



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

#### 1) IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** CAMPBELL TRIDIM 250EC FUNGICIDE  
**Other Names:** Triadimenol  
**Chemical Group:** Azole derivative  
**CAS No.:** 55219-65-3, 872-50-4  
**Recommended Use:** Fungicide for recreational turf and horticulture.  
**Supplier Details:** Colin Campbell (Chemicals) Pty Ltd ABN 29 000 045 590  
5 Blackfriar Place  
Wetherill Park NSW 2164  
**Telephone:** (02) 9725 2544  
**Fax:** (02) 9604 7768  
**Email:** [cccsyd@campbellchemicals.com.au](mailto:cccsyd@campbellchemicals.com.au)  
**Website:** [www.campbellchemicals.com.au](http://www.campbellchemicals.com.au)  
**Contact:** Product Development Manager – (02) 9725 2544  
**Emergency Telephone Number:** 13 11 26 (Poisons Information Centre)

#### 2) HAZARDS IDENTIFICATION

##### Statement of Hazardous Nature

This product is classified as: Xi, Irritating, T, Toxic, N, Dangerous to the environment.

Hazardous according to the criteria of SWA.

Not dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

**SUSMP Classification:** S6

**ADG Classification:** Not applicable.

**UN Number:** Not applicable

**GHS classification:** Reproductive toxicity : Category 1B  
Specific Target Organ Toxicity (resp) - Single Exposure Category 3  
Hazardous to aquatic environment Short term/Chronic Category 3

**GHS Signal Words:** DANGER

**Hazard Statements :** H227: Combustible liquid  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.  
H360: May damage fertility or the unborn child.  
H402: Harmful to aquatic life.

**General Precautionary Statements :** P102 : Keep out of reach of children  
P103 : Read label before use.



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

#### Pictograms :



#### Precautionary statements

P102: Keep out of reach of children.  
P201: Obtain special instructions before use.

#### Prevention:

P202: Do not handle until all safety precautions have been read and understood.  
P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.  
P261: Avoid breathing fumes, mists, vapours or spray.  
P262: Do not get in eyes, on skin, or on clothing.  
P264: Wash contacted areas thoroughly after handling.  
P271: Use only outdoors or in a well ventilated area.  
P273: Avoid release to the environment.  
P280: Wear protective gloves, protective clothing and eye or face protection.

#### Precautionary statements

P312: Call a POISON CENTRE or doctor if you feel unwell.  
P362: Take off contaminated clothing and wash before reuse.  
P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313: If skin irritation occurs: Get medical advice.  
P337+P313: If eye irritation persists: Get medical advice.  
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

#### Response:

#### Storage :

P410: Protect from sunlight.  
P402+P404: Store in a dry place. Store in a closed container.  
P403+P235: Store in a well-ventilated place. Keep cool.

#### Disposal:

P501 Dispose of contents and container as specified on the registered label.

### 3) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
Triadimenol	55219-65-3	250g/L
N-methyl-2-pyrrolidone	872-50-4	600g/L
Other non-hazardous ingredients	Non hazardous	balance



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

#### 4) FIRST AID MEASURES

**If poisoning occurs, move out of dangerous area immediately contact a doctor or Poison Information Centre (Ph: 13 11 26) and follow the advice given.  
Show this Material Safety Data Sheet to the doctor.**

- If inhaled:** If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air.
- In case of skin contact:** Quickly and gently blot away excess liquid. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 10 minutes or until chemical is removed. If irritation persists, repeat flushing and obtain medical advice.
- In case of eye contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed, while holding the eyelid(s) open. Obtain medical advice immediately if irritation occurs.
- If swallowed:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.
- First Aid facilities** Ensure eye wash and safety shower are available.
- Medical Attention:** Symptoms may be delayed. Treat symptomatically. Symptoms and hazards refer to the solvent. Headache, blurred vision. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary oedema and pneumonitis. The first aid procedure should be established in consultation with a doctor responsible for industrial medicine.

