

# Material Safety Data Sheet



## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product name:** CROP CARE BARRACK 720 FUNGICIDE

**Synonyms:**

**CAS-No.:**

**Molecular Formula:**

**Supplier:** Crop Care Australasia Pty Ltd

**ACN:** 061 362 347

**Street Address:** 77 Tingira Street  
Pinkenba  
Queensland 4008  
Australia

**Telephone:** + 61 7 3867 9100

**Facsimile:** + 61 7 3867 9110

**Emergency telephone number:** 1 800 033 111 (ALL HOURS)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Recommended use:** Broad spectrum fungicide.

**Appearance:** Liquid (Suspension concentrate).

| CHEMICAL ENTITY                                  | CAS NO.   | PROPORTION    |
|--|-----------|---------------|
| Chlorothalonil                                   | 1897-45-6 | 54% (720 g/L) |
| Water  | 7732-18-5 | HIGH          |
| Other ingredients determined not to be hazardous | -         | MED           |
|  | -         | 100%          |

PROPORTION (% weight per weight):

VHIGH >60, HIGH 30-60, MED 10-29, LOW 1-9, VLOW <1

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are National Registration Authority (NRA) approved active constituents.

## 3. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Worksafe Australia.

**Hazard Category**

Xn Harmful

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## R-phrases

R40(3) Possible risks of irreversible effects.

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

## Poisons Schedule (Aust)/Toxic Substance (NZ): S6

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126; New Zealand 03 4747000).

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

**Eye contact:** If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**Skin contact:** If skin contact occurs, remove contaminated clothing and wash skin. If irritation occurs seek medical advice.

**Inhalation:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Notes to physician:** Treat symptomatically. Chlorothalonil may produce temporary allergic reactions (redness of eyes, mild bronchial irritation, redness or rash on exposed skin). Antihistamine or steroid creams are effective barrier treatments. (1)

## 5. FIRE-FIGHTING MEASURES

**Specific hazards:** Non combustible liquid.

**Fire fighting further advice:** Not combustible. Decomposes on heating emitting toxic fumes including hydrogen chloride (HCl). Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition.

**Suitable extinguishing media:** Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

## 6. ACCIDENTAL RELEASE MEASURES

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**SMALL SPILLS:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal. Wash area down with detergent and excess water.

**LARGE SPILLS:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled drums for disposal. Wash area down with detergent and excess water. If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

## 7. HANDLING AND STORAGE

**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 or place away from children, animals, food, feedstuffs, seed and fertilisers.

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### National occupational exposure limits

No value assigned for this specific material by the National Occupational Health and Safety Commission (Worksafe Australia).

However, supplier recommended hygiene standard for constituent,

|                  | TWA |                   |
|------------------|-----|-------------------|
|                  | ppm | mg/m <sup>3</sup> |
| Chlorothalonil * | -   | 0.1               |

\* Supplier recommended. (1)

The recommended hygiene standard (TWA) is the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Hygiene Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Engineering measures:** IN THE WORKPLACE: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Hygiene Standard. Keep containers closed when not in use.

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**Personal protection equipment:** OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES (Short).  
Code: B - Orica Personal Protection Guide No.1, 1998

**MANUFACTURE, PACKAGING AND TRANSPORT:** Avoid skin and eye contact and the inhalation of vapour. Wear overalls, safety glasses and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. If inhalation risk exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**PREPARATION AND USE OF PRODUCT:** Avoid contact with eyes and skin. Do not inhale spray mist. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and goggles and disposable mist mask. 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 goggles and contaminated clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form / Colour / Odour:** Liquid (Suspension concentrate).

**Solubility:** Dispersible in water.

|                            |         |                     |         |
|----------------------------|---------|---------------------|---------|
| Specific Gravity (20 C)    | : 1.34  | Melting Point (C)   | : N App |
| Rel Vapour Density (air=1) | : N Av  | Boiling Point (C)   | : N Av  |
| Vapour Pressure (20 C)     | : N Av  | Decomp. Point (C)   | : N Av  |
| Flash Point (C)            | : N App | Sublimation Point   | : N App |
| Flammability Limits (%)    | : N App | pH                  | : N Av  |
| Autoignition Temp (C)      | : N App | Viscosity           | : N Av  |
| % Volatile by volume       | : N Av  | Evaporation Rate    | : N Av  |
| Solubility in water (g/L)  | : N Av  | (n-Butyl acetate=1) |         |
| LogPow (Chlorthalonil)     | : 2.89  |                     |         |

(Typical values only - consult specification sheet)  
N Av = Not available                      N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Stability:** Product is stable for at least 2 years under ambient storage conditions.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled and overexposure occurs are:

### Acute Effects

**Ingestion:** No adverse effects expected, however large amounts may cause general depression, diarrhoea and irritation of the mouth, oesophagus and stomach. (1)

**Eye contact:** May be an eye irritant. May cause conjunctivitis and corneal opacity. (1)

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**Skin contact:** Contact with skin may result in irritation. May cause skin sensitisation in sensitive individuals.

