



Insectigas™ D

Material Safety Data Sheet #: **058**

Issued: 28 February 2001

This product is a simple asphyxiant and is classified as harmful according to criteria of Worksafe Australia.

Risk phrases: Harmful by inhalation, in contact with skin and if swallowed.

Safety phrases: Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. If you feel unwell, contact a doctor or Poisons Information Centre immediately (show label where possible).

COMPANY DETAILS

Company: BOC Gases Australia Limited
A.B.N. 95 000 029 729
Address: Riverside Corporate Park, 10 Julius Avenue,
North Ryde NSW 2113
Telephone Number: (02) 8874 4400
Emergency Telephone Number: 1800 653 572

IDENTIFICATION

Product name: Insectigas D
Other names:
Product code: 188
UN number: 1967
Dangerous Goods: 2.3
HAZCHEM code: 2XE
Poisons schedule: 6
Pack size: 6 kg (DE), 31 kg (GE)
Use: Space spray for control of flying and crawling insects.
Application method: Cylinder positioned vertically with valve at top. Portable cylinders connected to hand held spray gun or manifolded cylinders connected to fixed pipework distribution system with spray nozzles and controlled release.

Physical Description/Properties:

Appearance : Colourless mist with aromatic odour.
Boiling point (deg. C at 101.32 kPa): -78 approximately
Vapour pressure (kPa at 25 deg. C): 6,300 approximately
Relative density (0 deg. C, 101.3 kPa, Air=1): 1.53
Flashpoint (deg C): Non-flammable
Lower flammability limit (%): Non-flammable
Upper flammability limit (%): Non-flammable

Solubility in water (101.32 kPa, 25 deg. C): Carbon Dioxide: 0.759 cm³/cm³
DDVP negligible.

Other properties:

High pressure liquefiable gas, critical temperature deg. C: 31 approximately

Critical pressure kPa: 7,380 approximately

Odour threshold: Not determined.

Reactions: Dust of aluminium, chrome manganese may ignite then explode when heated in carbon dioxide. Incompatible with acrylaldehyde, aziridine, metal acetylides, sodium peroxide.

Material compatibility: DDVP will react with moisture to form corrosive breakdown products which attack mild steel. Avoid wetting surfaces which have plastic, painted, and similar surfaces or are very absorbent (e.g. furnishings). Aluminium or stainless steel preferred. Teflon and Nylon suitable but most rubbers and plastics are affected by Carbon Dioxide. Corrosive when moist.

Cylinder colour: Grey green body, golden yellow shoulder, black eductor tube stripe.

Cylinder valve outlet: AS2473 Type 40. Requires nylon washer.

Cylinder valve safety device: Not allowed.

Approximate weight when full: DE 16 kg, GE 75 kg.

This product is an Australian registered Agricultural Chemical for use by registered pest controllers.

Ingredients	Chemical name:	CAS number:	Proportion:
	2,2-dichlorovinyl dimethyl phosphate (DDVP, dichlorvos)	62-73-7	50g/kg
	Carbon Dioxide	124-38-9	balance

HEALTH HAZARD INFORMATION

Health Effects: DDVP is absorbed through the skin, eyes, lungs and stomach. A relatively short exposure may cause poisoning by blocking cholinesterase in the blood and muscles. Symptoms of poisoning may be of sudden onset and should not be ignored. Children are more susceptible than adults.

Acute: DDVP may induce vomiting, nausea, diarrhoea, slow pulse, headache, giddiness, tearing, blurred vision, sweating, muscular weakness, staggering, abdominal, cramping, difficulty breathing and loss of consciousness. Escaping liquid from the cylinder can form a dry ice powder like snow and leave a liquid DDVP residue. Uncontrolled release of compressed gas may cause physical injuries in addition to the following health effects:

Swallowed: Solid carbon dioxide will cause severe cold burns to mouth and throat.

Eye: Contact with spray mist may cause irritation. Eye contact with dry ice powder could result in frostbite or cold burns.

Skin: Dermatitis may be caused in sensitised individuals. Skin contact with dry ice powder could result in frostbite or cold burns.

Inhaled: Inhalation of spray mist may cause asthmatic reactions in sensitised individuals. **Carbon Dioxide** in low concentrations of 3 to 5% by volume in air can cause increased respiration and headache. Concentrations of 8 to 15% can cause

headache, nausea and vomiting which may lead to unconsciousness. Higher concentrations can cause rapid circulatory insufficiency leading to coma and death.

Chronic: Carbon Dioxide is potentially toxic at concentrations below 3% due to cellular membrane effects and biochemical alterations such as increased P(CO₂), increased concentration of bicarbonate ions and acidosis. Long term exposures to levels between 0.5 and 1% are likely to cause calcium deposition in body tissues including kidneys.

First Aid: Rescue personnel are advised to monitor oxygen concentration or use self contained breathing apparatus when entering confined spaces and poorly ventilated areas.

Swallowed: Drink large volumes of water. seek medical attention.

Eye: Dry ice powder: keep patient calm. Immediately flush with tepid water in large quantities, or with sterile saline solution. Hold eyelids apart and irrigate with gentle flow for 15 minutes bathing entire eyeball. Seek medical attention.

