SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Chlorothalonil 900 WG Fungicide**

Other Names:	Chlorothalonil. Group M5 Fungicide. Chloronitrile chemical family.
Use:	Agricultural fungicide for the control of certain diseases in crops.
Company:	Apparent Pty Ltd
Address:	Suite G.08, 762 Toorak Rd, Glen Iris, Vic. 3146. PO Box 3092, Cotham PO, Kew, Vic 3101
ACN/ABN:	143 724 136
Telephone Number:	03 9822 13216
Email:	enquiries@apparentag.com.au
Emergency Contact:	0411 227 338

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 Dangerous (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:

Acute Toxicity – Inhalation: Category 2.
Eye Damage/Irritation: Category 1.
Specific Target Organ Toxicity (Single Exposure): Category 3.
Carcinogenicity: Category 2.
Sensitization – Skin: Category 1, 1A, 1B.

Signal Word: DANGER.

Hazard Statements:

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.
P281 Use personal protective equipment as required.
P260 Do not breathe dust, vapours or spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 Wear respiratory protection.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Response:

P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P320	Specific treatment is urgent - see Safety Directions on the label.

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***
Chlorothalonil	1897-45-6	900 g/kg
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. Rinse mouth and give plenty of water to drink. Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

Eye contact: If in eyes, immediately brush granules away and flush with copious amounts of water until product is removed. Seek medical advice immediately. If irritation persists, seek medical advice.

Skin contact: 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.

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: There is a very low risk of an explosion from this product if commercial quantities are involved in a fire. This product has the potential to from flammable or explosive dust clouds – keep dust to a minimum. DO NOT use water jets.

Extinguishing media: Extinguish fire using foam blanket, carbon dioxide or dry agent. If not available, use waterfog or fine water spray but ensure all runoff is contained.

Hazards from combustion products: Product will decompose when burnt and will emit toxic and noxious fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke.

SECTION 5 FIRE FIGHTING MEASURES (Continued)

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.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergence procedures: Wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield and goggles. Will damage eyes and skin. In the case of spillage, stop leak if safe to do so, and contain spill. Prevent spillage entering drains or watercourses. 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. Launder protective clothing before storage or re-use.

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. Will damage eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield and goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield. If product on skin, immediately wash area with soap and water. If product in eyes, wash out immediately with water. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. 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. Not classified as a Dangerous Good.

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.

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

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

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

Personal Hygiene: Will damage eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. 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:	Light brown granules.
Odour:	Mild odour.
Boiling point:	No data.
Freezing point:	No data.
Specific Gravity:	No data.
Solubility in Water:	Product disperses in water.
pH:	6 - 8.
Flammability:	No data.
Corrosive hazard:	Not corrosive.
Flashpoint (°C):	Not available.
Poisons Schedule:	This product is a Schedule 6 (S6) poison.
Formulation Type:	Water dispersible Granule.

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: Strong oxidising agents and strong alkalis.

Hazardous decomposition products: On burning will emit toxic fumes of carbon monoxide and other noxious and toxic fumes.

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 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.

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.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Inhaled: This product is toxic if inhaled. Acute inhalation LC_{50} = 0.6 mg/L/4 hour. Breathing in high concentrations of dusts or aerosols 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.

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. In rural areas contact ChemClear http://www.chemclear.com.au for help with collection of unwanted rural chemicals.

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 containers: *Plastic containers* - Triple or preferably pressure rinse containers before disposal. Add rinsings to the 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 containers at a local authority landfill. 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, vegetation and roots. Empty containers and product should not be burnt.

Plastic bag in cardboard container - Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. 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. Cardboard container may be recycled.

drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 500 kg (L) or less; or in IBC's under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3077. (See special provision AU01).

SECTION 14 TRANSPORT INFORMATION (Continued)

Marine and Air Transport: Apparent Chlorothalonil 900 WG 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 3077, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 90% Chlorothalonil).

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. 69310.
This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. T: Toxic, Xi: Irritant.
This product is not classified as a Dangerous Good according to the ADG Code 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. 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: 29 July 2019. Valid for 5 years till 29 July 2024. (5 year update).

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.
Carcinogen:	An agent which is responsible for the formation of a cancer.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
Mutagenic:	Capable of inducing a genetic mutation in an organism.
LD_{50}:	Median Lethal Dose A statistically derived single dose of a substance that can be expected to cause death in 50% of dosed animals.
OCS:	Office of Chemical Safety.
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:	Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References:
1. "Hazardous Chemicals Information System". Safe Work Australia HCIS website. (2019).
2. "Classifying Hazardous Substances" Safe Work Australia. August 2018.
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.