#### 5) FIRE FIGHTING MEASURES

- Extinguishing media** Combustible. Water fog, foam, carbon dioxide or dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Hazard from combustion products** Fire decomposition products from this product may be toxic if inhaled. : hydrogen chloride, hydrogen cyanide, carbon monoxide, nitrogen oxides. The major hazard in fires is usually inhalation of heated toxic or oxygen deficient (or both), fire gases.
- Precautions for fighting fires** There is little risk of an explosion from this product if commercial quantities are involved in a fire. Firefighters should take care and appropriate precautions. Any explosion will likely spread the fire to surrounding materials. Water spray may be used to cool drums involved in a fire, reducing the chances of an explosion. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.  
Fire fighters should wear full protective gear, including self-contained



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

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 fire residues and contaminated fire extinguishing water in accordance with local regulations. Do not release contaminated water into the environment.

**Hazchem Code** Not applicable

#### 6) ACCIDENTAL RELEASE MEASURES

In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. It should be fitted with a type G cartridge, suitable for agricultural chemicals.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Avoid using sawdust or other combustible material. Any electrical equipment should be non-sparking. Any equipment capable of building an electrostatic charge should be electrically grounded. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

#### 7) HANDLING AND STORAGE

**Handling** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage** Keep out of reach of children. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area, in the original container. Check containers periodically for leaks.



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

#### 8) EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Standards	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
	103 (N-methyl-2-pyrrolidone)	309 (N-methyl-2-pyrrolidone)

The ADI for Triadimenol is set at 0.06mg/kg/day. The corresponding NOEL is set at 6.25mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2014.

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.

**Short Term Exposure Limit (STEL)** means the exposure level that may be equalled (but should not be exceeded for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL.

**Biological Limit Values** None allocated

**Engineering Controls** Control process conditions to avoid contact. Use in a well ventilated area only. If natural ventilation is inadequate, use of a fan is suggested. Ensure eye wash and safety shower are available

**Personal Protective Equipment**

Eyes: Protective glasses or safety goggles. Eye wash bottle with pure water.

Clothing: Impervious overalls buttoned to the neck and wrists and a washable hat.

Gloves: Polyvinyl alcohol or nitrile-butyl-rubber gloves. Before removing gloves clean them with soap and water.

Respiratory: If inhalation is likely an AS/NZS 1715/1716 approved respirator should be worn.

#### 9) PHYSICAL AND CHEMICALS PROPERTIES

**Appearance:** Pale amber/brown translucent liquid

**Odour:** Aromatic odour..

**Vapour pressure:** 3.4 kPa at 20°C (N-methyl-2-pyrrolidone)

**Relative vapour density:** Not available

**Evaporation rate:** No data available.

**Volatile component:** No data available.

**Boiling point:** No data available.

**Freezing/Melting point:** No data available.

**pH:** No data available.

**Solubility:** Emulsifiable

**Specific gravity:** 1.075 at 20°C

**Flash point:** 93°C (N-methyl-2-pyrrolidone)

**Flammability (explosive) limit:** Lower: 1.3 vol. % ; upper 9.5 vol. % (N-methyl-2-pyrrolidone)

**Auto ignition temperature:** 245°C.



MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

<b>Partition coefficient (octanol/water):</b>	<i>Triadimenol</i> : Log P <sub>ow</sub> = 3.08 – 3.28 at 25°C
<b>Viscosity:</b>	<i>N-methyl-2-pyrrolidone</i> : Log P <sub>ow</sub> = –0.46
<b>Oxidising properties:</b>	No data available.

#### 10) STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions of use and storage.
<b>Conditions to avoid:</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials :</b>	Acids, bases, oxidising agents, reducing agents.
<b>Hazardous decomposition products:</b>	No decomposition products expected under normal conditions of use.
<b>Hazardous reactions:</b>	Does not polymerise.

#### 10) TOXICOLOGICAL INFORMATION

##### Inhalation

**Short term exposure:** This product is an inhalant irritant. Symptoms may include headache, irritation of nose and throat and increased secretion of mucous in the nose and throat. Other symptoms may also become apparent, but they should disappear after exposure has ceased if treatment is prompt.

