

OzCrop Methomyl 225 SL Insecticide OzCrop

Chemwatch: 5360-27 Version No: 4.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 10/12/2021 Print Date: 27/09/2022 S.GHS.AUS.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	OzCrop Methomyl 225 SL Insecticide
Chemical Name	Not Applicable
Synonyms	APVMA Number: 84035
Proper shipping name	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23°C
Chemical formula	Not Applicable
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Insecticide.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	OzCrop
Address	G13/25 Solent Circuit Norwest NSW 2153 Australia
Telephone	+61 2 8123 0170
Fax	+61 2 8123 0171
Website	http://www.ozcrop.com.au
Email	orders@ozcrop.com.au

Emergency telephone number

	Association / Organisation	In Transport Emergency DIAL 000
	Emergency telephone numbers	1800 033 111 (24 hours - Australia wide)
C	Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	S7
Classification [1] Flammable Liquids Category 2, Acute Toxicity (Oral) Category 2, Acute Toxicity (Dermal) Category 3, Serious Eye Damag Category 2B, Acute Toxicity (Inhalation) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)







Signal word Danger

Hazard statement(s)

H410	Very toxic to aquatic life with long lasting effects.
H331	Toxic if inhaled.
H320	Causes eye irritation.
H311	Toxic in contact with skin.
H300	Fatal if swallowed.
H225	Highly flammable liquid and vapour.

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Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and protective clothing.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.	
P330	Rinse mouth.	
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.	
P302+P352	IF ON SKIN: Wash with plenty of water.	
P304+P340	IF INHALED: Remove person to fresh air and keep 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.	
P311	Call a POISON CENTER/doctor/physician/first aider.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.	
P391	Collect spillage.	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].	

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
16752-77-5	10-30	methomyl
Not Available		(225g/L)
Legend:	Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

SECTION 4 First aid measures

	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water.
Eye Contact	• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
_,	Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
	 Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
	If product comes in contact with skin:
	Contact a Poisons Information Centre or a doctor.
	DO NOT allow clothing wet with product to remain in contact with skin, strip all contaminated clothing including boots.
Skin Contact	Quickly wash affected areas vigorously with soap and water.
	DO NOT give anything by mouth to a patient showing signs of narcosis, i.e. losing consciousness.
	Give atropine if instructed.
	DO NOT delay, get to a doctor or hospital quickly.
	If spray mist, vapour are inhaled, remove from contaminated area.
	Contact a Poisons Information Centre or a doctor at once.
Inhalation	▶ Lay patient down in a clean area and strip any clothing wet with spray.
	Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
	Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained.

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	Perform CPR if necessary. DO NOT give anything by mouth to a patient showing signs of narcosis, i.e. losing consciousness. Give atropine if instructed. Get to doctor or hospital quickly.
Ingestion	If swallowed: Contact a Poisons Information Centre or a doctor at once. If swallowed, activated charcoal may be advised. Give atropine if instructed. REFER FOR MEDICAL ATTENTION WITHOUT DELAY. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

Indication of any immediate medical attention and special treatment needed

Following acute or short term repeated exposures to carbamates:

- Carbamylation of acetylcholinesterase produces symptoms of muscarinic and nicotinic poisoning. Clinical effects disappear within 24 hours following spontaneous, in vivo, hydrolysis of the complex. Symptoms develop within 15 minutes to 2 hours.
- Access the adequacy of the airway and ventilation and use oxygen, suction, intubation, artificial ventilation, intravenous lines and cardiac monitors as needed.
- Usual methods of decontamination (Ipecac / lavage / charcoal / cathartics) may be used when the patient presents within 2-4 hours after exposure. When Ipecac Syrup is used the patient must be observed closely to prevent aspiration.
- Atropine is the antidote of choice. Pralidoxime [and other oximes] usually is unnecessary and, in any case, may reduce the effectiveness of atropine. [Mild cases should be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should given 2 to 4 mg intramuscularly every 10 minutes until fully atropinized, then every 30 to 60 minutes to maintain the effect for at least 12 hours - Incitec] [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 Firefighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result Fire Incompatibility

Advice for firefighters

Advice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. If containment of runoff is not possible, consider allowing fire to burn-out. Use of water may present a significant pollution hazard.
Fire/Explosion Hazard	 Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) nitrogen oxides (NOx) sulfur oxides (SOx) silicon dioxide (SiO2) hydrogen sulfide (H2S) other pyrolysis products typical of burning organic material.
HAZCHEM	•3WE

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills

Environmental hazard - contain spillage.

