



MATERIAL SAFETY DATA SHEET

TRIBUNIL HERBICIDE SPRAY

Date of Issue: June 2009

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name: **Tribunil® Herbicide Spray**
Other Names: none
Recommended Use: **Selective Herbicide**
Supplier: AgNova Technologies Pty Ltd
ABN: 70 097 705 158
Address: Suite 10/857 Doncaster Road
Doncaster East Vic 3109 Australia
Telephone: (03) 9840 2333
Facsimile: (03) 9840 2555
Website: www.agnova.com.au
Contact: Managing Director
Emergency Telephone Number: 1800 033 111 (24 hrs)

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE – DANGEROUS GOODS

Hazard Designation: Classified as Hazardous according to the criteria of NOHSC

Risk Phrases: R50/53 Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Safety Phrases: S 60/61 This material and its container must be disposed of as hazardous waste. Avoid release to environment. Refer to special instructions/Material Safety Data Sheets.

ADG Classification: Not a Dangerous Good for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (Class 9 in Europe)

SUSDP Classification: Poison Schedule 5 (S5)
(Standard for Uniform Scheduling of Drugs and Poisons)



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3. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredients: | CAS Number: | Concentration (w/v): |
|--|-----------------|----------------------|
| Methabenzthiazuron | 18691-97-9 | 70 % |
| Kaolin | 1332-58-7 | ~ 16.5% |
| Silica, quartz (in kaolin) | 14808-60-7 | (variable) |
| Other ingredients, including dispersing agents | (non hazardous) | ~ 13.5% |

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

- Ingestion:** Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice as above.
- Inhalation:** Remove to fresh air and keep at rest. Obtain medical advice.
- Skin contact:** Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
- Eye contact:** Rinse eyes immediately with clean water for 15 minutes and obtain medical aid.
- First Aid Facilities:** Ensure eyewash and shower facilities are available.
- Medical attention:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.



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5. FIRE FIGHTING MEASURES

- Extinguishing Media:** Water spray, foam, dry agent carbon dioxide, sand.
- Hazards from Combustion Products:** In a fire, formation of hydrogen cyanide, carbon monoxide, sulphur dioxide and nitrogen oxides can be expected.
- Precautions for Fire Fighters:** This product is sensitive to dust explosion. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Extinguish possible sources of ignition. Do not smoke, eat or drink during the clean up process. Wear protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Avoid creation of dust, damping down if necessary. Sweep up and collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place in the drum. Seal drums label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

Observe government regulations.

7. HANDLING AND STORAGE

- Handling:** Keep out of reach of children. Store product under dry conditions. Do not allow water soluble bags to be splashed with water or handle with wet gloves.
- Storage:** Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Keep from contact with fertilisers, insecticides, fungicides and seeds.
- Flammability:** This product may cause dust explosion, if water soluble bag is broken. Fine dust particles can form explosive mixtures with air.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: The National Occupational Health and Safety Commission (NOSHC) exposure standards:
TWA for kaolin is 10 mg/m³ (as inspirable dust)
STEL for silica, quartz is 0.2 mg/m³

Definitions:

Exposure standard- Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for five-day working week.

Exposure standard – Short Term Exposure limit (STEL) means a 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.

Engineering Controls: Control process conditions to avoid contact. Use in a well-ventilated area only.

Personal Protective Equipment: Eyes: Safety goggles if exposure is possible.
Clothing: Suitable work clothes to avoid skin contact with the product.
Gloves: Elbow-length PVC gloves if exposure to the product is likely.
Respiratory: Wear a respirator if inhalation is possible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: beige powder
Odour: Slight characteristic
Vapour Pressure: 5.9 x 10⁻⁶ Pa at 20° C (Methabenzthiazuron)
Vapour Density: Not applicable
Boiling Point: Not applicable
Melting Point: Not available
Solubility: Dispersible in water
Bulk Density: 340/292 mL/100g (loose/packed)
pH: 9.0 – 10.5 (1% in water)
Flash Point: Not applicable
Flammability (explosive) Limits: Not available. May cause dust explosion.
Auto-Ignition Temperature: Not available
Formulation: Wettable powder



