SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **AgMerch Chlorothalonil 720 Fungicide**

Other Names: Chlorothalonil. Group M5 Fungicide. Chloronitrile chemical family.
Use: Agricultural fungicide for the control of certain diseases in crops.
Company: AgMerch Pty Ltd
Address: 217 Wyndham Street, Shepparton, Vic 3630
ACN/ABN: 26 645 371 017
Email: info@agmerch.com.au
Emergency Contact: 0498 530 214

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*.

* Not subjected to the ADG code when transported in Australia by Road or Rail in packages 500 kg (L) or less; or in IBC's (refer to SP AU01). However, if transported by Air or Sea, this provision does not apply. Then the product is classed as a Dangerous Good (Class 9 Environmentally Hazardous) by IATA and IMDG respectively. See Section 14 of this SDS for details.

Globally Harmonised System (GHS) classification of the substance/mixture:
Sensitization – Skin: Hazard Category 1, 1A, 1B.
Eye Damage/Irritation: Hazard Category 1.
Acute Toxicity – Inhalation: Hazard Category 1.
Specific Target Organ Toxicity (Single Exposure): Hazard Category 3.
Carcinogenicity: Hazard Category 2.
Hazardous to the Aquatic Environment – Long-Term (Chronic) Hazard: Hazard Category 1.

Signal Word: DANGER.

Hazard Statements:
H302 Harmful swallowed
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mists, vapours or spray.
P263 Wash hands, arms and face thoroughly after handling.
P271 Use only outdoors or in a well ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 In case of inadequate ventilation wear respiratory protection.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep 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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention:
P310	Immediately call a POISON CENTER or doctor.
P320	Specific treatment is urgent - see Safety Directions on the label.
P321	Specific treatment see Safety Directions on product label.
P333 + P313	If skin irritation or rash occurs: Get medical advice /attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage and Disposal:

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

Disposal:

P501	Dispose of contents/container in accordance with national regulations.

Pictograms:

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	***CAS NUMBER***	***PROPORTION***
Chlorothalonil	1897-45-6	720 g/L
Ethylene Glycol	107-21-1	50 g/L
Other ingredients (including water) determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: If swallowed do NOT induce vomiting. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126. If swallowed, do not induce vomiting. Rinse any residual product from mouth and lips. Give water to drink and seek medical help. Do not give anything by mouth to a semi-conscious or unconscious person. If vomiting occurs, give more water to drink to assist dilution.

Eye contact: Immediately hold eyes open and flood with clean water until chemical is removed. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation occurs and persists, see a doctor.

Skin contact: If on skin wash with soap and water. If irritation occurs and persists, see a doctor. Remove contaminated clothing and launder before re-use.

Inhalation: Remove to fresh air and observe until recovered. If effects persist, seek medical advice.

Advice to Doctor: No specific antidote. Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Considered low risk due to water content, however upon evaporation of water the product is combustible. Low risk of explosion if involved in a fire.

SECTION 5 FIRE FIGHTING MEASURES (Continued)

Extinguishing media: Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff. Preferred extinguishing media: alcohol resistant foam, CO_2 or dry chemical. Soft stream water fog if no alternatives. DO NOT use water jet. Contain all runoff.

Hazards from combustion products: When heated to dryness, this product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion that can be both toxic and irritating.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or vapours generated. Evacuate personnel to a safe area.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and goggles and disposable mist mask covering mouth and nose. In the case of spillage, stop leak if safe to do so, and contain spill. Contain and absorb spilled material with absorbent material such as sand, clay, cat litter or material such as vermiculite. Collect recoverable product for use as labelled on the product. Vacuum, shovel or pump contaminated spilled material into an approved container and dispose of waste as per the requirements of Local or State Waste Management Authorities. Keep out animals and unprotected persons.

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: Ensure containers are kept closed until using product. Attacks eyes and skin. 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 prepared spray wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and goggles and disposable mist mask covering mouth and nose. If clothing becomes contaminated with product or wet with spray remove clothing immediately. If product on skin immediately wash area with soap and water. If product in eyes, wash out immediately with water. 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, goggles and contaminated clothing.

Conditions for Safe 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, seeds and fertilisers. Ideally, the product should be stored below 30°C. This product is a Schedule 6 Poison (S6) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
Exposure guidelines have not been established for this product by Safe Work Australia, however the manufacturer recommends the following guideline for chlorothalonil.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m³)
chlorothalonil	0.1 mg/m³	-

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

Biological Limit Values:
No biological limit allocated.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

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 closed when not in use

Personal Protective Equipment (PPE):
General: When preparing spray and using prepared spray wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves and goggles and disposable mist mask covering mouth and nose. If clothing becomes contaminated with product or wet with spray remove clothing immediately. If product on skin immediately wash area with soap and water. If product in eyes, wash out immediately with water. 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, goggles and contaminated clothing.