Skin: Drench shower or irrigate with water for 15 to 20 minutes. Remove contaminated clothing under shower. Wash skin thoroughly with soap and water. If any symptoms are present commence atropinisation (see advice to doctor). **Cold burns:** irrigate with tap or tepid water for 15 to 30 minutes. Apply sterile dressing and treat as thermal burn. Immerse large areas or limbs in tap or tepid water for 15 to 30 minutes. Do not apply any form of direct heat. Seek medical attention.

Inhaled: Remove from exposure. Check there is no obstruction to the airway if breathing is weak or has ceased and give artificial respiration, preferably using an oxygen resuscitator. Keep warm and rested. If any symptoms are present commence atropinisation (see advice to doctor). Seek medical attention.

First Aid Facilities: Atropine tablets. Air Viva™ or Oxy Viva™ . Water or sterile saline solution for irrigation.

Advice to Doctor: Ensure adequate oxygenation as atropine may precipitate ventricular fibrillation in the presence of cyanosis. Antidotes:

1. Atropine sulphate. 2.5 mg IMI and repeat every 10 minutes until signs of atropinisation occur (flushed face, dry mouth, widely dilated pupils, fast pulse (>140). Repeat atropine to maintain mild atropinisation for 24-48 hours. Interruption of therapy has caused fatal pulmonary oedema or respiratory failure.
2. Cholinesterase reactivator. 2-PAM, Pralidoxime, Protopam, 2 pyridine aldoxine, methchloride (methiodide). This should be given after full atropinisation. (2 x 20 mL ampoules) by slow IV injection. Repeat dose in 30 minutes if respiration not improved. This dose may be repeated twice within each 24 hour period. 2 PAM is of low toxicity if used at above doses but can cause symptoms similar to OP poisoning if dosage is excessive. Avoid use of morphine, aminophylline, phenothiazines or respiratory depressants.

PRECAUTIONS FOR USE

Exposure Standards: Worksafe exposure standard TLV TWA for DDVP is 0.1 ppm, carbon dioxide is 5,000 ppm and STEL is 30,000 ppm. A significant source of exposure to DDVP may be through the skin.

Engineering Controls: Do not expose cylinders to aggressive chemical or industrial environments which will affect the integrity of the cylinder. High pressure liquefied gas cylinder fitted with eductor tube for liquid withdrawal when vertical with valve at top. Do not connect a gas regulator to the cylinder valve. A nylon washer and matching cylinder valve connection are required to make a leak tight connection to dispensing equipment. Never allow oil or grease on cylinder valves. Aluminium or stainless steel preferred. Teflon and Nylon suitable but most rubbers and plastics are affected by Carbon Dioxide. Manifolled cylinders should be positioned in well ventilated areas, preferably outside buildings and away from heat sources. Mechanical lifting devices and trolleys should be used to lift and move cylinders. Secure cylinders against falling at all times, especially when in use. Ensure cylinder valve is shut and equipment depressurised before commencing maintenance and repairs. To maximise the effectiveness of the product it is applied with artificial and natural ventilation closed. Hand held application should commence at the furthest point from the exit and continue as the operator moves away from the spray drift towards the exit. Entry should be barred to areas in which fixed nozzle spraying occurs during spraying. Ventilation should be re-opened 4 hours after spraying has ceased and operate for 30 minutes before re-occupation is permitted.

Personal Protection: Avoid contact with escaping product. Only experienced and properly trained people should use this product. Wear protective clothing, chemical resistant (neoprene) gloves and full-face respirator with agricultural filter. Avoid inhaling spray mist and wash hands after use. People, pets, and domestic animals should be removed from the treatment area and food and water covered during, and for 2 hours after spraying.

Flammability: Non-flammable product.

SAFE HANDLING INFORMATION

Storage and Transport: Commonwealth, State and Territory Dangerous Goods legislation contain provisions which affect compressed gas storage and transport.

Store: Cylinders should be stored: upright, prevented from falling, in a secure area away from flammable or combustible materials and food stuffs; below 45 deg C, in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete); away from areas of heavy traffic and emergency exits.

Transport: Ensure cylinder is separated from the driver. Shipping name: Insecticide gas, toxic n.o.s. (dichlorvos) non-flammable. Transport E.P.G. card: 2B1

Spills and disposal: Always connect to equipment suitable for dispensing liquid carbon dioxide. In an emergency allow product to escape to atmosphere preferably in a well ventilated, remote location. Monitor oxygen concentration in confined spaces. Contact nearest BOC Gases centre for guidance. Leak checking may be done by pressure drop test or by using soapy water on joints and outlets. Shut cylinder valve to stop leaks if possible and safe to do so. If cylinder or cylinder valve is leaking then shut cylinder valve, depressurise equipment, disconnect cylinder from equipment and move the cylinder to a well ventilated area, preferably outdoors and allow gas to escape. Never attempt to repair a leaking or damaged cylinder valve. Notify the

nearest BOC Gases centre that you will be returning a faulty cylinder. Residual product will be disposed of when the cylinder is returned. Ensure work area is thoroughly ventilated before re-entry.

Fire/Explosion Hazard: Temperatures in a fire may cause cylinders to rupture violently. There are no hazardous decomposition products. Call fire brigade. Cool cylinders exposed to fire by applying water from a protected location. Do not approach cylinders suspected of being hot. Remove cool cylinders from the path of the fire. Evacuate the area if unable to keep cylinders cool. Ensure work area is thoroughly ventilated before re-entry.

CONTACT POINT

Technical Support: 131 262 (B/Hrs)
or 132 427 (fax)

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