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Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. $\mbox{\ }\mbox{\ }\mbox{\ }$ Control personal contact with the substance, by using protective equipment. Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container. Environmental hazard - contain spillage. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. $\label{eq:wear-full-body} \bullet \mbox{ Wear full body protective clothing with breathing apparatus.}$ Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). No smoking, naked lights or ignition sources. Increase ventilation. **Major Spills** Stop leak if safe to do so. Water spray or fog may be used to disperse vapour. Contain or absorb spill with sand, earth or vermiculite. ▶ Use only spark-free shovels and explosion proof equipment. ▶ Collect recoverable product into labelled containers for recycling. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling	
Safe handling	 Containers, even those that have been emptied, may contain explosive vapours. Do NOT cut, drill, grind, weld or perform similar operations on or near containers. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights, heat or ignition sources. When handling, DO NOT eat, drink or smoke. Vapour may ignite on pumping or pouring due to static electricity. DO NOT use plastic buckets. Earth and secure metal containers when dispensing or pouring product. Use spark-free tools when handling. Avoid contact with incompatible materials. Keep containers securely sealed. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Other information	 Store in original containers in approved flame-proof area. No smoking, naked lights, heat or ignition sources. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. Keep containers securely sealed. Store away from incompatible materials in a cool, dry well ventilated area. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

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Other information	Store away from incompatible materials in a cool, dry well ventilated area. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.	
Conditions for safe storage, in	cluding any incompatibilities	
Suitable container	 Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid. Check that containers are clearly labelled and free from leaks. For low viscosity materials (i): Drums and jerry cans must be of the non-removable head type. (ii): Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) For manufactured product having a viscosity of at least 250 cSt. (23 deg. C) Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used. Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic. 	
Storage incompatibility	 Explosion or violent decomposition during distillation of aldoximes has been attributed to the presence of peroxides arising from autooxidation. Peroxides may form on the -C=NOH system (both aldehydes and hydroxylamine peroxides) or perhaps arise from unreacted aldehyde. Explosion hazards are inherent to ketoximes and many of their derivatives. Such hazard has been attributed to the inadvertent occurrence of acidic conditions leading to the highly exothermic Beckmann rearrangement accompanied by potentially catastrophic gas evolution. The presence of acidic salts (iron(III) chloride), or the ketoxime hydrochloride markedly lowers decomposition temperatures. A range of exothermic decomposition energies for oximes is given as 170-230 kJ/mol. The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on a 	

molar basis (J/g) be used in the assessment. For example, in "open vessel processes" (with man-hole size openings, in an industrial setting),

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substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in "closed vessel processes" (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g.

BRETHERICK: Handbook of Reactive Chemical Hazards, 4th Edition

- Carbamates are incompatible with strong acids and bases, and especially incompatible with strong reducing agents such as hydrides.
- Flammable gaseous hydrogen is produced by the combination of active metals or nitrides with carbamates.
- ▶ Strongly oxidising acids, peroxides, and hydroperoxides are incompatible with carbamates.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	methomyl	Methomyl	2.5 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
methomyl	0.91 mg/m3	10 mg/m3	23 mg/m3

Ingredient	Original IDLH	Revised IDLH
methomyl	Not Available	Not Available

Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)

Appropriate engineering controls

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted. accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

- Adequate ventilation is typically taken to be that which limits the average concentration to no more than 25% of the LEL within the building, room or enclosure containing the dangerous substance.
- Ventilation for plant and machinery is normally considered adequate if it limits the average concentration of any dangerous substance that might potentially be present to no more than 25% of the LEL. However, an increase up to a maximum 50% LEL can be acceptable where additional safeguards are provided to prevent the formation of a hazardous explosive atmosphere. For example, gas detectors linked to emergency shutdown of the process might be used together with maintaining or increasing the exhaust ventilation on solvent evaporating ovens and gas turbine enclosures.
- Temporary exhaust ventilation systems may be provided for non-routine higher-risk activities, such as cleaning, repair or maintenance in tanks or other confined spaces or in an emergency after a release. The work procedures for such activities should be carefully considered.. The atmosphere should be continuously monitored to ensure that ventilation is adequate and the area remains safe. Where workers will enter the space, the ventilation should ensure that the concentration of the dangerous substance does not exceed 10% of the LEL (irrespective of the provision of suitable breathing apparatus)

Personal protection









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Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

See Hand protection below

- ▶ Wear chemical protective gloves, e.g. PVC.
- ▶ Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact
- · chemical resistance of glove material,
- · glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.

