

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Decimator 400 Insecticide**

Other Names: An organophosphorus pesticide, Group 1B Insecticide.

Use: A liquid broad spectrum insecticide.

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

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Emergency Contact: 0411 227 338

Email: wardell@bigpond.net.au

SECTION 2

HAZARDS IDENTIFICATION

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

GHS Classification:

Flammable Liquids: Hazard Category 3.

Acute Toxicity – Inhalation: Category 4.

Acute Toxicity – Dermal: Hazard Category 4.

Acute Toxicity – Dermal: Hazard Category 3.

Acute Toxicity – Oral: Hazard Category 3.

Skin Corrosion/Irritation: Category 2.

Sensitization – Skin: Hazard Category 1, 1A, 1B.

Specific Target Organ Toxicity (Repeated Exposure): Category 1.

Signal Word: DANGER

Hazard Statements:

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H372 Causes damage to organs through prolonged or repeated exposure by ingestion.

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, vapour or spray.

P271 Use only outdoors or in a well-ventilated area.

P264 Wash hands, arms and face thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

SECTION 2 HAZARDS IDENTIFICATION (Continued)**Precautions (Cont):**

- P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE 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.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P321 Specific treatment see Safety Directions on the product label.
 P322 Specific measures see First Aid Instructions on the product label.
 P330 Rinse mouth.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P361 Remove/Take off immediately all contaminated clothing.
 P362 Take off contaminated clothing and Wash before reuse.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use alcohol resistant foam for extinction.

Storage and Disposal:

- P405 Store locked up.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P501: Dispose of contents/container in accordance with national regulations.

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

CHEMICAL	CAS NUMBER	PROPORTION
Dimethoate	60-51-5	400 g/L
Cyclohexanone	108-94-1	453 g/L
Xylene	1330-20-7	137 g/L
Other ingredients determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Ingestion:** If swallowed do NOT induce vomiting. Wash mouth with water. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126. If swallowed, activated charcoal may be advised. Give atropine if instructed.
- Eye contact:** Immediately hold eyes open and flood gently with clean water. 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. If skin is irritated, seek medical advice. Launder contaminated clothing before re-use.
- Inhalation:** Remove to fresh air and observe until recovered. If effects persist, seek medical advice. In severe case, symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

SECTION 4 FIRST AID MEASURES (Continued)

Advice to Doctor: Dimethoate is an anti-cholinesterase compound. Atropine by injection, is the preferred antidote. Oximes, such as 2-PAM/Protopam, may be therapeutic if used early; however, use only in conjunction with atropine. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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. Morphine, barbiturates, phenothiazine derivatives, tranquillizers and all kind of stimulants are contraindicated.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Flammable liquid (C1). Flash point > 23°C and < 61°C. There is a moderate risk of an explosion from this product if commercial quantities are involved in a fire.

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 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. On heating will emit toxic fumes. 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 ACCIDENTIAL RELEASE MEASURES

Emergency procedures / Material and methods for containment and cleanup 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, contain and absorb spilled material with absorbent material such as sand, clay, cat litter or material such as vermiculite and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons.

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. Product is poisonous if absorbed by skin contact or inhaled or swallowed. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with eyes and skin. Do not inhale spray mist. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, face shield and impervious footwear. When using the prepared spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, impervious footwear and half facepiece respirator with combined dust and gas cartridge. If product 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 and if rubber wash with detergent and warm water, and contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Protect from direct sunlight and temperatures above 40°C. If storing for periods of more than 2 - 3 months avoid temperatures above 30°C. Classified as a Dangerous Good – flammable liquid.

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)
Cyclohexanone	100 mg/m ³ (25 ppm)	Not set
Xylene	350 mg/m ³ (80 ppm)	655 mg/m ³ (150 ppm)

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

Biological Limit Values:

This product is an organophosphate pesticide and health monitoring maybe required. See the Safe Work Australia guidance notes titled "Health monitoring for Exposure to Hazardous Chemicals" and "Organophosphate Pesticides".

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 cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, face shield and impervious footwear. When using the prepared spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, impervious footwear and half facepiece respirator with combined dust and gas cartridge. If product on skin, immediately wash area with soap and water.

Hygiene Measures: Product is poisonous if absorbed by skin contact or inhaled or swallowed. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with eyes and skin. Do not inhale spray mist. 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 and if rubber wash with detergent and warm water, and contaminated 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:	Faint peach coloured liquid.
Odour:	Mercaptan/acetone odour (characteristic organophosphorus odour).
Boiling point:	Expected to be 140°C.
Freezing point:	Below 5°C.
Specific Gravity:	Approximately 1.
Solubility in Water:	Emulsifies in water.
pH:	No data available.
Flammability:	Combustible.
Corrosive hazard:	Not corrosive.
Flashpoint (°C):	> 62°C.
Poisons Schedule:	S6.
Formulation Type:	Emulsifiable concentrate (EC).

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 particular reactions to avoid.

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.

Excessive exposure may produce organophosphate type cholinesterase inhibition. Signs and symptoms of excessive exposure to dimethoate may be headache, dizziness, in-coordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhoea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.

Potential Health Effects:**ACUTE EFFECTS**

Swallowed: Harmful if swallowed. Acute oral LD₅₀ = 180 to 330 mg/kg for dimethoate. Calculated LD₅₀ for product = 385 to 635 mg/kg.

