

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Methomyl 225 Insecticide**

Other Names: Methomyl, Group 1A Insecticide, Carbamate insecticide.
Use: Agricultural insecticide for control of various insects in various 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 1321
Email: enquiries@apparentag.com.au
Emergency Contact: 0411 227 338

SECTION 2

HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Classified as a Dangerous Good according to the ADG Code.
Flammable Liquid.**

GHS Classification:

Flammable Liquids: Hazard Category 2.
Acute Toxicity – Oral: Hazard Category 1.
Acute Toxicity – Dermal: Hazard Category 3.
Acute Toxicity – Inhalation: Hazard Category 3.
Specific Target Organ Toxicity (Single Exposure): Hazard Category 1.
Hazardous to the Aquatic Environment – Acute: Hazard Category 1.

Signal Word: DANGER

Hazard Statements:

H225 Highly flammable liquid and vapour.
H300 Fatal if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H370 Causes damage to organs.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces: - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe mist, vapours or spray.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash hands, arms and face thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

SECTION 2 HAZARDS IDENTIFICATION (Continued)**Response:**

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment see Safety Directions on the product label.
P330	Rinse mouth.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use alcohol resistant foam for extinction.
P391	Collect spillage.

Storage:

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.
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Pictograms:**SECTION 3****COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Methomyl	16752-77-5	225 g/L
Methanol	67-56-1	593 g/L
Other ingredients determined to be non-hazardous		Balance

SECTION 4**FIRST AID MEASURES****FIRST AID**

- Ingestion:** Rinse mouth thoroughly with water. Seek medical advice immediately. Preferably, carry out treatment under the direction of medical advice obtained by phone. If swallowed, activated charcoal may be advised. Give atropine if instructed. If product has been swallowed and symptoms are evident and medical assistance is not immediately available, give one atropine tablet (0.6 mg) every five minutes until dryness of the mouth occurs.
- Eye contact:** If in eyes immediately hold eyelids open and wash with copious amounts of clean water until chemical is removed. Seek medical advice immediately. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation persists, seek medical advice.
- Skin contact:** Immediately wash skin with soap and water to remove chemical. Remove contaminated clothing and launder before re-use. If skin is irritated, seek medical advice. All leather items should be discarded.
- Inhalation:** Remove patient to fresh air. Seek medical advice immediately. If required, give one atropine tablet every five minutes until dryness of the mouth occurs. Obtain medical assistance. See 'ingestion' for further information.

SECTION 4 FIRST AID MEASURES (Continued)

Advice to Doctor: An anticholinesterase compound.

General Supportive treatment:-

Artificial respiration (via a tracheal tube) should be started at the first sign of respiratory failure and maintained for as long as necessary.

Atropine:-

Atropine should be given, beginning with 2 mg iv repeated at 15 to 30 minute intervals. The dose and the frequency of atropine treatment varies from case to case, but should maintain the patient fully atropinized (dilated pupils, dry mouth, skin flushing, etc.).

Oxime reactivations:-

Although it might be suspected that oxime cholinesterase reactivators would be as helpful in carbamate poisoning as they are in organophosphorous poisoning, this is not the case. There is experimental evidence that the pyridinium oxime 2-PAM is not effective in carbamate poisoning and there is some evidence that it makes poisoning by certain carbamates worse.

Diazepam:-

Diazepam should be included in the therapy of all but the mildest cases. Besides relieving anxiety it appears to counteract some aspects of CNS-derived symptoms that are not affected by atropine. Doses of 10 mg sc or iv are appropriate and may be repeated as required. Other centrally acting drugs and drugs that may depress respiration are not usually recommended in the absence of artificial respiration procedures.

SECTION 5**FIRE FIGHTING MEASURES**

Specific Hazard: Flammable liquid (C1). Flash point < 23°C. Avoid strong water jets.

Extinguishing media: Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. If not available, use CO₂ or dry chemical. If not available use waterfog or fine water spray but ensure all runoff is contained. Contain all runoff.

