

## Section 1 - Identification of The Material and Supplier

**PCT Holdings Pty Ltd**  
**1/74 Murdoch Circuit**  
**Acacia Ridge, Qld 4110**

**Phone: 1800 630 877 (all hours)**

**Chemical nature:** Chlorothalonil is an aromatic derivative.  
**Trade Name:** **Surefire Chlortan 720 Fungicide**  
**APVMA Code:** 66860  
**Product Use:** Agricultural fungicide for use as described on the product label. Group M5 herbicide.  
**Creation Date:** **August, 2015**  
**This version issued:** **August, 2015**

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Xi, Irritating. T+, Very toxic. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**Risk Phrases:** R26, R37, R40, R41, R50/53. Very toxic by inhalation. Irritating to respiratory system. Limited evidence of a carcinogenic effect. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S2, S45, S60, S61, S24/25, S36/37. Keep out of reach of children. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

**SUSMP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated



### GHS Signal word: DANGER

#### HAZARD STATEMENT:

- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H351: Suspected of causing cancer.
- H410: Very toxic to aquatic life with long lasting effects.

#### PREVENTION

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P260: Do not breathe 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.
- P284: Wear respiratory protection.

#### RESPONSE

- P310: Immediately call a POISON CENTRE or doctor/physician.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. See urgent medical attention.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313: If exposed or concerned: Get medical advice.
- P337+P313: If eye irritation persists: Get medical advice.

## SAFETY DATA SHEET

P391: Collect spillage.

**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 containers as specified on the registered label.

## Emergency Overview

**Physical Description & Colour:** White liquid.

**Odour:** No data re odour.

**Major Health Hazards:** The acute oral and dermal toxicity of chlorothalonil is low (oral and dermal LD<sub>50</sub>, > 5000mg/kg). A study of acute inhalation yielded a LC<sub>50</sub> of 0.1 mg/L air. Chlorothalonil is a mild skin irritant and is severely irritating to the eye. No valid test for sensitization was available. It is reported that the results of studies of skin sensitization in guinea-pigs were inconclusive.

This product is very toxic by inhalation, has limited evidence of a carcinogenic effect, may cause irreversible effects, is irritating to skin and severely irritating to eyes, and may cause sensitisation to sensitive individuals.

## Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Chlorothalonil	1897-45-6	720g/L	not set	not set
Other non hazardous ingredients	various	to 100%	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value 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. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

## Section 4 - First Aid Measures

**General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Not Combustible. Use extinguishing media suited to burning materials.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

## SAFETY DATA SHEET

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

## Section 6 - Accidental Release Measures

**Accidental release:** 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. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

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. 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.

## Section 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:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

### SWA Exposure Limits

### TWA (mg/m<sup>3</sup>)

### STEL (mg/m<sup>3</sup>)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Chlorothalonil is set at 0.01mg/kg/day. The corresponding NOEL is set at 1.5mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values from Australian ADI List, June 2014.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Eye Protection:** Protective glasses or goggles must be worn when this product is being used. Failure to protect your eyes may lead to severe harm to them or to general health. Emergency eye wash facilities must also be available in an area close to where this product is being used.

**Skin Protection:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where product is being used.

## Section 9 - Physical and Chemical Properties:

**Physical Description & colour:** White liquid.

**Odour:** No data re odour.

**Boiling Point:** Approximately 100°C at 100kPa.

## SAFETY DATA SHEET

<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	Water component.
<b>Vapour Pressure:</b>	2.37 kPa at 20°C (water vapour pressure).
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.34 approx
<b>Water Solubility:</b>	Dispersible.
<b>pH:</b>	No data.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	2.89 (chlorothalonil) (log P octanol/water)
<b>Autoignition temp:</b>	Not applicable - does not burn.

## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** strong bases.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Hydrogen chloride gas, other compounds of chlorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

**Toxicity:** An information profile for Chlorothalonil is available at <http://extoxnet.orst.edu/pips/ghindex.html>

**Acute toxicity:** The acute oral and dermal toxicity of chlorothalonil is low (oral and dermal LD<sub>50</sub>, > 5000mg/kg). A study of acute inhalation yielded a LC<sub>50</sub> of 0.1 mg/L air. Chlorothalonil is a mild skin irritant and is severely irritating to the eye. No valid test for sensitization was available. It is reported that the results of studies of skin sensitization in guinea-pigs were inconclusive.