Eye: This product may cause eye irritation. Symptoms may include stinging and reddening of eyes and watering. If exposure is brief, symptoms should disappear once exposure has ceased and product washed from eyes.

Skin: May cause mild irritation of the skin, but unlikely to be sensitising. Prolonged skin contact with the concentrate can cause defatting of the skin and may result in dermatitis. Repeated minor exposure may have a cumulative poisoning effect.

Inhaled: Probably an inhalation irritant. Breathing vapour can cause headaches, dizziness and nausea. Avoid inhalation of vapours.

Long Term Exposure:

Chronic toxicity: Repeated or prolonged exposure to organophosphates may result in the same effects as acute exposure including the delayed symptoms. There was no cholinesterase inhibition in an adult human who ingested 18 mg (about 0.26 mg/kg/day) of Dimethoate/day for 21 days. No toxic effects and no cholinesterase inhibition were observed in individuals who ingested 2.5 mg/day (about 0.04 mg/kg/day) for 4 weeks. In another study with humans given oral doses of 5, 15, 30, 45 or 60 mg/day for 57 days, cholinesterase inhibition was observed only in the 30 mg/day and higher dosage groups. Repeated or prolonged exposure to organophosphates may result in the same effects as acute exposure, including the delayed symptoms. Other effects reported in workers repeatedly exposed include impaired memory and concentration, disorientation, severe depression, irritability, confusion, headache, speech difficulties, delayed reaction times, nightmares, sleepwalking, and drowsiness or insomnia. An influenza-like condition with headache, nausea, weakness, loss of appetite, and malaise has also been reported.

Reproductive effects: Current evidence indicates that Dimethoate does not adversely affect reproduction.

Teratogenic effects: Dimethoate is teratogenic in cats and rats at 12 mg/kg/day. There were no teratogenic effects seen in the offspring of mice given 9.5 to 10.5 mg/kg/day Dimethoate in their drinking water. It is not likely that teratogenic effects will be seen in humans under normal circumstances.

Mutagenic effects: Mutagenic effects due to Dimethoate exposure were seen in mice. They were more prominent in male mice given a single high dose of Dimethoate than in male mice given one twelfth of the same dose daily for 30 days. Mutagenic effects are unlikely in humans under normal circumstances.

Carcinogenic effects: An increase in malignant tumours was reported in rats given oral doses of 5, 15 or 30 mg/kg/day Dimethoate for over a year. The increases were not, however, dose dependent. That is, higher doses did not necessarily result in higher tumour rates. Thus the evidence of carcinogenicity, even with high-dose, long-term exposure, is inconclusive. This suggests carcinogenic effects in humans are unlikely.

Organ toxicity: Target organs as determined through animal tests include the testicles, kidneys, liver, and spleen.

Fate in humans and animals: Dimethoate is rapidly metabolized by mammals. Rats excreted about 50 to 60% of administered doses in urine, expired air and faeces within 24 hours. Human volunteers excreted 76 to 100% of administered Dimethoate within 24 hours.

SECTION 12**ECOLOGICAL INFORMATION**

Environmental Toxicology: Dimethoate is moderately to very highly toxic to birds. In Japanese quail, a 5-day dietary LC₅₀ of 341 ppm is reported. It may be very highly toxic to other birds with reported acute oral LD₅₀ values of 41.7 to 63.5 mg/kg in mallards and 20.0 mg/kg in pheasants. Birds are not able to metabolize Dimethoate as rapidly as mammals do, which may account for its relatively higher toxicity in these species. Dimethoate is moderately toxic to fish, with reported LC₅₀ values of 6.2 mg/L in rainbow trout, and 6.0 mg/L in bluegill sunfish. It is more toxic to aquatic invertebrate species such as stoneflies and scuds. Daphnids (*Daphnia magna*) 48 hour EC₅₀ = 8.9 mg/L. Green algae (*Pseudokirchneriella subcapitata*) 72 hour EC₅₀ = 246 mg/L. Dimethoate is highly toxic to honeybees. The 24 hour topical LD₅₀ for Dimethoate in bees is 0.12 µg per bee.

Environmental Fate:

Dimethoate has low persistence in the soil environment. Soil half-lives of 4 to 16 days, or as high as 122 days have been reported, but a representative value may be on the order of 20 days. Because it is rapidly broken down by soil microorganisms, it will be broken down faster in moist soils. Biodegradation may be significant, with a 77% loss reported in a nonsterile clay loam soil after 2 weeks. In water, Dimethoate is not expected to adsorb to sediments or suspended particles, nor to bioaccumulate in aquatic organisms. It is subject to significant hydrolysis, especially in alkaline waters. The half-life for Dimethoate in raw river water was 8 days, with disappearance possibly due to microbial action or chemical degradation. Photolysis and evaporation from open waters are not expected to be significant. Breakdown in vegetation: Dimethoate is not toxic to plants.

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. 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 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 bury empty containers in 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, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14**TRANSPORT INFORMATION**

Transport: This product is classified as a Dangerous Good. UN 1993, Proper Shipping Name FLAMMABLE LIQUID, N.O.S. (Contains Cyclohexanone, Xylene). Packaging Group III. Hazchem 3W. Hazard Identification Number (HIN) 30. Australian Standards Initial Emergency Response Guide No. 14.

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. 70165.

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

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: 15 July 2015. Valid for 5 years till 15 April 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.

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.

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.

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