



# SAFETY DATA SHEET CITADEL® FUNGICIDE

## Section 1: Identification of the Substance and Supplier

**Product name :** CITADEL FUNGICIDE  
**Chemical name of active Ingredient(s):**  $\beta$ -(4-chlorophenoxy)- $\alpha$ -(1,1-dimethylethyl)-1H-1,24-triazole-1ethanol  
**Chemical formula:** Triadimenol: C<sub>14</sub>H<sub>18</sub>ClN<sub>3</sub>O<sub>2</sub>  
**Use:** Fungicide  
**Supplier:** ADAMA New Zealand Limited  
Level 1/93 Bolt Road, Tahunanui, Nelson, New Zealand  
P.O. Box 1799, Nelson New Zealand.  
**Telephone** +64 3 543 8275 Fax: +64 3 543 8274  
**Emergency Telephone:** 0800 POISON (0800 764 766)

## Section 2: Hazards Identification

**Hazard Classifications:** 6.1D, 6.4A, 6.8A, 6.9A, 9.1B, 9.3C

**Most important hazards:** **TOXICITY**  
**Toxic –**  
May be harmful if swallowed, inhaled or absorbed through the skin.  
May cause eye irritation.  
May cause reproductive/development damage from repeated oral exposure.  
**Toxic –** presumed to cause neurotoxicity from repeated oral exposure at high doses.  
Avoid skin and eye contact and avoid inhalation of vapour.  
**ECOTOXICITY**  
**Toxic to aquatic life with long lasting-effects.** Avoid contamination of any water supply with product or empty container.  
**Harmful to terrestrial vertebrates.**

## Section 3. Composition/Information on Ingredients

Substance/preparation	Preparation				
<b>Information on hazardous ingredients *</b>					
Common name	CAS No.	Value	EC Number	Symbol	R-Phrases
Triadimenol	55219-65-3	250 g/l --			
N-Methyl-2-pyrrolidone	872-50-4	Approx 400g/l	212-828-1	Xi	R36/38

- **Occupational Exposure Limit(s), if available, are listed in section 8**

## Section 4: First-Aid Measures

**First-aid measures:**  
**Inhalation:** Remove victim to fresh air. Consult a doctor in the event of any complaints.  
**Ingestion:** Induce vomiting. Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.  
**Skin contact:** Remove contaminated clothing. Wash away remainder with water and Soap. Followed by a warm water rinse. Consult a doctor in the event of any complaints.  
**Eye contact:** Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. If pain persists, consult eye specialist.  
**Notes to a physician:** There is no specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal.  
**Protection of first-aiders:** Use appropriate protection (see section 8).



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## Section 5: Fire-Fighting Measures

### Extinguishing media

<b>Suitable:</b>	Water spray, fog or regular foam.
<b>Special Procedures:</b>	Fight fires from protected location. Dike fire control water for later disposal.
<b>Hazardous thermal (de)composition products:</b>	CO, CO <sub>2</sub> , NO <sub>x</sub> , HCl and Chlorides
<b>Protection of fire-fighters:</b>	Wear proper protective equipment. Self-contained breathing apparatus.

## Section 6: Accidental Release Measures

<b>Personal precautions:</b>	Wear appropriate protective clothing. (see section 8)
<b>Environmental precautions:</b>	Dispose of this material and its container at hazardous or special waste collection point, in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. Contaminated soil layers have to be dug out.
<b>Methods for cleaning up:</b>	In the event of minor spillage. Absorb remainder in sand or other inert material. Use appropriate container to avoid environmental contamination. In the event of major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal. Dispose of in an authorised waste collecting point.

## Section 7: Handling and Storage

<b>Handling:</b>	Keep out of reach of children. Do not breathe fumes. Avoid contact with skin and eyes. Do not eat, drink or smoke while using.
<b>Storage:</b>	Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from sources of ignition, stockfeed or foodstuffs. As a Class 9 Substance with Ecotoxicity Classifications, storage of CITADEL Fungicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS 8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations. See Safety Data Sheet for further information.

## Section 8: Exposure Controls/Personal Protection

<b>Engineering measures:</b>	Ventilation required.
<b>Hygiene measures:</b>	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
<b>Occupational Exposure Limits: TLV (USA)</b>	
<b>Common name:</b>	Triadimenol: Not Established N-Methyl-2-pyrrolidone: Not Established
<b>Personal protective equipment:</b>	
<b>Respiratory Protection:</b>	During spraying wear suitable respiratory equipment.
<b>Skin and body:</b>	Wear suitable protective clothing. Chemical resistant boots.
<b>Hands:</b>	Chemical resistant gloves.
<b>Eyes:</b>	Safety goggles or Chemical goggles.

