



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Proleaf-C Seed Treatment
Other Names: Triadimenol/cypermethrin
Product Codes: None allocated
Recommended Use: Fungicide plus insecticide for use on agricultural crops – seed treatment.
Chemical Family: Triazole + synthetic pyrethroid
Supplier: Chemtura Australia Pty Ltd
ABN: 005 225 507
Street Address: Level 7, 435 King William Street
Adelaide South Australia 5000
Telephone Number: 61 8 8112 0900
Facsimile Number: 61 8 8112 0999
Emergency Telephone: 1800 033 111 (24-hour service)

2. HAZARDS IDENTIFICATION

Hazard Classification: **HAZARDOUS SUBSTANCE, NON-DANGEROUS GOOD**
Classified according to the criteria of the Australian Safety and Compensation Council (ASCC).
Risk Phrases: None assigned.
Safety Phrases: See sections 4, 5, 6, 7, 8, 10, 12, 13
Poisons Schedule: S5
Dangerous Goods Class: 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.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Identity	Common Name(s) and Synonym(s)	CAS Number	Proportion by Weight
Triadimenol	Triadimenol	55219-65-3	10-<30% (150g/L)
Cypermethrin	Cypermethrin	52315-07-8	<10% (4g/L)
	Other ingredients including wetting agents and water	Non-hazardous	>60%

Note: Australian and US Patents apply.

4. FIRST AID MEASURES

Ingestion: Wash mouth out with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice.
Inhalation: If inhaled remove to fresh air and keep at rest.
Eye Contact: Rinse eyes immediately with clean water for at least 15 minutes and seek medical aid.
Skin Contact: Carefully remove contaminated clothing. Wash affected areas with soap and water.
First Aid Facilities: Ensure eye wash and safety shower are available.
Additional Information: If poisoning occurs contact a doctor or Poison Information Centre. Phone Australia 131 126; New

Medical Attention:

Zealand 03 4747 000. Follow the advice given. Show this Material Safety Data Sheet to a doctor. Synthetic pyrethroids can cause eye and skin irritation and paraesthesiae. The synthetic pyrethroid, cypermethrin, is present at low concentrations in this product. Triadimenol is a triazole compound. Symptoms of poisoning have not been recorded. Local contamination – Treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid measures. Systemic poisoning – Initial treatment should be symptomatic and supportive. Gastric lavage, then activated charcoal and sodium sulphate may be administered to absorb remaining toxicant. Medical advice for treatment of poisoning with cypermethrin – Irritated skin can be cleaned with cleansing milk. Application of a Vitamin E or moisturizing cream may relieve symptoms. For eyes, instil local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops. Give analgesics as necessary. As the cypermethrin content of this product is only 0.4%, systemic poisoning from this compound is unlikely.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, foam, dry chemical, carbon dioxide (CO₂), sand.

Hazards from Combustion Products:

Can react with oxidising materials. In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.

Precautions for Fire fighters and Special Protective Equipment:

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.

HazChem Code:

Not applicable

Additional Information:

None available.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials for Containment and Clean-Up Procedures:

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. Contain spill and absorb with earth, sand, clay or other absorbent material. Prevent spilled material from entering drains or watercourses. Collect and store in properly labeled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. 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.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Keep out of reach of children.

Conditions for Safe Storage:

Store in the tightly closed original container in a dry, well ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight. Do not store near any material intended for use or consumption by humans or animals. When treated seed is stored it should be kept apart from other grain and the bags or other containers should be clearly marked to indicate the contents have been treated with Proleaf-C Seed Treatment. Do NOT allow seed treated with this product to contaminate seed intended for animal consumption. Do NOT allow seed treated with this product to contaminate seed intended for use for human consumption. Do NOT use treated seed for human consumption.

Flammability:

Not flammable.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Standards:

The NOHSC exposure standard (TWA) for glycerin mist is : 10mg/ m³
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 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 (PPE):

Eyes: Safety goggles or face mask if exposure is possible

Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat.

Gloves: Elbow length butyl rubber or neoprene gloves

Respiratory: If inhalation of product or dust from grain is likely an AS/NZS 1715/1716 approved

respirator should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Green liquid suspension
Odour:	Weak characteristic odour
Vapour Pressure:	Not available
Vapour Density:	Not available
pH:	6.0-8.0
Boiling Point:	Not available
Melting Point:	Not available
Solubility:	Miscible with water
Specific Gravity (Water = 1):	1.072 at 20°C
Decomposition Temp:	Not available
Flashpoint:	No flashpoint up to 100°C
Flammability (explosive) limit:	Not available
Auto ignition temperature:	Not available
Partition coefficient (octanol/water):	Triadimenol: Log P _{ow} = 3.08-3.28 at 25°C Cypermethrin: log P _{ow} = 6.6 at 20°C

