SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Check Mate 500 Herbicide**

Other Names:	Triallate, a thiocarbamate chemical herbicide, Group E Herbicide.
Use:	A liquid pre-emergent wild oats agricultural herbicide.
Company:	Apparent Pty Ltd
Address:	Suite G.08 762 Toorak Road, Hawthorn East, Vic. 3123. PO Box 3092, Cotham PO, Kew, Vic 3101
ACN/ABN:	143 724 136
Telephone Number:	03 9822 1321
Email:	wwardell@bigpond.net.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.
Combustible Liquid (C1).

Global Harmonization System (GHS) classification:

Aspiration Hazard - Category 1.
Acute Toxicity - Oral - Category 4.
Skin Corrosion/Irritation - Category 2.
Eye Damage/Irritation – Category 2B.
Sensitization – Skin: Category 1, 1A, 1B.
Specific Target Organ Toxicity (Repeated Exposure): Category 2.
Hazardous to the Aquatic Environment- Acute Hazard: Category 1.
Hazardous to the Aquatic Environment- Long-Term Hazard: Category 4.

Signal Word: DANGER.

Hazard statements:

H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H336 May cause drowsiness and dizziness.
H373 May cause damage to organs <...> through prolonged or repeated exposure <<...>>.
H400 Very toxic to aquatic life.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements:

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash (hands, arms and face) thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
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.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Response (Cont):

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 +P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see Safety Directions on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and Wash before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.

Storage & Disposal:

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***
Triallate	2303-17-5	500 g/L
Liquid hydrocarbons	various	30 – 60 % w/w
Other ingredients determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: If swallowed do NOT induce vomiting, seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26. Wash mouth with water and then drink plenty of water. Make every effort to prevent vomit from entering the lungs by careful placement of the patient. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

Eye contact: If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. If irritation occurs and persists seek medical advice.

Skin contact: If skin contact occurs remove contaminated clothing and wash skin and hair with soap and water. If irritation occurs and persists, seek medical advice. Launder contaminated clothing before re-use. If irritation occurs and persists seek medical advice.

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

Advice to Doctor: Treat symptomatically. This product also contains aromatic solvents which may produce a chemical pneumonitis; therefore vomiting is not recommended, and lavage requires intubation. Activated charcoal and cathartics will assist gastrointestinal tract evacuation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Combustible liquid (C1). Flash point > 62°C – < 150°C.

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

Hazards from combustion products: Product will decompose when burnt and will emit toxic fumes including carbon monoxide. Heating may cause expansion or decomposition leading to violent rupture of containers. Fire-fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

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. Stop all fire water from entering drains or water bodies.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergence procedures / Material and methods for containment and cleanup procedures: Accidental release: In case of spillage, remove all ignition sources. Contain and absorb spilled material with absorbent material such as clay, sand or cat litter and dispose of waste as indicated. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves and face shield or goggles and half facepiece respirator.

In the case of spillage, stop leak if safe to do so, and contain spill. Contain spill and sweep up and shovel or pump recoverable material into labelled containers for use, recycling or dispose as waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Keep out animals and unprotected persons. This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Thoroughly launder protective clothing before storage or re-use.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: No smoking, eating or drinking should be allowed where material is used or stored. Harmful if inhaled or swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Do not inhale vapour or spray mist. Avoid contact with eyes and skin. When opening the container and mixing and loading spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves, goggles and half facepiece respirator. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash contaminated clothing, gloves, goggles and respirator and if rubber wash with detergent and warm water.

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. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations. Not classified as a Dangerous Good by the ADG in containers less than 3000 litres.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
No exposure guidelines have been established for this product by Safe Work Australia.
Biological Limit Values:
No biological limit allocated.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

Engineering controls:
Use in ventilated areas adequate to keep exposure low, generally natural ventilation is adequate. Keep containers closed when not in use.