**Inhalation:** Inhalation of mists or aerosols may produce respiratory irritation.

## Long Term Effects

Available evidence indicates that repeated or prolonged exposure to chlorothalonil may cause kidney disorders. (1)

## Acute toxicity / Chronic toxicity

No LD50 data available for the product. However for the constituent,

CHLOROTHALONIL: (1)

Oral LD50 (rats): >10,000 mg/kg.

Dermal LD50 (rabbit): >10,000 mg/kg.

Inhalation LC50(rat): 0.092 mg/l/4hr (hammer milled technical, unground - typical commercial product).

SKIN: Severe irritant (human). Evidence in humans of contact dermatitis.

EYES: Severe irritant (rabbit).

Studies in animals have shown that repeated doses produce kidney tumours in rats and male mice.

A study in animals has shown that repeated doses produce no teratogenic effects.

ADI (Acceptable Daily Intake) for humans is 0.01 mg/kg bw/day. (2)

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

CHLOROTHALONIL:

AQUATIC TOXICITY:

Very toxic to aquatic organisms. (1)

96hr LC50 (rainbow trout): 47 ug/L. (3)

96hr LC50 (bluegill sunfish): 60 ug/L. (3)

96hr LC50 (channel catfish): 43 ug/L. (3)

48hr LC50 (Daphnia magna): 70 ug/L. (1)

96hr LC50 (pink shrimp): >165 ug/L. (3)

LogPow is 2.89 (3)

The risk of bioaccumulation in an aquatic species is low.

TERRESTRIAL TOXICITY:

Harmless to terrestrial species.

Oral LD50 (mallard ducks): >4640 mg/kg. (3)

Dietary LC50 (mallard ducks, 8d): >10,000 mg/kg. (3)

Dietary LC50 (bobwhite quail, 8d): >10,000 mg/kg. (3)

Slightly toxic to bees. (3)

ENVIRONMENTAL FATE AND DISTRIBUTION:

Chlorothalonil is rapidly degraded in soil, with its half lives ranging from a few hours to a few days.

It is predicted to have low mobility in soil. (1)

## 13. DISPOSAL CONSIDERATIONS

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 clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill.

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If no landfill is available, bury the containers below 500 mm 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

### Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

### Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

**UN-No:** 3082  
**Class:** 9 Miscellaneous Dangerous Goods  
**Packing group:** Packing Group 3

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(CONTAINS CHLOROTHALONIL)

This material is classified as a Marine Pollutant according to the International Maritime Dangerous Goods Code.

### Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**UN-No:** 3082  
**Class:** 9 Miscellaneous Dangerous Goods  
**Packing group:** Packing Group 3

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(CONTAINS CHLOROTHALONIL)

## 15. REGULATORY INFORMATION

This material is hazardous according to health criteria of Worksafe Australia.

### **Hazard Category**

Xn Harmful

### **R-phrase(s)**

R40(3) Possible risks of irreversible effects.

### **S-phrase(s)**

S 2 Keep out of reach of children.  
S13 Keep away from food, drink and animal foodstuffs.

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Wear suitable protective clothing and gloves.

Poisons Schedule (Aust)/Toxic Substance (NZ): S6

## 16. OTHER INFORMATION

### Literary reference

- (1) Material Safety Data Sheet - Chlorothalonil technical (CDS 11614)  
Zeneca Agrochemicals. 04/1999
- (2) ADI List, Commonwealth Department of Health and Family Services.  
01/2001.
- (3) In 'The Pesticide Manual'. 12th Ed. Ed. CDS Tomlin. British  
Crop Protection Society, 2000.

This Material Safety Data Sheet has been prepared by SHE Pacific Pty Ltd on behalf of its clients.

Contact: SHE Pacific Pty Ltd, MSDS Services

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Reason(s) For Issue: FIRST ISSUE PRIMARY MSDS

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Orica Limited and its subsidiaries cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

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

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.