



COLIN CAMPBELL (CHEMICALS) PTY. LTD.

MATERIAL SAFETY DATA SHEET

Date of Issue: 1 January 2008

1) IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: CAMPBELL DEK DF FUNGICIDE
Other Names: None
Chemical Group: Dithiocarbamate
Recommended Use: Fungicide for use on recreational turf.
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: (02) 9725 2544 – 8am to 6pm Monday to Friday.

2) HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON DANGEROUS GOOD

Hazardous classification: Hazardous according to the criteria of the National Occupational Health & Safety Commission (NOHSC)

Risk phrases: R37 - Irritating to respiratory system.
R43 - May cause sensitisation by skin contact.

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: 5 (Standard for the Uniform Scheduling of Drugs & Poisons)

3) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
Mancozeb	8018-01-7	75%
Inert ingredients	Non hazardous	10-40%

4) FIRST AID MEASURES

If poisoning occurs, 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.

Inhalation: If inhaled remove to fresh air and keep at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin Contact: Carefully remove contaminated clothing. Wash affected areas with soap and water.



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4) FIRST AID MEASURES continued

Eye contact:	Check and remove any contact lenses. Rinse eyes immediately with clean water for at least 15 minutes and seek medical aid.
Ingestion:	Wash mouth out with water. Do NOT induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice. Loosen tight clothing.
First Aid facilities	Ensure eye wash and safety shower are available.
Medical Attention:	Treat symptoms. Avoid alcohol - may cause vomiting and shock..

5) FIRE FIGHTING MEASURES

Extinguishing media	Water spray, foam, dry chemical, carbon dioxide (CO ₂)
Hazard from combustion products	In a fire, formation of nitrogen and sulphur, possibly carbon disulphide or ethylene diamine and oxides of manganese and zinc 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 extinguishing agent and spillage safely later. Do not release contaminated water into the environment.
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. 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.
Flammability	Not combustible.



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8) EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Standards	No exposure standards have been assigned for mancozeb. However, an exposure standard (TWA) has been set for manganese, dust and compounds at 1 mg/m ³ . 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	Use in a well ventilated area only.
Personal Protective Equipment	Eyes: Safety goggles or face shield Clothing: Cotton overalls buttoned to the neck and wrists and a washable hat. Gloves: Elbow length chemical resistant PVC gloves Respiratory: None necessary

9) PHYSICAL AND CHEMICALS PROPERTIES

Appearance:	Greyish free flowing granules
Odour:	Slightly pungent
Vapour pressure:	Negligible at 20°C
Vapour density:	Not available
Boiling point:	Decomposes at about 192°C without melting.
Freezing/Melting point:	Decomposes at about 192°C without melting
pH:	Not available.
Solubility:	Disperses in water
Specific gravity:	Not available.
Flash point:	Not available
Flammability (explosive) limit:	Not available
Auto ignition temperature:	Not available
Partition coefficient (octanol/water):	Not available. Solubility of mancozeb in water is 6.2 mg/L at 25°C

10) STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Conditions to avoid:	Excessive heat
Incompatible materials :	Strong acids.



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10) STABILITY AND REACTIVITY continued

Hazardous decomposition products: In a fire, formation of nitrogen and sulphur, possibly carbon disulphide or ethylene diamine and oxides of manganese and zinc can be expected.

Hazardous reactions: None. Hazardous polymerisation is not possible.

11) TOXICOLOGICAL INFORMATION

Inhalation: Inhalation of dust may result in respiratory irritation.

Skin contact: May cause sensitisation by prolonged skin contact.

Eye contact: May irritate the eyes.

Ingestion: Product toxicity is low.

ANIMAL TOXICITY DATA – PRODUCT

Acute:

Oral toxicity LD₅₀ rat >5000mg/kg

Dermal toxicity: LD₅₀ rat (percutaneous) >10000mg/kg
LD₅₀ rabbit (percutaneous) >5000mg/kg

Inhalation toxicity: No data

Skin irritation: Mild to moderate skin irritant. May cause sensitisation.

Irritation of mucous membranes: Severe irritant

Sensitisation: Skin sensitiser

Chronic:

Prolonged exposure to dust or mists containing manganese compounds can cause progressive poisoning. The signs and symptoms are apathy, loss of balance and weakness. More advanced poisoning may show evidence of central nervous system disturbance.

12) ECOLOGICAL INFORMATION

Harmful to aquatic organisms and may cause adverse effects in the aquatic environment. DO NOT contaminate streams, rivers or waterway with Ippon or the used containers.

Ecotoxicity: Mancozeb:

Fish toxicity: LC₅₀ (96 h) goldfish 9 mg/L
LC₅₀ (96 h) in trout (*Onchorhynchus mykiss*) 2.2 mg/L



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12) ECOLOGICAL INFORMATION continued

**Ecotoxicity
(continued):**

Mancozeb:

Bird toxicity:

Acute oral LD₅₀ >1000 mg/kg

Bee toxicity : LD₅₀ 193 µg/bee

Mancozeb is practically non-toxic to birds, mammals and bees.

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

Mancozeb is rapidly degraded in the soil.

13) DISPOSAL CONSIDERATIONS

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

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

15) REGULATORY INFORMATION

Registered under the Agricultural and Veterinary Chemicals Act 1988 (Commonwealth) Australian Pesticides and Veterinary Medicines Authority approval number: 51918

16) OTHER INFORMATION

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.

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

END OF MSDS