**Long Term exposure:** No data for health effects associated with long term inhalation.

##### Skin Contact:

**Short term exposure:** This product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become apparent but, if treated promptly, all should disappear once exposure has ceased.

**Long Term exposure:** No data for health effects associated with long term skin exposure.

##### Eye Contact:

**Short term exposure: This product is an eye irritant.** Symptoms may include stinging and reddening of the eyes and watering which may become copious. Other symptoms may also become apparent but, if exposure is only brief and treated promptly, all should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Long Term exposure:** No data for health effects associated with long term eye exposure.

##### Ingestion:

**Short term exposure:** Significant oral exposure is considered to be unlikely. This product is unlikely to cause any irritation problems in the short or long term.

**Long Term exposure:** No data for health effects associated with long term ingestion.

##### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC



MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

<b>Acute oral toxicity:</b>	LD <sub>50</sub> (rat) >2,000mg/kg
<b>Acute inhalation toxicity:</b>	LC <sub>50</sub> (rat) >0.412 mg/L (highest attainable concentration)
<b>Acute dermal toxicity:</b>	LD <sub>50</sub> (rat) >5,000 mg/kg
<b>Sensitisation:</b>	Non-sensitising
<b>Mutagenicity:</b>	Triadimenol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
<b>Reproduction toxicity:</b>	Triadimenol caused reduced fertility and reduced lactation rate. The reproduction toxicity seen with triadimenol is related to parental toxicity. N-methyl-2-pyrrolidone caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. N-methyl-2-pyrrolidone caused a reduced pup survival, a reduced litter size and a reduced pup weight.
<b>Development toxicity:</b>	Triadimenol caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with triadimenol are related to maternal toxicity. N-methyl-2-pyrrolidone caused developmental toxicity only at dose levels toxic to the dams. N-methyl-2-pyrrolidone caused a reduced pup survival.
<b>Specific target organ toxicity-repeated exposures:</b>	Triadimenol did not cause specific target organ toxicity in experimental animal studies. N-methyl-2-pyrrolidone caused specific target organ toxicity in experimental animal studies in the following organs : testes..

**11) ECOLOGICAL INFORMATION**

Dangerous to fish and aquatic organisms. Low toxicity to birds, bees and earthworms. DO NOT contaminate streams, rivers or waterway with this product or the used containers.

**Ecotoxicity: Triadimenol:**

Fish toxicity: LC<sub>50</sub> (96-hr) rainbow trout) : 42mg/L

Invertebrates : EC<sub>50</sub> (48-hr) (Daphnia) : 253mg/L

Algae: EC<sub>50</sub> (72-hr) Raphidocelis subcapitata (freshwater green algae) 41.13mg/L

Birds : LD<sub>50</sub> bobwhite quail : >2,000mg/kg

Bees : No data.

**Environmental fate, persistence and degradability, mobility**

***Triadimenol :***

Not rapidly biodegradable.

Bioconcentration factor (BCF) 21.

Does not bioaccumulate.

Moderately mobile in soils.

Partition coefficient n-octanol/water : log P<sub>ow</sub> 3.08-3.28.

***N-methyl-2-pyrrolidone:***

Rapidly biodegradable

Does not bioaccumulate.

Highly mobile in soils.



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### MATERIAL SAFETY DATA SHEET

Date of Issue: 1 December 2016

**Identified harmful effects on environment:** Harmful to aquatic organisms, may cause longterm adverse effects in the aquatic environment..

**Other precautions:** Do not contaminate dams, waterways or sewers with this product.

#### 12) DISPOSAL CONSIDERATIONS

This product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used containers. 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. Empty containers and product should not be burnt.

#### 13) TRANSPORT INFORMATION

**Not dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.**

#### 14) REGULATORY INFORMATION

Registered under the Agricultural and Veterinary Chemicals Act 1988 (Commonwealth) Australian Pesticides and Veterinary Medicines Authority approval number: 51580

#### 15) OTHER INFORMATION

Date of revision : 1 December 2016  
Reason for revision : Upgrading to GHS format.

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 the how the product will be handled and used in the workplace including in conjunction with other products.

**END OF MSDS**