**Chronic toxicity:** Studies of toxicity with repeated doses showed that in mice and rats, but not in dogs, the kidney is the prime target organ for systemic toxicity attributable to chlorothalonil. In studies in mice and rats, chlorothalonil also caused local toxicity in the forestomach. In a 90-day study in mice, the NOAEL for systemic effects was 275 ppm, equal to 48 mg/kg bw per day, on the basis of an increased incidence of hyperplasia in the proximal tubules of the kidneys and increased kidney weight at 750 ppm, equal to 124 mg/kg bw per day. In a 13-week study in rats, the NOAEL for systemic effects was 10 mg/kg bw per day on the basis of increased kidney weights and hyperplasia in the kidneys at 40 mg/kg bw per day. Human eye and skin irritation is linked to chlorothalonil exposure; 14 of 20 workers exposed to 0.5% chlorothalonil in a wood preservative developed dermatitis. All workers showed swelling and inflammation of the upper eyelids. Allergic skin responses have also been noted in farm workers.

**Reproductive effects:** Studies suggest that chlorothalonil will not affect human reproduction at expected exposure levels.

**Teratogenic effects:** Long-term studies indicate that high doses fed to rats caused reduced weight gains for males and females in each generation studied. A study of birth defects in rabbits showed no effects. Chlorothalonil is not expected to produce birth defects in humans.

**Mutagenic effects:** Mutagenicity studies on various animals, bacteria, and plants indicate that chlorothalonil does not cause any genetic changes. The compound is not expected to pose mutagenic risks to humans.

**Carcinogenic effects:** Based on evidence from animal studies, chlorothalonil's carcinogenic potential is unclear. Male and female rats fed chlorothalonil daily over a lifetime developed carcinogenic and benign kidney tumours at the higher doses. In another study, where mice were fed high daily doses of chlorothalonil for 2 years, females developed tumours in the fore-stomach area (attributed to irritation by the compound) and males developed carcinogenic and benign kidney tumours.

**Organ toxicity:** Chronic studies of rats and dogs fed high dietary levels show that chlorothalonil is toxic to the kidney. In addition to less urine output, changes in the kidney included enlargement, greenish-brown colour, and development of small grains.

**Fate in humans and animals:** Chlorothalonil is rapidly excreted, primarily unchanged, from the body. It is not stored in animal tissues. Residues have not been found in the tissues or milk of dairy cows fed chlorothalonil.

Chlorothalonil is Classed by SWA as a potential sensitiser by skin contact.

## SAFETY DATA SHEET

## Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Chlorothalonil	Conc>=20%: T+; R40; R26; R37; R41; R43

## Potential Health Effects

See section 11 for Chronic exposure studies.

### Inhalation:

**Short Term Exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

### Skin Contact:

**Short Term Exposure:** Available data indicates that this product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

### Eye Contact:

**Short Term Exposure:** This product is a severe eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms such as swelling of eyelids and blurred vision may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment is likely to cause permanent damage.

### Ingestion:

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

### Carcinogen Status:

**SWA:** Chlorothalonil is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans. See the SWA website for further details. A web address has not been provided as addresses frequently change.

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

**IARC:** Chlorothalonil is classed 2b IARC - possibly carcinogenic to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

## Section 12 - Ecological Information

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Effects on birds:** Chlorothalonil is practically nontoxic to birds. Most avian wildlife are not significantly affected by this compound.

**Effects on aquatic organisms:** Chlorothalonil and its metabolites are highly toxic to fish, aquatic invertebrates, and marine organisms. Fish, such as rainbow trout, bluegill, and channel catfish are noticeably affected even when chlorothalonil levels are low (less than 1 mg/L). Its bioaccumulation factor is quite low.

**Effects on other organisms:** The compound is nontoxic to bees.

### Environmental Fate:

**Breakdown in soil and groundwater:** Chlorothalonil is moderately persistent. In aerobic soils, the half-life is from 1 to 3 months.

**Breakdown in water:** In very basic water (pH 9.0), about 65% of the chlorothalonil was degraded into two major metabolites after 10 weeks.

**Breakdown in vegetation:** Chlorothalonil's residues may remain on above-ground crops at harvest, but will dissipate over time. Chlorothalonil is a fairly persistent fungicide on plants, depending on the rate of application.

## Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

## Section 14 - Transport Information

**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

## SAFETY DATA SHEET

**Section 15 - Regulatory Information**

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Chlorothalonil, is mentioned in the SUSMP.

**Section 16 - Other Information**

**This SDS contains only safety-related information. For other data see product literature.**

**Acronyms:**

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS Number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

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**SAFETY DATA SHEET**