Personal Hygiene: Attacks eyes and skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. 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:	Smooth creamy light grey liquid suspension.
Odour:	Slightly pungent odour.
Boiling point:	No data available.
Freezing point:	No data available.
Specific Gravity:	Approximately 1.3 g/mL.
Solubility in Water:	Product suspends in water.
pH:	No data available.
Flammability:	No data available.
Corrosive hazard:	Not corrosive.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	This product is a schedule 6 (S6) poison.
Formulation Type:	Suspension Concentrate (SC).

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: Incompatible with strong acids, bases and oxidizing agents.

Hazardous decomposition products: Product is only likely to decompose after heating to dryness, following by continuing heat. This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion that can be both toxic and irritating Do not store for prolonged periods in direct sunlight. Avoid oxidizing materials.

Hazardous reactions: Will not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

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 personal protective equipment and handling procedures to minimise exposure.

Potential Health Effects:

ACUTE EFFECTS

Swallowed: The acute oral toxicity LD_{50} (rat) > 5000 mg/kg. Ingestion may cause irritation to the mouth, throat and stomach. Possible symptoms include nausea, vomiting and central nervous system depression.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Eye: Can be severely irritating to the eyes. Can cause eye damage unless immediately washed out of the eyes.

Skin: The acute dermal toxicity LD_{50} (rabbit) > 4000 mg/kg. Avoid skin contact. May cause skin irritation. May cause skin sensitisation.

Inhaled: This product is toxic if inhaled. Acute inhalation LC_{50} = 0.6 mg/L/4 hour. May irritate the respiratory tract. Breathing in high concentrations of this material may cause headache, nausea, dizziness and weakness.

Long Term Exposure:

Chronic toxicity: Extensive testing of chlorothalonil has found no evidence of mutagenic, neurotoxic, teratogenic or reproductive effects. Subchronic toxicity studies in dogs have shown kidney toxicity, and chronic toxicity studies in rats and mice have shown kidney and forestomach tumours at high doses. This is not considered to be a risk to humans when handled and used as directed on the label.

Chlorothalonil is rapidly excreted, primarily unchanged, from the body. It is not stored in animal tissues.

Safe Work Australia has classified chlorothalonil in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Chlorothalonil is highly toxic to fish and aquatic organisms. Toxicity to fish: Rainbow trout LC_{50} (96 hr) 0.043 mg/L; Bluegill sunfish LC_{50} (96 hr) 0.059 mg/L. Toxic to Algae: *Selanastrum capricornutum* EC_{50} (120 hr) 210 µg/L. Toxic to aquatic invertebrates: *Daphnia magna* EC_{50} (48 hr) 0.07 mg/L. Low toxicity to bees. Low toxicity to birds Mallard duck LD_{50} > 4640 mg/kg.

Environmental Fate: Chlorothalonil has low mobility in soil. Chlorothalonil is moderately persistent. In aerobic soils, the half-life is from 1 to 3 months. Increased soil moisture or temperature increases chlorothalonil degradation. It is not degraded by sunlight on the soil surface. In water the half life is 4.5 hours to 9 days. Chlorothalonil does not store in fatty tissues and is rapidly excreted from the body. Its bioaccumulation factor is quite low.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: 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. On site disposal of the concentrated product is not acceptable. Ideally the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

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

Disposal of empty containers: Triple-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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface 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. Do not burn empty containers or product.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: 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 500 kg (L) or less; or in IBC's. (See special provision AU01). Bulk shipments should use UN 3077, as per below.

SECTION 14 TRANSPORT INFORMATION (Continued)

Marine and Air Transport: AgMerch Chlorothalonil 720 Fungicide 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 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 72% Chlorothalonil). Hazchem code ●3Z. Hazard Identification Number (HIN) 90. Australian Standards Initial Emergency Response Guide No. 47.

SECTION 15 REGULATORY INFORMATION

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 Registration No. 84450.
This product is classified as a Hazardous Substance under the criteria of Safe Work Australia.
This product is not classified as a Dangerous Good according to the ADG Code for packs less 500 kg (L) or less; or in IBC's (SP AU01) (7th Ed).
This product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).
Requirements concerning special training:
Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 15 September 2021. Valid for 5 years till 15 September 2026. (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).
Carcinogen:	An agent which is responsible for the formation of a cancer.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
HCIS:	Hazardous Chemical Information System.
Lacrimation:	The production, secretion, and shedding of tears.
Lavage:	A general term referring to cleaning or rinsing.
Mutagen:	An agent capable of producing a mutation.
Pneumonitis:	A general term that refers to inflammation of lung tissue.
PPE:	Personal protective equipment.
Teratogen:	An agent capable of causing abnormalities in a developing foetus.
TWA:	The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.
Safe Work Australia:	Australian government statutory body established in 2008 to develop national policy relating to Worker Health & Safety and workers' compensation.

References

1. "Hazardous Chemicals Information System". Safe Work Australia HCIS website. (2021).
2. "Classifying Hazardous Substances" Safe Work Australia. August 2018.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2017 (7th Ed).

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.