## Section 9: Physical and Chemical Properties

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Tan - clear
<b>Odour:</b>	Characteristic odour
<b>Molecular weight:</b>	Triadimenol: 295.8
<b>Melting point:</b>	Triadimenol: 110.5 – 126.5°C



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<b>Vapour Pressure:</b>	Triadimenol: 5.6x10 <sup>-7</sup> Pa at a temperature of 25°C 2.8x10 <sup>-7</sup> Pa at a temperature of 20°C
<b>Specific gravity:</b>	1.077-1.088
<b>Solubility in water:</b>	Triadimenol: 73.1 g/l at a temperature of 20°C
<b>Octanol/water partition coefficient:</b>	Triadimenol: log Pow = 3.2
<b>pH value:</b>	6.10 (1% solution)
<b>Flash point:</b>	118°C
<b>Explosive properties:</b>	Not Explosive
<b>Lower explosion limit:</b>	N-Methyl-2-pyrrolidone: 1.3%
<b>Upper explosion limit:</b>	N-Methyl-2-pyrrolidone: 9.5%

### Section 10: Stability and Reactivity

<b>Physico-chemical Stability:</b>	Stable under normal conditions
<b>Conditions to avoid:</b>	Protect from (sun) light, open flame and sources of heat. Decomposes upon heating.
<b>Materials to avoid:</b>	Avoid contact with: strong bases and strong acids.
<b>Hazardous reactions:</b>	Hazardous polymerization will not occur.
<b>Hazardous decomposition Products:</b>	CO, CO <sub>2</sub> , NO <sub>x</sub> , HCl and Chlorides

### Section 11: Toxicological Information

#### Preparation

<b>Acute toxicity - Oral:</b>	LD <sub>50</sub> (rat) 1483 mg/kg
<b>Acute toxicity - Dermal:</b>	LD <sub>50</sub> (rabbit) >2,000 mg/kg
<b>Acute toxicity - Inhalation:</b>	LC <sub>50</sub> (rat) 5.3 mg/L/4h
<b>Skin irritation:</b>	Not irritating (rabbit).
<b>Eye irritation:</b>	Irritating (rabbit).
<b>Sensitization:</b>	Non Sensitizer (Guinea-pig)

<b>Common name:</b>	<b>Triadimenol</b>
<b>Carcinogenicity:</b>	Not carcinogenic
<b>Mutagenicity:</b>	Not mutagenic
<b>Reproduction toxicity:</b>	Not embryo-toxic in animal experiments.

### Section 12: Ecological Information

<b>Mobility:</b>	Triadimenol: Not mobile (soil)
<b>Persistence/degradability:</b>	Triadimenol: Half-life time (t <sub>1/2</sub> ) = 112-472 days

<b>Ecological effects information:</b>	
96 H-LC <sub>50</sub> – Rainbow trout [mg/l]:	3.47
48 H-EC <sub>50</sub> – Daphnia magna [mg/l]:	8.5
72 H-EbC <sub>50</sub> Algae [mg/l]:	18.5
ErC <sub>50</sub> Algae [mg/l]:	160

### Section 13: Disposal Considerations

<b>Methods of disposal:</b>	Container Disposal - Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.
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## Section 14: Transport Information

UN Number	3082
Proper shipping name	Environmentally hazardous substance, Liquid, N.O.S, Triadimenol
DG Class	9
Packing Group	III
Hazchem Code	2X
Marine Pollutant	Yes
IER Guide page	47

**National transport regulations:** Do not carry this product on a passenger service vehicle.

**Segregation:** Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

## Section 15: Regulatory Information

### New Zealand Regulatory Information:

**NZFSA Approval:** Registered pursuant to the ACVM Act 1997. No P7518  
See [www.nzfsa.govt.nz/acvm](http://www.nzfsa.govt.nz/acvm) for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval No. HSR002476  
See [www.ermanz.govt.nz](http://www.ermanz.govt.nz) for registration conditions.

**HSNO Classifications:** 6.1D, 6.4A, 6.8A, 6.9A, 9.1B, 9.3C



## Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

Whiteout® is a trademark of an Adama Group Company

### HISTORY

**Date of printing:** 03/06/2014