoke containing hazardous products of combustion.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke. Do not breathe smoke or vapours generated.

SECTION 6**ACCIDENTAL RELEASE MEASURES****Emergency procedures / Material and methods for containment and cleanup procedures:**

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Isolate and post spill area. Keep out unprotected persons and animals. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves and face shield or goggles. Large spills should be dyked or covered to prevent dispersal. If possible, granules may be recovered and used for their intended use. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Keep out animals and unprotected persons.

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. Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers. Use earthen bunds or absorbent bunding to prevent spreading of spillage.

SECTION 7**HANDLING AND STORAGE**

Precautions for Safe Handling: Ensure containers are kept closed until using product. Will irritate the eyes and skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat and elbow-length PVC gloves. Wash hands after use. After each day's use wash gloves, face shield or goggles and contaminated clothing.

Conditions for Safe Storage: Keep out of reach of children. 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 any undiluted chemical on-site. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 8**EXPOSURE CONTROLS / PERSONAL PROTECTION**

Exposure Guidelines: No exposure standard for this product has been established by Safe Work Australia.

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 dust and vapours are minimised.

Personal Protective equipment (PPE):

General: When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat and elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Personal Hygiene: Will irritate the eyes and skin. 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:	White to beige coloured granules.
Odour:	Characteristic odour.
Boiling point:	No data available.
Freezing point:	No data available.
Bulk density:	No data available.
Solubility in Water:	Product disperses in water.
pH:	No data available.
Flammability:	Non flammable.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	This product is a schedule 5 (S5) poison.
Formulation type:	Water Dispersible Granule (WG).

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: Do not store for prolonged periods in direct sunlight.

Incompatible materials: Strong acids, strong bases and strong oxidising agents.

Hazardous decomposition products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, oxides Nitrogen and sulfur and hydrogen fluoride.

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: Low acute oral toxicity; the acute oral LD₅₀ (rat) > 5000 mg/kg (Isoxaflutole).

Eye: This product may be an eye irritant. In addition, the granules can cause physical discomfort if in the eye.

Skin: Low acute dermal toxicity. The dermal LD₅₀ (rabbit) > 2000 mg/kg (Isoxaflutole). May be a slight irritant, but only likely to cause transient irritation.

Inhaled: Low acute inhalation toxicity. Acute inhalation LC₅₀ > 5.26 mg/L/4hr (Similar product).

Long Term Exposure:

Chronic toxicity: No data available on this formulation. Safe Work Australia has classified Isoxaflutole in the occupational environment as a Reproductive Category 3 substance, classified as “suspected of damaging fertility or the unborn child”. In both maternal animals and offspring, changes in body weight and/or food consumption were the primary effects seen in the DNT study and at the same dose tested. Decreased brain weights were observed in offspring on post-natal day (PND) 11 at the high dose only, but not at a later time point, an indicator of a developmental delay and/or a secondary effect of the decreased body weight. Although morphometric analyses were not performed in the study, there were no effects on pup swimming ability, learning, memory, motor activity, or auditory startle response at any dose, nor was there any evidence of neuropathology in the study at any dose.

Reproductive effects: The data indicates no reproductive effects.

Mutagenic effects: The data suggests that isoxaflutole is not mutagenic or genotoxic.

Carcinogenic effects: Isoxaflutole caused at high dose levels an increased incidence of tumours in the liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Development toxicity: Isoxaflutole caused developmental toxicity only at dose levels toxic to the dams. Isoxaflutole caused a delayed ossification of foetuses. The developmental effects seen with Isoxaflutole are related to maternal toxicity.

SECTION 12**ECOLOGICAL INFORMATION**

Environmental Toxicology: Isoxaflutole has low toxicity to birds. The EC₅₀ < 2,150 mg/kg for bobwhite quail and > 21500 mg/kg for mallard ducks. Isoxaflutole has very low toxicity to bees, LD₅₀ > 100 µg/bee. Isoxaflutole is moderately toxic to fish LC₅₀ (96 hr) = > 1.7 mg/L for Rainbow trout. EC₅₀ (48 hr) = 1.5 mg/L for *daphnia magna*. Toxic to algae EC₅₀ (72hr) = 16 µg/L for *Selenastrum capricornutum* and aquatic plants EC₅₀ = 16 µg/L for *Lemna gibba*. Isoxaflutole is highly toxic to the mysid shrimp (96 hr) LC₅₀/EC₅₀ = 0.018 ppm and moderately toxic to the eastern oyster (96 hr) LC₅₀/EC₅₀ = 3.3 ppm. It is moderately toxic to the sheepshead minnow (96 hr) LC₅₀ > 6.4 ppm. Not toxic to earth worms LC₅₀ > 1000 mg/kg soil.

Environmental Fate: Isoxaflutole, has a half-life of 12 hours to 3 days, depending on soil type and other factors, also converts to diketone nitrile in the soil. Isoxaflutole is retained at the soil surface, allowing it to be taken up by surface germinating weed seeds, whereas diketone nitrile, which has a half-life of 20 to 30 days, penetrates the soil and is taken up by plant roots. In both plants and in the soil, diketone nitrile is converted to the herbicidally inactive benzoic acid. This degradation is more rapid in maize than in susceptible weed species and this contributes to the mechanism of selectivity, together with the greater sowing depth of the crop. Low potential to bioaccumulate with a bioaccumulation factor of 11. Isoxaflutole is mobile and is expected to persist and accumulate in surface water and groundwater.

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. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®). Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty containers: When the container is empty, shake any residual material into the spray tank. Shred and bury empty packaging in a local authority landfill. If no such landfill is available, bury the packaging below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

DrumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

SECTION 14**TRANSPORT INFORMATION**

Road & Rail Transport: Apparent Tight-Rope is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 kg. Bulk shipments should use UN 3077, as per below.

Marine and Air Transport: Apparent Tight-Rope is 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 75% Isoxaflutole).

SECTION 15**REGULATORY INFORMATION**

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xi, Xn). Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 69693.

Product is not classified as a Dangerous Good according to the ADG Code (7th Ed) in containers less than 3000 kilograms.

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: 5 November 2014. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:

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

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.

SECTION 16 OTHER INFORMATION (Continued)

- Morphometric: The quantitative measurement of the form especially of living systems or their parts.
- Myotoxic: Having a toxic effect on muscle.
- NOHSC: National Occupational Health and Safety Commission.
- OCS: Office of Chemical Safety.
- 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. "Search Hazardous Substances". HSIS. Safe Work Australia website. (2014).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
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