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of use.
Conditions to Avoid:	Excessive heat.
Incompatible Materials:	Oxidising agents, alkaline materials.
Hazardous Decomposition Products:	In a fire, formation of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides can be expected.
Hazardous Reactions:	If involved in a fire, hydrochloric acid gas and oxides of nitrogen may be emitted.
Polymerisation:	Will not polymerise.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation: Harmful if inhaled. May produce respiratory irritation. Skin contact: May irritate the skin. Facial contact may cause temporary facial numbness. Eye contact: May irritate the eyes. Ingestion: Harmful if swallowed
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ANIMAL TOXICITY DATA - PRODUCT

Acute Health Effects:	Oral toxicity: LD50 rat 689mg/kg (triadimenol) LD50 rat 250-4150mg/kg (cypermethrin) Dermal toxicity: LD50 rat >5000mg/kg (triadimenol) LD50 rat >4920mg/kg (cypermethrin) Inhalation toxicity: LC50 rat (4 hour): >954mg/L - (triadimenol) - highest attainable concentration LC50 rat (4 hour): 2.5mg/L - (cypermethrin) Skin irritation: Not irritating - rabbit - (triadimenol) Slightly irritating - rabbit - (cypermethrin) Sensitisation: Not a skin sensitiser - guinea pig - (triadimenol) May be a weak sensitiser - guinea pig - (cypermethrin)
Chronic Health Effects:	Animal studies have shown that triadimenol is not oncogenic or carcinogenic nor teratogenic, is not mutagenic. Cypermethrin is non-genotoxic and non-carcinogenic.

12. ECOLOGICAL INFORMATION

Ecological Information:	Triadimenol is harmful to aquatic organisms. It has a low toxicity to birds, bees and earthworms. Cypermethrin is highly toxic to fish and aquatic organisms. However, it is present at a low concentration in this product and under field conditions fish are not at risk from normal agricultural usage. Cypermethrin is highly toxic to bees in laboratory tests, but when used as a seed treatment
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according to label directions should not put hives at risk. Proleaf-C is harmful to fish. DO NOT contaminate streams, rivers or waterways with Proleaf-C, used containers, treated seed or bags which have contained treated seed. DO NOT feed treated seed or otherwise expose to wildlife or domestic birds.

Ecotoxicity:

Triadimenol:

Fish toxicity: LC₅₀ (96 h) bluegill sunfish (*Lepomis macrochirus*) 15mg/L
LC₅₀ (96 h) in trout (*Onchorhynchus mykiss*) 21.3mg/L
Daphnia toxicity: EC₅₀ (48 h) water flea (*Daphnia magna*) 51mg/L
Algal toxicity:
Growth rate: EC₅₀ (72 h) green algae (*Pseudokirchneriella subcapitata*) 38mg/L
Bird toxicity:
Acute oral LD₅₀ bobwhite quail >2000mg/kg
EC₅₀ activated sludge micro-organism >10,000mg/L

Cypermethrin:

Fish toxicity: LC₅₀ (96 h) sheepshead minnow 2.37mg/L
LC₅₀ (96 h) in trout (*Onchorhynchus mykiss*) 0.69mg/L
Daphnia toxicity: LC₅₀ (48 h) water flea (*Daphnia magna*) 0.15mg/L
Acute oral LD₅₀ mallard ducks >10000mg/kg
Acute oral LD₅₀ chickens >2000mg/kg
LD₅₀ : 0.035 µg/bee (24 h) (oral); 0.021g/bee (topical)

**Persistence/Degradability/
Mobility:**

Triadimenol is inherently biodegradable ~70% in 28 days. DT50 in sandy loam is 110-375 days; in loam 240-270 days.

Bioconcentration factor (BCF): 21

Cypermethrin has moderate persistence in soils. The biological degradation of cypermethrin is rapid. It is unlikely to cause groundwater contamination.

13. DISPOSAL CONSIDERATIONS

Disposal Method(s):

Triple or preferable pressure rinse containers before disposal. Add rinsings to the mixing tank. Do not dispose of undiluted chemical 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 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

**Precautions for Landfill or
Incineration:**

Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN Number: None applicable
UN Proper Shipping Name: None applicable
DG Class & Subsidiary Risk: None applicable
Packing Group: None applicable
EPG/GTEPG: None applicable
Special Precautions for User: None applicable
HazChem Code: None applicable
Marine Pollutants: No

15. REGULATORY INFORMATION

Poisons Schedule: S5
Additional Information: APVMA Product No. 58192

16. OTHER INFORMATION

Date of Preparation: April, 2006
Revision Date: August, 2008
Revision Number: 1
Revision Summary: Rev 1 - Update of Chemtura contact details

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~END OF SAFETY DATA SHEET~