COLIN CAMPBELL (CHEMICALS) PTY. LTD.

SAFETY DATA SHEET

Date of Issue: 1 November 2021

1) IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**CAMPBELL FLOWABLE TMTD FUNGICIDE**
Other Names:	Thiram, tetramethylthiuramdisuphide
Chemical Group:	Dithiocarbamate
CAS No.:	
Recommended Use:	Fungicide for use on horticultural crops.
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
Website:	www.campbellchemicals.com.au
Contact:	Product Development Manager – (02) 9725 2544
Emergency Telephone Number:	13 11 26 (Poisons Information Centre)

2) HAZARDS IDENTIFICATION

GHS classification:	Acute toxicity oral : Category 4 Skin corrosion / irritation : Category 2 Skin sensitisation : Category 1 Serious eye damage / eye irritation : Category 2/2A Acute toxicity inhalation Category 4 Specific target organ toxicity – single exposure : Category 2 Specific target organ toxicity – repeated exposure : Category 2
Signal Words:	Poison
Hazard Statements :	H302 Harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction H319 Causes serious eye irritation H332 Harmful if inhaled H335 May cause respiratory irritation H371 May cause damage to organs
General Precautionary Statements :	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children P103 Read label before use.

Pictograms :



Precautionary statements Prevention:

P260 Do not breathe fumes, mists, vapours or sprays.
P262 Do not get in eyes, on skin, or on clothing..
P264 Wash contacted areas thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in well ventilated areas.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.

Precautionary statements Response:

P362 Take off contaminated clothing and wash before reuse.
P301+P312 IF SWALLOWED: Call a POISONS 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.
P309+P311 If exposed or if you fell unwell: Call a POISON CENTRE or doctor/physician.
P333+P313 If skin irritation or rash occurs : Get medical advice.
P337+P313 If eye irritation persists: Get medical attention.
P391 Collect spillage.
P370 + P378 In case of fire : Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage :

P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents/container to an approved waste disposal plant.

Other information :

Considered non-dangerous goods for road and rail transport (in packaging including IBCs not greater than 3,000L each) according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01, IATA or IMDG/IMSBC criteria.
Hazardous substance according to SWA criteria.

3) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
Thiram	137-26-8	30-60%
Ethylene glycol	107-21-1	0-30%

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 Safety Data Sheet to the doctor.

If inhaled: Move to fresh air and keep at rest. If symptoms persist, call a doctor. If breathing is difficult, oxygen may assist if administered by trained personnel, preferably on doctor's advice.. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

In case of skin contact: Carefully remove contaminated clothing and shoes immediately. Wash affected areas with mild soap and plenty of water. If irritation persists, repeat flushing and seek medical attention.

In case of eye contact: Check and remove any contact lenses, if easy to do so. Protect unharmed eye. Rinse eyes immediately with clean water for at least 15 minutes and seek medical aid immediately. Keep eye wide open while rinsing.

If swallowed: DO NOT induce vomiting. Clean mouth with water. Obtain medical attention.

First Aid facilities Ensure eye wash and safety shower are available.

Medical Attention: Symptoms may be delayed. The first aid procedure should be established in consultation with a doctor responsible for industrial medicine.

5) FIRE FIGHTING MEASURES

Extinguishing media Use carbon dioxide, dry chemical, foam or water fog.

Hazard from combustion products In a fire, formation of carbon monoxide, carbon dioxide and nitrogen oxides can be expected.

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

Hazchem Code

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. Ensure adequate ventilation. 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 labelled 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

Handling Keep out of reach of children. Will irritate eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves and contaminated clothing.

Storage Store in the closed original container in a cool well ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room away from children, animals, food, animal feed, seed and fertilisers. Protect from frost.

8) EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Standards

	TWA (mg/m^3)	STEL (mg/m^3)
Thiram	1	Not set
Ethylene glycol	52	104

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. If necessary use a fan.

Personal Protective Equipment

Eyes:	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, Odour and Colour:		White to yellow liquid acrid odour
Specific Gravity:		1.18-1.19
Melting Point:		Not applicable
Solubility (water):		Suspension
Flash Point:		No data
Boiling Point:		No data
Vapour Pressure:		As for water vapour
Vapour Density:		No data
Percent Volatiles:		44%
Flammability Limits:	**UFL:**	Not determined
	LFL:	Not determined
Autoignition Temperature:		Not determined
Partition co-efficient, n-octanol/water		Thiram : log pK_{ow} = 1.73

10) STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use and storage.

Conditions to avoid: Excessive heat

Incompatible materials : None known.

