





Section 1: Identification: Product identifier and chemical identity

Product Identifier:	CHOICE METHOMYL 225 INSECTICIDE
Other Means of Identification:	Group 1A insecticide. Grow Choice product code number: 225 AVPMA registered number: 89110
Recommended Use:	For the control of certain insect pests of cereals, fruit, legumes, cotton, oilseed crops, tobacco, potatoes, vegetables, pastures, peanuts, ginger, duboisia, and other crops as listed in the Directions for Use table on the label.
Details of manufacturer or importer:	Grow Choice Pty Ltd ABN 36 161 264 884
Address:	113 Fitzroy Street TAMWORTH NSW 2340 AUSTRALIA
Website:	www.growchoice.com.au
Phone Number & Email:	(02) 6766 3979 - admin@growchoice.com.au
Emergency Phone Number:	In Case Of Emergency Dial 000
Poisons Information Centre:	Phone: 13 11 26 and speak to a Poisons Information Specialist. Fax: +61 2 9845 3597 http://www.chw.edu.au/poisons/contact.htm

Section 2: Hazards identification

Classification of the substance and mixture:	Acute Toxicity - Oral: Category 2 Acute Toxicity - Dermal: Category 3 Acute Toxicity - Inhalation: Category 3 STOT Single Exposure Category 1 Flammable Liquids: Category 2 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Signal word:	DANGER
Hazard statements:	Fatal if swallowed. Toxic in contact with skin. Toxic if inhaled. Causes damage to organs. Highly flammable liquid and vapour. Very toxic to aquatic life with long lasting effects.
Precautionary Statements (General):	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.
Pictograms:	Flame, Health hazard, Skull and crossbones, Environment. The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.
	   
Precautionary Statements (Prevention):	Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, clothing, eye and face protection. Do not breathe vapours or spray. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Keep container tightly closed.
Precautionary Statements (Response):	IF exposed: Call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.

Precautionary Statements (Response) (cont...):	Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Other Information:	Poisons Schedule S7 DANGEROUS POISON

Section 3: Composition and information on ingredients

Chemical Nature	Liquid	
Hazardous ingredients		
Chemical Identity	CAS No	Proportion
Methomyl	16752-77-5	225 g/L
Methanol	67-56-1	593 g/L
Water and minor components	N/A	10-30 %

Section 4: First aid measures

In Case Of Emergency Dial 000 and/or Poisons Information Centre: Phone: 13 11 26 and speak to a Poisons Information Specialist. Take this SDS and or DFU/Label with you or when calling the Poisons Information Centre.	
General Advice:	<p>If Inhaled: Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice immediately.</p> <p>Skin Contact: Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use. All contaminated leather items should be discarded. Seek medical advice, but only after the exposed skin has been thoroughly washed.</p> <p>Eye Contact: If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice immediately.</p> <p>Ingestion: Rinse mouth thoroughly with water. Seek medical advice immediately.</p>
Note to Physician:	<p>An anticholinesterase compound.</p> <p>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.</p> <p>Atropine: Atropine should be given, beginning with 1.2 - 2mg iv repeated at 10 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.).</p> <p>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, including carbaryl, worse.</p> <p>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 10mg 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.</p>

Section 5: Fire fighting measures

Suitable Extinguishing Equipment:	Water fog, foam, carbon dioxide or dry chemical. Avoid using large volumes of water which would spread the product.
Hazards from Combustion:	If involved in a fire, it will emit oxides of carbon, oxides of nitrogen and possibly oxides of sulphur.
Special Protective Equipment and Precautions for Fire Fighters:	Breathable air apparatus should be worn when fighting a fire in which this product is involved.
Hazchem Code:	2WE Classified as hazardous.
Further Information:	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

Section 6: Accidental release measures

Spills & disposal:	Shut off all possible sources of ignition. Keep upwind. Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal.
Personal precautions:	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental precautions:	Prevent from entering drains, waterways or sewers
Methods for cleaning up or taking up:	If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas, as possible, before absorbing remaining material into vermiculite or other absorbent. To clean and neutralise spill area, tools and equipment, wash with a bleach or caustic/soda ash solution. Absorb as above any excess liquid and add to the drums of waste already collected.

Section 7: Handling and storage

Conditions for safe storage, including incompatibilities:	Store in an area suitable for flammables. Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Store in a well ventilated place away from ignition sources. Store in a locked enclosure. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.
Other information:	Always read the label and any attached leaflet before use

Section 8: Exposure controls and personal protection

Occupational exposure limit values:					
	<u>Name</u>	STEL		TWA	
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>
	Methanol	328	250	262	200
	Methomyl			2.5	
Other exposure information:	NOHSC has set the following exposure standard for methanol: TLV (TWA) 262 mg/m3, STEL -, SK. 'SK' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.				
Appropriate engineering controls:	Use with local exhaust ventilation or while wearing appropriate respirator.				