Hazards from combustion products: There is a risk of an explosion from this product if commercial quantities are involved in a fire. If involved in a fire, it will emit toxic oxides of carbon and nitrogen and possibly oxides of sulphur. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to 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.

SECTION 6**ACCIDENTAL RELEASE MEASURES**

Emergency procedures: Extinguish all sources of ignition. In the case of spillage, stop leak if safe to do so, and contain spill. Wear protective equipment to prevent skin/eye contamination. 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 decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

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: No smoking, eating or drinking should be allowed where material is used or stored. Keep out of reach of children. Very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact, inhaled or swallowed. Attacks the eyes. Will irritate the nose, throat and skin. Repeated minor exposure may have accumulative poisoning effect. Avoid contact with eyes, skin and clothing. **DO NOT** inhale vapour or spray mist. Protect eyes while using. When opening the container and preparing spray, wear elbow-length chemical resistant gloves and a face shield. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length chemical resistant gloves, impervious footwear and half-face piece respirator with combined dust and gas cartridge/canister. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product or spray on skin, immediately wash area with soap and 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, face-shield, respirator or face piece and contaminated clothing. Wash rubber respirator with detergent and warm water.

Conditions for Safe Storage: KEEP OUT OF REACH OF CHILDREN. This product is a Schedule 7 Poison (S7) and must be stored, transported and sold in accordance with the relevant Health Department regulations. This product is classified as a Dangerous Good – Flammable liquid. DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in the closed original container, in a locked, cool well ventilated area, out of direct sunlight. Store in a room or place away from children, animals, food, feed stuffs, seed and fertilizers. DO NOT store near sources of ignition.

SECTION 8**EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines:**

Exposure guidelines have been established for ingredients contained in this product by Safe Work Australia.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Methomyl	2.5 mg/m ³	Not set
Methanol	262 mg/m ³ (200 ppm)	328 mg/kg (250 ppm)

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

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas adequate to keep exposure below the TWA. Keep containers closed when not in use.

Personal Protective Equipment (PPE):

General: When opening the container and preparing spray, wear elbow-length chemical resistant gloves and a face shield. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length chemical resistant gloves, impervious footwear and half-face piece respirator with combined dust and gas cartridge/canister. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product or spray on skin, immediately wash area with soap and 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, face-shield, respirator or face piece and contaminated clothing. Wash rubber respirator with detergent and warm water.

Hygiene Measures: Very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact, inhaled or swallowed. Attacks the eyes. Will irritate the nose, throat and skin. Repeated minor exposure may have accumulative poisoning effect. Avoid contact with eyes, skin and clothing. **DO NOT** inhale vapour or spray mist. Protect eyes while using. 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: Blue coloured liquid.
Odour: Sulfur-like odour.

SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES (Continued)**

Boiling point:	Approximately 62°C.
Freezing point:	No data available.
Specific Gravity:	Approximately 0.9.
Solubility in Water:	Soluble. (Solubility of methomyl is 58 g/L @ 25°C).
pH:	No data available.
Flammability:	Highly Flammable.
Corrosive hazard:	Not corrosive.
Flashpoint (°C):	< 23°C.
Poisons Schedule:	Schedule 7 (S7) poison.
Formulation Type:	Soluble Concentrate (SL).

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. Store away from all sources of ignition. Any electrical equipment in the area of this product should be flame proofed.

Incompatible materials: Strong oxidising agents, strong acids and strong bases.

Hazardous decomposition products: When involved in a fire will emit toxic and noxious fumes. Burnt product will generally produce foul odours.

Hazardous reactions: No special considerations. Hazardous polymerisation is not possible.

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: Very Toxic. LD₅₀ (rat) 30 mg/kg for methomyl. The following symptoms, listed in approximate order of appearance, begin within 30 - 60 minutes and are at a maximum in 2 - 8 hours.

