

MATERIAL SAFETY DATA SHEET



Date of Issue: May 25th, 2010

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Dropp[®] Liquid Cotton Defoliant

Other names None

Product codes and pack sizes 4269976 (5 L)

Chemical group Phenylurea

Recommended use Plant growth regulator for agricultural use

Formulation Suspension concentrate (SC)

Supplier Bayer CropScience Pty Ltd ABN 87 000 226 022

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Victoria 3123, Australia

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Contact Development Manager (03) 9248 6888

Emergency Telephone Number 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW NON-HAZARDOUS SUBSTANCE – NON-DANGEROUS GOOD

Hazard classification Not hazardous (National Occupational Health and Safety Commission - NOHSC)

Risk phrases None

Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13

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.

SUSDP classification (Poison Schedule) Exempt (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Thidiazuron	[51707-55-2]	500
Propylene glycol	[57-55-6]	70 - 80
Other ingredients (non-hazardous)	---	600 - 610

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4. FIRST AID MEASURES

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

Inhalation	If inhaled remove to fresh air and keep at rest. If symptoms persist obtain medical aid.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if skin problems persist.
Eye contact	Rinse eyes immediately with clean water. If eye irritation persists, obtain medical advice, preferable from an eye specialist.
Ingestion	Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice as above.
First Aid Facilities	Ensure eyewash and shower facilities are available.
Medical attention	<u>Symptoms of poisoning:</u> <i>Local:</i> Slight local irritation. <i>Systemic:</i> No known symptoms. <u>Treatment:</u> <i>Local:</i> Treat as above under First Aid. <i>Systemic:</i> Decontamination, supportive care and symptomatic treatment.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, foam, dry chemical, carbon dioxide
Hazards from combustion products	In a fire, oxides of nitrogen, sulphur and carbon may be formed.
Precautions for fire fighters	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. Otherwise, spray with water to cool. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.
Hazchem code	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Absorb spill with absorbent material, sweep up and collect and store in properly labelled drums for disposal. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

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7. HANDLING AND STORAGE

Handling	Keep out of reach of children. Avoid contact with eyes. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow length PVC gloves. After each day's use, wash gloves and contaminated clothing. Wash hands after use.
Storage	Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Protect from frost. Prevent penetration into the ground.
Flammability	Not flammable or combustible

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	The National Occupational Health and Safety Commission (NOHSC) exposure standard for propylene glycol is: TWA: 150 ppm, 474 mg/m ³ (vapour and particulates) <u>Definition:</u> <i>Exposure standard – time weighted average (TWA)</i> – the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
Biological limit values	None allocated
Engineering controls	Control process conditions to avoid contact. Use in a well-ventilated area only.
Personal Protective Equipment	Eyes: Wear chemical resistant goggles if exposure is likely. Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat Gloves: Elbow-length PVC or nitrile gloves Respiratory: Wear an AS/NZS 1715/1716 approved respirator suitable for organic vapour/mist if working in areas with insufficient ventilation and exposure to vapours or mists is likely.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous cream coloured suspension
Odour:	Mild distinctive
pH:	6.0 to 8.0
Vapour pressure:	4 x 10 ⁻⁶ mPa at 25°C (thidiazuron)
Vapour density:	Not available
Boiling point:	Approx. 100 °C
Freezing/melting point:	Not available
Solubility:	Miscible with water.
Density:	Approximately 1.18 g/mL at 20°C
Flash Point:	Not flammable or combustible
Flammability (explosive) limits:	Not available.
Auto-ignition temperature:	545°C
Partition coefficient (octanol/water):	<i>Thidiazuron</i> : Log P _{ow} = 1.77 at pH 7.3

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10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Avoid oxidising agents.
Hazardous decomposition products	In a fire, oxides of nitrogen, sulphur and carbon may be formed.
Hazardous reactions	None known

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	May be harmful if inhaled.
Skin contact	Not expected to irritate the skin. Non-sensitising.
Eye contact	May irritate the eyes.
Ingestion	May be harmful if swallowed.

ANIMAL TOXICITY DATA

<u>Acute:</u>	
Oral toxicity	LD ₅₀ rat: > 5000 mg/kg
Dermal toxicity	LD ₅₀ rat: > 5000 mg/kg
Inhalation toxicity	LC ₅₀ rat (4 hour): > 4.33 mg/L (highest attainable concentration)
Skin irritation	Non irritating (rabbit)
Eye irritation	Slightly irritating (rabbit)
Sensitisation	Non-sensitising (guinea pig)

Chronic:

Thidiazuron was not carcinogenic, was not mutagenic and did not cause reproductive effects or teratogenicity in animal studies.

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12. ECOLOGICAL INFORMATION

Dropp Liquid is harmful to aquatic organisms. DO NOT contaminate streams, rivers, or waterways with Dropp Liquid or the used containers.

Ecotoxicity

Thidiazuron:

Fish toxicity: LC₅₀ (96 h) rainbow trout (*Onchorhynchus mykiss*) > 19 mg/L

LC₅₀ (96 h) bluegill sunfish (*Lepomis macrochirus*) 32 mg/L

Daphnia toxicity: LC₅₀ (48 h) > 10 mg/L

Bird toxicity: LD₅₀ Japanese quail > 3160 mg/kg

Dropp Liquid:

Fish toxicity: LC₅₀ (96 h) rainbow trout (*Onchorhynchus mykiss*) > 100 mg/L

Daphnia toxicity: EC₅₀ (48 h) water flea (*Daphnia magna*) 17.1 mg/L

Algal toxicity: IC₅₀ (96 h) algae (*Pseudokirchneriella subcapitata*) 12 mg/L

Environmental fate, persistence and degradability, mobility

Thidiazuron is not readily biodegradable < 17%. It is strongly adsorbed by soil. DT₅₀ in soil is about 26-144 days (aerobic); 28 days (anaerobic).

13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse container before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers 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. 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
Marine Pollutant	No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act, 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 53462 See also Section 2.

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16. OTHER INFORMATION

Trademark information Dropp[®] is a Registered Trademark of Bayer.

Preparation information Replaces June 1st, 2009 edition.
Reasons for change: Formulation composition.

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.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS