

SAFETY DATA SHEET



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Date of Issue: January 2014
MSDS No. FMC/CAP900/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FMC CAPTAN 900 FUNGICIDE

Other Names: Captan. Group M4 Fungicide. Phthalimide group of fungicides.
Use: Agricultural fungicide for the control of certain diseases in crops.
Company: FMC Australasia Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9208 **Fax Number:** 07 3908 9221
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

GHS Classification:

Acute Toxicity – Inhalation: Category 3.
Eye Damage/Irritation: Category 1.
Sensitization – Skin: Category 1, 1A, 1B.
Carcinogenicity: Category 2.

Signal Word: DANGER

Hazard Statements:

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H351 Suspected of causing cancer.

Precautionary statements:

Prevention:

P261 Avoid breathing dust/mist/vapours/spray.
P271 Use only in outdoors or in a well ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.

Response:

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.
P311 Call a POISON CENTRE or doctor/physician.
P321 Specific treatment see Safety Directions on the label.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P308 + P313 IF exposed or concerned: Get medical advice/ attention:

SECTION 2 HAZARDS IDENTIFICATION (Continued)*Storage and Disposal:*

- P403 + P233 Store in a well-ventilated place. keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Pictograms:

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Captan	133-06-2	900 g/kg
Other ingredients determined not to be hazardous	mixture	Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Swallowed:** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If swallowed, do not induce vomiting. Wash mouth with water and give water to drink. If any discomfort persists seek medical advice.
- Eye:** If in eyes, immediately brush granules away and flush with copious amounts of water until product is removed. Seek medical advice immediately.
- Skin:** If on skin gently brush granules away. Wash skin with soap and water to remove product. Remove contaminated clothing. If irritation occurs and persists see a doctor. Launder contaminated clothing before re-use.
- Inhaled:** Remove patient to fresh air. Seek medical attention immediately.

Advice to Doctors: Treatment is otherwise symptomatic and supportive.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: There is a very low risk of an explosion from this product under normal circumstances if involved in a fire.

Extinguishing media: Choose extinguishing media to suit the burning material. Foam, CO₂ or dry chemical. If waterfog or fine water spray is used, ensure all runoff is contained.

Hazards from combustion products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, oxides of nitrogen and possibly thiophosgene.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC/nitrile gloves and face-shield or goggles. Harmful if inhaled or swallowed. Will damage the eyes. May irritate the skin. May irritate the nose and throat. Avoid contact with eyes and skin. Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13 or in accordance with the requirements of Local or State Waste Management Authorities.

SECTION 6 ACCIDENTIAL RELEASE MEASURES (Continued)

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Avoid generating dust. Ensure containers are kept closed until using product. Harmful if inhaled or swallowed. Will damage the eyes. May irritate the skin. May irritate the nose and throat. Avoid contact with eyes and skin. If product or spray in eyes, wash it out immediately with water. Do not inhale dust or spray mist. When opening the container, mixing and loading and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC/nitrile gloves and face-shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length rubber gloves. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight. Do not store near sources of ignition or naked flames.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

Exposure guidelines have been established for the active ingredient in this product by Safe Work Australia. The exposure standard for captan contains a carcinogen, sensitiser and skin notice.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Captan (Sk Sen*)	0.5 mg/m ³	-

TWA = Time-weight Average STEL = Short term Exposure Limit

- * The 'Sk' notation refers to the potential for dermal absorption of the material including mucous membranes and the eyes by contact with vapours or direct skin contact.
- * The 'Sen' notation refers to the potential of the substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance.

CARCINOGEN CATEGORY NOTICE: Category 2 - Probable human carcinogen for which there is sufficient evidence to provide a strong presumption that human exposure might result in the development of cancer.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in well ventilated area only. Use local exhaust at all process locations where spray may be emitted. Ventilate all transport vehicles prior to unloading. Keep containers close when not in use.

Personal Protective equipment (PPE):

General: When opening the container, mixing and loading and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC/nitrile gloves and face-shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length rubber gloves. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing. Harmful if inhaled or swallowed. Will damage the eyes. May irritate the skin.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Grey brown granules.
Odour:	Feint characteristic odour.
Boiling point:	Not available.
Freezing point:	Not available.
Specific Gravity:	Not applicable.
pH:	Not available.
Solubility in Water:	Product disperses in water.
Flammability:	Not available.
Flashpoint (°C):	Not available.
Flammability Limits (%):	Not established.
Poisons Schedule:	Product is a schedule 6 poison.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight.