Hazardous decomposition products: In a fire, formation of carbon monoxide, carbon dioxide, sulphur oxides and nitrogen oxides can be expected. Occasionally hydrogen cyanide gas in reducing atmospheres.

Hazardous reactions: Stable under recommended storage conditions. No decomposition or hazardous polymerisation reactions if used as directed.

11) TOXICOLOGICAL INFORMATION

Inhalation : Symptoms include itching, scratch throat, hoarseness, sneezing, coughing, inflammation of the nose or throat, bronchitis, dizziness, headache, fatigue, nausea, diarrhoea and other gastrointestinal complaints. Persons with chronic respiratory problems are at increased risk from exposure to thiram.

Skin contact: Thiram is irritating to the skin. Persons with skin disease are at increased risk from exposure to thiram

Eye contact: Thiram is irritating to the eyes, symptoms may include stinging and reddening of the eyes and watering which may become copious..

Ingestion: Ingestion of thiram and alcohol together may cause stomach pains,

nausea, vomiting, headache, slight fever and possible dermatitis

Chronic toxicity:

Mutagenicity: Evidence of mutagenicity is not conclusive.

Teratogenicity: High doses are required to cause teratogenicity.

Reproductive effects: Reproductive effects have been identified in test animals but at doses higher than humans would be expected to be exposed to.

Carcinogenicity: Not carcinogenic.

Organ toxicity: Damage to the liver with decreased liver enzyme activity and increased liver weight. May also cause damage to kidneys, blood and the nervous system.

Acute toxicity: Thiram is harmful by ingestion, inhalation and by dermal absorption. Acute exposure in humans may cause headaches, dizziness, fatigue, nausea, diarrhoea and other gastrointestinal complaints. Workers exposed to thiram during application or mixing operations within 24 hours of moderate alcohol consumption have been hospitalised with symptoms

Oral toxicity (product): LD_{50} rat 620->1900 mg/kg
LD_{50} mice 1500-2000 mg/kg
LD_{50} rabbit 210 mg/kg

Dermal toxicity (product): LD_{50} rat/rabbit >1000mg/kg

Inhalation toxicity: LC^{50} (4h) rats >500mg/L

Sensitisation: Skin sensitizer.

12) ECOLOGICAL INFORMATION

Very toxic to aquatic organisms and may cause adverse effects in the aquatic environment.
DO NOT contaminate streams, rivers or waterway with this product or the used containers.

Ecotoxicity:

Thiram:

Birds

Practically nontoxic to birds. Oral LD_{50}(Japanese quail) >5000ppm
Oral LD_{50}(pheasant) 2800ppm
Oral LD_{50}(mallard duck) 673ppm
Oral LD_{50}(redwinged black bird) 100ppm

Fish toxicity: Highly toxic to fish.
LC_{50} (Lepomis macrochirus) (Bluegill sunfish) 0.23 mg/L.
LC_{50} (Oncorhynchus mykiss) (rainbow trout) 0.13 mg/L
LC_{50} (carp) 4 mg/L

Daphnia : EC_{50} 0.21mg/L

Environmental fate, persistence and degradability, Not expected to bioconcentrate in aquatic organisms. No data on breakdown in vegetation. Thiram is rapidly degraded in water by hydrolysis and photodegradation. Thiram may adsorb to suspended

mobility	particles in water or to sediment. Low to moderate persistence in soils. Almost immobile in soils high in clay or organic matter. Thiram is not expected to contaminate ground water.Soil half-life is 15 days, degradation proceeds faster in acid soils ans soils with high organic matter. In a humus sandy soil at pH 3.5, thiram decomposed after 4-5 weeks and 14-15 weeks at pH7.0.
Identified harmful effects on environment:	This product is a marine pollutant for sea transport. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Other precautions:	Do not contaminate dams, waterways or sewers with this product.

13) 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.

14) TRANSPORT INFORMATION

Considered non-dangerous goods for road and rail transport (in packaging including IBCs not greater than 3,000L each) according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01 criteria.
For bulk shipments, classified as Class 9, UN 3082, Hazchem Code 2Z.

Sea Transport :

UN Number :
IMO Correct shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (thiram)
IMO Dangerous Goods Class : Class 9 : Miscellaneous Dangerous Goods
IMO Packing Group : III

15) REGULATORY INFORMATION

Registered under the Agricultural and Veterinary Chemicals Act 1988 (Commonwealth) Australian Pesticides and Veterinary Medicines Authority approval number: 30616

16) OTHER INFORMATION

Date of revision : 1 November 2021
Reason for revision : Renewal.

This SDS 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 SDS 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 SDS