Personal protective equipment:	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat, elbow-length PVC gloves, goggles, impervious footwear and half piece respirator with combined dust and gas cartridge (canister). If clothing becomes contaminated with product or wet with spray, remove clothing immediately.
Re-entry Period:	Do not allow entry into treated areas for 24 hours after treatment. When prior entry is necessary, wear all protective clothing and chemical resistant gloves.
Hygiene measures:	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.
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 9: Physical and chemical properties

Appearance:	Blue Liquid	Volatile Components:	~52%
Odour:	Sulfur-like odour	Flammable Limits - Lower:	6.7% by volume
pH:	7 - 7.5 (undiluted)	Flammable Limits - Upper:	36.5% by volume
Flammability:	Highly Flammable	Specific Gravity:	0.90
Flash Point:	21°C	Vapour Pressure:	0.72 mPa (25°C methomyl) 16.96 kPa (25°C methanol)
Auto-Ignition Temperature:	470°C	Solubility in water:	Solubility of methomyl is 58g/l @ 25°C
Partitioning coefficient n-octanol/water (log Pow):	Kow Log P is 0.093 for methomyl		

Section 10: Stability and reactivity

Chemical Stability:	Stable under normal conditions.
Substances to avoid:	Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime.
Hazardous polymerisation:	Hazardous polymerisation is not possible.

Section 11: Toxicological information

Toxicology Information:	No harmful effects are expected if the precautions on the label and this MSDS are followed.
Acute Toxicity - Oral	LD50 (rat) 30 mg/kg for methomyl For methanol, toxicity values vary widely in the literature, but values are always much higher than methomyl. The toxicity of this product is almost entirely due to the methomyl component.
Acute Toxicity – Dermal:	LD50 (rabbit) >2000 mg/kg for methomyl.
Acute Toxicity – Inhalation:	LC50 (rat) (4hr) 0.3 mg/l for methomyl aerosol.

Ingestion:	<p>The following symptoms, listed in approximate order of appearance, begin within 30-60 minutes and are at a maximum in 2-8 hours:</p> <p>Mild - Anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue and eyelids, contraction of the pupil and impairment of visual acuity.</p> <p>Moderate - Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular fasciculations.</p> <p>Severe - Diarrhea, pinpoint and non reactive pupils, respiratory difficulty, pulmonary oedema, cyanosis, loss of sphincter control, convulsions, coma and heart block. Hyperglycemia and possible acute pancreatitis have occurred.</p>
Inhalation:	<p>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.</p>
Skin:	<p>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.</p>
Eye:	Will irritate the eyes. May cause pupil constriction.
Carcinogenicity:	The weight of the evidence is that methomyl is not carcinogenic.
Reproductive Toxicity:	Data indicates no reproductive effects.
Chronic Effects:	<p>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 the toxicity of methomyl.</p>
Serious eye damage/irritation:	The product is an eye irritant.
Mutagenicity:	The weight of evidence indicates that methomyl does not present a mutagenic risk.
Skin corrosion/irritation:	The product is a skin irritant.
Other information:	The Australian Acceptable Daily Intake (ADI) for methomyl for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.25 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).

Section 12: Ecological information

Other Precautions:	<p>Do not spray on vegetation where honeybees are foraging. Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.</p>
Environmental Protection:	<p>Marine pollutant. Spray drift can cause damage, read the label for more information.</p>
Acute Toxicity - Fish:	<p>The following is data for the active ingredient, methomyl. LC50 (96hr) for rainbow trout is 3.4 mg/l. LC50 (96hr) for bluegill sunfish is 0.9 mg/l.</p>
Acute Toxicity – Daphnia:	LC50 (48hr) for daphnia is 0.032 mg/l for methomyl.

Acute Toxicity - Other Organisms:	The following data is for the active ingredient, methomyl. Bees: Toxic to bees. LD50 0.1 µg/bee. Birds: Toxic to birds. LD50 for mallard ducks is 15.9 mg/kg.
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Section 13: Disposal considerations

Product Disposal:	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Container Disposal:	Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. 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 at an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm 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. Empty containers and product should not be burnt. 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.
Returnable Containers:	Empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

Section 14: Transport information

UN number:	2758	Packing group:	II
Hazard class:	3	Sub.Risk:	6.1
UN Proper shipping name:	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC flash point less than 23°C (contains Methomyl and Methanol)		
Hazchem Code:	2WE		
Storage and transport:	Considered dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.		
EPG Number:	3A2	IERG Number:	16
UN Number (Sea Transport):	2758	IMO Class/Packing Group:	Class 3; Packing Group II
IMO Proper Shipping Name:	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC flash point less than 23°C (contains Methomyl and Methanol)		

Section 15: Regulatory information

Regulatory Information:	WHS Schedule 11, item 7 (flammable liquid, category 2), item 34 (acute toxicity, category 2).
National and or International Regulatory Information:	This product is a carbamate and is a cholinesterase inhibitor. While not specifically included in regulations, it may be prudent to treat occupational health surveillance similarly to that for organophosphates. There is a legislative requirement in most States in Australia for workers to be medically monitored when using organophosphates, by:- estimation

National and or International Regulatory Information (cont...):	of red cell and plasma cholinesterase activity towards the end of the day on which organophosphates have been used'. Ref: Control of Workplace Hazardous Substances, NOHSC:1005.
Packaging & Labelling	DANGEROUS POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Other Information:	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA).
Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 7	
Registration status: Registered	APVMA approval: 899110

Section 16: Any other relevant information

Date of preparation or last revision: 12 January 2021
Source of Data: The information provided in this SDS is sourced from Grow Choice studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.
Note: This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions
CONTACT POINT: Grow Choice Pty Ltd (02) 6766 3979 24 HOURS EMERGENCY CONTACT: 1800 033 111
This Material Safety Data Sheet 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.
DISCLAIMER This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Grow Choice's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Grow Choice shall have no liability.

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