Mild – Anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue and eyelids, contraction of the pupil and impairment of visual acuity.

Moderate – Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular fasciculations.

Severe – Diarrhoea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary oedema, cyanosis, loss of sphincter control, convulsions, coma and heart block. Hyperglycaemia and possible acute pancreatitis have occurred.

Eye: Will irritate the eyes. May cause pupil constrictions.

Skin: This product is a skin irritant. Prolonged contact of the concentrate with skin will result in absorption of some methomyl and methanol which can be harmful. Symptoms of over-exposure may be similar to those described for 'Ingestion'. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. LD₅₀ (rabbit) > 2000 mg/kg for methomyl.

Inhaled: May cause irritation to mucous membranes and respiratory tract. Breathing vapour can result in headaches, dizziness and possible nausea. Breathing in high concentrations of vapour can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness. Inhalation of sprays or mists may result in effects described under 'Ingestion'. LC₅₀ (rat) = 0.3 mg/L/4hr for methomyl aerosol.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)**Long Term Exposure:**

Regular exposure may result in lowering of cholinesterase activity which will recover within a few days after exposure ceases. Repeated or prolonged exposure to high doses of methanol alone may have serious irreversible effects such as blindness. This effect is not relevant with this product, as ingestion of significant quantities would result in death due to toxicity of methomyl.

The weight of evidence is that methomyl is not carcinogenic, mutagenic and does not have any reproductive effects.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Highly toxic to birds. LD₅₀ Bobwhite quail = 24 mg/kg. LD₅₀ hens 28 mg/kg. All deaths occurred within 10 minutes. LD₅₀ Japanese quail = 34 mg/kg. LD₅₀ Mallard duck & pheasants = 16 mg/kg. LD₅₀ starlings = 42 mg/kg. LD₅₀ Red Winged blackbirds = 10 mg/kg. Moderately to highly toxic to fish. LD₅₀ Rainbow trout = 3.4 mg/kg. LD₅₀ Bluegill sunfish = 0.9 mg/kg. LD₅₀ daphnia = 0.032 mg/kg. Highly toxic to aquatic invertebrates. Methomyl does not bioaccumulate. Highly toxic to bees by contact and ingestion, LD₅₀ = 0.1 µg/bee.

Environmental Properties: *Breakdown in water:* Half-life in surface water is estimated at 6 days. Estimated half-life in ground water > 25 weeks. *Breakdown in Soil:* Low persistence in soil. Half-life in soil is approximately 14 days. Highly soluble in water so has a potential for groundwater contamination. *Breakdown in vegetation:* Residues are short lived with half-life of 3 to 5 days.

Do not spray on vegetation where honeybees are foraging. Do not contaminate dams, waterways or sewers with this product or the containers for this product.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in clean-up 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. Eliminate all sources of ignition. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

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: This product is classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail. UN 2758. Proper Shipping Name: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S – flash point less than 23°C (contains Methomyl and Methanol). Packaging Group II. Class 3, Sub-Class 6.1. Hazchem ●3WE. Hazard Identification number 336. Hazard Identification Number (HIN) 30. Australian Standards Initial Emergency Response Guide No. 16.

This product is a Schedule 7 Poison (S7) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 15**REGULATORY INFORMATION**

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a Schedule 7 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 80047.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. T: Toxic.

This product is classified as a Dangerous Good.

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: 17 September 2018. Valid for 5 years till 17 September 2023. (Review of GHS classification).

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).

Anorexia: Lack or loss of appetite for food

Carcinogen: An agent which is responsible for the formation of a cancer.

Fasciculations: A brief spontaneous contraction affecting a small number of muscle fibres, often causing a flicker of movement under the skin.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Hyperglycaemia: An excess of glucose in the bloodstream.

Mutagenic: Capable of inducing a genetic mutation in an organism.

LD₅₀: Median Lethal Dose. A statistically derived single dose of a substance that can be expected to cause death in 50% of dosed animals.

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. (2018).
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.

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