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10. STABILITY AND REACTIVITY

| | |
|--|---|
| Chemical Stability: | Stable under normal storage conditions. |
| Hazardous Polymerisation: | Not available |
| Conditions to Avoid: | Moisture, heat. |
| Incompatible Materials: | Strong acids and alkalis, strong oxidising agents. |
| Hazardous Decomposition Products: | In a fire, formation of hydrogen cyanide, carbon monoxide, sulphur dioxide and nitrogen oxides can be expected. |

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

| | |
|--------------|--|
| Inhalation | Harmful if inhaled. May cause respiratory irritation if inhaled. |
| Skin Contact | Harmful if absorbed by the skin. May irritate the skin. |
| Eye contact | May irritate the eyes. |
| Ingestion | Harmful if swallowed. |

ANIMAL TOXICITY DATA

Acute:

Oral Toxicity: LD₅₀ Oral Rat = > 2500 mg/kg (derived from active ingredient data)

Dermal Toxicity: LD₅₀ Dermal (skin contact) Rat > 5000 mg/kg (test results of a similar product)

Inhalation Toxicity: LC₅₀ (4 hr inhalation) Rat 5.12 mg/L air (dust)

Skin Irritation: Non irritating (rabbit) (test results of a similar product)

Eye Irritation: May irritate the eyes.

Chronic:

Tests with Methabenzthiazuron showed it was not teratogenic and did not affect reproduction. Methabenzthiazuron is not listed by the National Toxicology Program of the International Agency for Research on Cancer as a carcinogen.

Significant Data with Possible Relevance to Human Health



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No data available

12. ECOLOGICAL INFORMATION

Methabenzthiazuron is toxic to aquatic organisms. It is not toxic to bees. DO NOT contaminate ponds, irrigation channels, drains, streams, rivers or waterways with the chemical or used containers.

Technical methabenthiazuron

| | |
|---|--|
| Fish Toxicity: | Acute LC ₅₀ 96 hr (Rainbow trout <i>Oncorhynchus mykiss</i>) = 15.9 mg/L Acute LC ₅₀ Golden orfe (<i>Leuciscus melanotus</i>) = 29 mg/L |
| Daphnia Toxicity: | Acute LC ₅₀ (48 hr) 30.6 mg/L |
| Bird Toxicity: | No data |
| Bee Toxicity: | Not toxic |
| Other: | Algae toxicity: growth rate: IC ₅₀ (96h) green algae (<i>Scenedesmus subspicatus</i>) 0.119 mg/L |
| Environmental Fate, Persistence and Degradation: | Methabenzthiazuron is adsorbed strongly on soils and degrades slowly. Duration of residual activity is about 3 months. Methabenzthiazuron is unstable in strong acids and alkalis but has a DT ₅₀ greater than 1 year at pH 4-9 at 22 ⁰ C. It is stable to direct photolysis. |

13. DISPOSAL CONSIDERATIONS

Single rinse foil pack before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. Puncture and bury empty container in a local authority landfill. If no landfill is available, bury the container below 500mm 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. Dispose of waste product through a reputable waste contractor.

14. TRANSPORT INFORMATION

| | |
|-----------------------------------|----------------|
| UN Number: | Not applicable |
| Proper Shipping Name: | Not applicable |
| Class and Subsidiary Risk: | Not applicable |
| Packing Group: | Not applicable |
| EPG: | Not applicable |
| Hazchem Code: | Not applicable |



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15. REGULATORY INFORMATION

APVMA Registered according to the Agricultural and Veterinary Chemicals Act 1988.
APVMA Product Number: 3170

SUSDP Poison Schedule 5

16. OTHER INFORMATION

Trademark Information: Tribunil is a Registered Trademark of Bayer.

Abbreviations and Acronyms: APVMA – Australian Pesticides and Veterinary Medicines Authority
NOHSC – National Occupational Health and Safety Commission
SUSDP – Standard for the Uniform Scheduling of Drugs and Poisons

Preparation Information: Initial version as AgNova Technologies product

Data Sources: Manufacturer product safety data and published data

This MSDS 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 MSDS 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.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF MSDS