Personal Protective Equipment (PPE):
General: When opening the container and mixing and loading spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves, goggles and half facepiece respirator. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash contaminated clothing, gloves, goggles and respirator and if rubber wash with detergent and warm water.

Personal Hygiene: Harmful if inhaled or swallowed. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Do not inhale vapour or spray mist. 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:	Amber to brown coloured liquid.
Melting point:	Not available.
Freezing point:	Not available.
Specific Gravity:	1.05.
Solubility in Water:	Emulsifies in water.
pH:	No data available.
Flammability:	Combustible liquid.
Corrosive hazard:	Not corrosive.
Flash point (°C):	> 62°C – < 150°C.
Flammability Limits (%):	Not established.
Poisons Schedule:	This product is a schedule 5 (S5) poision.

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. Avoid heating the product to high temperatures.
Incompatible materials: Keep away from strong oxidising agents.
Hazardous decomposition products: If involved in fire it will emit oxides sulphur and other toxic and noxious gases.
Hazardous reactions: Hazardous polymerisation will not occur.

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: Harmful if swallowed. If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or other lung damage. Tri-allate LD_{50} = 800 mg/kg (rat).

Eye: The concentrate will cause irritation of the eyes and possible damage in severe cases.

Skin: Will irritate the skin. Acute dermal LD_{50} > 2000 mg/kg. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. May cause sensitisation by prolonged skin contact.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Inhaled: High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, and may have other central nervous system effects. Acute inhalation LC_{50} > 5.3 mg/L/ (Tri-allate).

Long Term Exposure:

Chronic toxicity: Although triallate is a carbamate it does not inhibit cholinesterase activity. Liver and kidney damage has been noted in laboratory animals that have been fed excessive doses of triallate. Evidence from animal studies indicates that repeated or prolonged exposure to triallate can result in neurological effects.

Reproductive effects: Evidence suggests that triallate can cause reproductive effects at high doses.

Carcinogenicity: Data indicates no carcinogenic effects.

Mutagenic effects: The data suggests triallate is either non-mutagenic or very weakly mutagenic.

Organ toxicity: Changes have been observed in the cellular processes of the brain, liver and spleen of pigs given triallate. Studies in other species indicate the thymus, kidneys and reproductive organs are potential target organs.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Tri-allate is toxic to fish and other marine organisms. Over 7 weeks marked bioaccumulation occurred in bluegill sunfish, but over a two week depuration period, tri-allate was rapidly and nearly completely eliminated.

Species	Toxicity	Comment
Rainbow trout	LC_{50} = 1.2 mg/L (96 hour)	Moderate- high toxicity.
Daphnia	EC_{50} = 0.43 mg/L (48 hour)	High toxicity.
Algae	EC_{50} = 0.12 mg/L (96 hour)	High toxicity.
Bobwhite quail	LD_{50} > 2251 mg/kg	Very low toxicity.

Environmental Fate:
Under prolonged and extremely dry conditions, this product may persist for several months. The half-life in soil is 82 days. Tri-allate absorbs well to soil and has low solubility in water which indicates low movement in soils. However, in situations of high soil moisture conditions and/or low organic matter levels, tri-allate may become desorbed and more mobile.

DO NOT contaminate streams, rivers or waterways with the chemical or used container.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. In case of spillage, contain and absorb spilled material with absorbent material such as clay, sand or cat litter and dispose of waste as indicated below or in accordance to the Australian Standard 2507-Storage and Handling of Pesticides. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty 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 clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal 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 and product.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Marine and Air Transport: Apparent Check Mate 500 Herbicide is classified as 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 Triallate). Hazchem code ●3Z. Hazard Identification Number (HIN) 90.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 67079

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xn Harmful; Xi: Irritant.

This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail (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: 24 November 2015. Valid for 5 years till 24 November 2020 (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.
HSIS:	Hazardous Substances 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.
Myotoxic:	Having or being a toxic effect on muscle.
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. “Search Hazardous Substances”. Safe Work Australia website. (2015).
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.

End SDS