Incompatible materials: Keep away from strong oxidising agents.

Hazardous decomposition products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, oxides of nitrogen and possibly thiophosgene.

Hazardous reactions: Will not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION**Potential Health Effects:**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Acute

Swallowed: The acute oral toxicity LD₅₀ (rat) > 5000 mg/kg. Possible symptoms include nausea, vomiting and gastrointestinal discomfort and diarrhoea.

Eye: Irritating to the eye. Symptoms include burning, itching, and tearing.

Skin: The acute dermal toxicity LD₅₀ (rabbit) > 4000 mg/kg. Avoid skin contact. May cause skin irritation. Prolonged contact with the concentrate may result in absorption of captan in harmful amounts. May cause sensitisation by prolonged skin contact.

Inhaled: This product is toxic if inhaled. Acute inhalation LC₅₀ = 0.6 mg/L/4 hour. Breathing in high concentrations of dusts or aerosols of this material may cause headache, nausea, dizziness and weakness.

Chronic: Safe Work Australia has classified this product as a carcinogen of Category 2 - Probable human carcinogen for which there is sufficient evidence to provide a strong presumption that human exposure might result in the development of cancer.

Reproductive effects: Pregnant mice exposed by inhalation to high doses of Captan for 4 hours a day during days 6 to 15 of gestation showed significant mortality or weight loss. Foetal mortality accompanied these effects. Mice fed 50 mg/kg/day over three generations reproduced normally. Captan is unlikely to cause reproductive effects in humans at usual levels of exposure.

Teratogenic effects: Teratogenicity studies with rats, rabbits, hamsters, and dogs have given both negative and positive results. However, the weight of evidence suggests that Captan does not produce birth defects.

Mutagenic effects: Although Captan was mutagenic in some laboratory tests on isolated tissue cultures, the majority of evidence indicates that Captan is nonmutagenic

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Captan is highly toxic to fish. Toxicity to fish: Bluegill sunfish LC₅₀ (96 hr) 0.075 mg/L, Brook trout LC₅₀ (96 hr) 0.034 mg/L. Moderately toxic to aquatic invertebrates: *Daphnia magna* EC₅₀ (48 hr) 7 - 10 mg/L. Low toxicity to bees LD₅₀ = 91 µg/bee. Low toxicity to birds - mallard duck and pheasants LD₅₀ > 5000 mg/kg and Bobwhite quail LD₅₀ = 2000 – 4000 mg/kg.

Environmental Properties: Captan has a low persistence in soil, with a half-life of 1 to 10 days. Captan is rapidly degraded in near neutral water with half-lives of 23 to 54 hours - The effective residual life in water is 2 weeks. Captan has a low to moderate tendency to accumulate in living tissue - estimates of the bioconcentration factor range from 10 to 1000.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC/nitrile gloves and face-shield or goggles. Keep out animals and unprotected persons. Keep material out of streams and sewers. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

Very dangerous to Fish: Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

Disposal of empty, non-returnable containers: Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. 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 container below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: FMC Captan 900 is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 kilograms. Bulk shipments should use UN 3077, as per below.

Marine and Air Transport: FMC Captan 900 is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3077, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 90% Captan).

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xi, Xn). Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 6 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994.

Product is not classified as a Dangerous Good according to the ADG Code (7th Ed) in containers less than 3000 kilograms.

Product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

SECTION 16 OTHER INFORMATION

Issue Date: 24 January 2014. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code:	Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
Ataxia:	Inability to control the coordinate movements of the muscles.
Bradycardia:	Is a resting heart rate of under 60 beats per minute (adults).
Carcinogen:	An agent which is responsible for the formation of a cancer.
Clonic:	An abnormality in neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
Haematopoietic:	Pertaining to the formation of blood or blood cells.
Lavage:	The irrigation or washing out of an organ, as of the stomach or bowel.
Mutagen:	An agent capable of producing a mutation.
Oedema:	Accumulation of fluid in tissues.
NOHSC:	National Occupational Health and Safety Commission.
Teratogen:	An agent capable of causing abnormalities in a developing foetus.
Safe Work Australia:	Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2014).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

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 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 SDS.