Hands/feet protection

- · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- · Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- · Excellent when breakthrough time > 480 min
- · Good when breakthrough time > 20 min
- · Fair when breakthrough time < 20 min
- · Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection

See Other protection below

Overalls

- ► PVC Apron.
- ▶ PVC protective suit may be required if exposure severe.
- Eyewash unit.
- ▶ Ensure there is ready access to a safety shower.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.

Other protection

- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).
- Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.
- ▶ Ensure that there is a supply of atropine tablets on hand
- Ensure all employees have been informed of symptoms of cholinesterase poisoning and that the use of atropine in first aid is understood.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

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Material	СРІ
PE	В
SARANEX-23	В

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS	-	A-PAPR-AUS / Class 1
up to 50 x ES	-	A-AUS / Class 1	-
up to 100 x ES	-	A-2	A-PAPR-2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or

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* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted

hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Blue highly flammable liquid; mixes with water.		
Physical state	Liquid	Relative density (Water = 1)	1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	21	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (Not Available%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhaled

Poisoning due to cholinesterase inhibitors causes symptoms such as increased blood flow to the nose, watery discharge, chest discomfort. shortness of breath and wheezing. Other symptoms include increased production of tears, nausea and vomiting, diarrhoea, stomach pain, involuntary passing of urine and stools, chest pain, breathing difficulty, low blood pressure, irregular heartbeat, loss of reflexes, twitching, visual disturbances, altered pupil size, convulsions, lung congestion, coma and heart failure.

Symptoms of carbamate poisoning are similar to that of organophosphate poisoning, however, recovery from carbamate poisoning is quicker and generally less likely to be cause death.

Breathing of methomyl vapour, dust or sprays may aggravate asthma and inflammatory or fibrotic pulmonary disease. Methomyl is a pulmonary irritant; during exposure animals exhibit tremors, irregular breathing, grooming action, salivation.

Ingestion

Severely toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 gram may be fatal or may produce serious damage to the health of the individual.

Ingestion may produce nausea, vomiting, depressed appetite, abdominal cramps, and diarrhoea.

The inhibition of cholinesterase by methomyl is quickly reversed. A lethal dose for humans has been estimated at 12 to 15 mg/kg. In a methomyl

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	poisoning involving five men who had mistakenly used methomyl instead of salt, the men were found to be critically ill 3 hours after the meal with symptoms including frothing at the mouth, twitching and trembling. One of the two survivors showed generalised twitching and spasms, fasciculation and respiratory impairment thought to be due to severe bronchiospasms. A separate case involving suicide by a mother who also forced her 6-year old son to drink methomyl concluded the lethal dose in the mother was 55 mg/kg and 13 mg/kg in her child. Autopsy revealed pulmonary congestion and oedema, and the gastric mucosa was black-brown, oedematous and congested.		
Skin Contact	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. There may be sweating and muscle twitches at site of contact. Reaction may be delayed by hours. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Skin contact with methomyl may result in redness and swelling and repeated exposure may lead to contact dermatitis. Skin irritation may be aggravated in persons with existing skin lesions. When 200 mg/kg methomyl was applied to abraded rabbit skin for up to 15 days, some animals showed signs of cholinesterase inhibition and died between the first and eighth dose.		
Еуе	There is some evidence to suggest that this material can cause eye irritation and damage in some persons. Direct eye contact can produce tears, eyelid twitches, pupil contraction, loss of focus, and blurred or dimmed vision. Dilation of the pupils occasionally occurs. Animals show lachrymation, bulging eyes with red discharge during exposure to methomyl dusts.		
Chronic	Repeated or prolonged exposures to cholinesterase inhibitor to these substances may exhibit impaired memory and loss apathy, emotional liability, speech difficulties, headache, spa	In display the display of the displa	
OzCrop Methomyl 225 SL	TOXICITY	IRRITATION	
Insecticide	Not Available	Not Available	
	тохісіту	IRRITATION	
	dermal (rat) LD50: >1600 mg/kg ^[2]	Eye (rabbit): slight*	
methomyl	Inhalation(Rat) LC50; 0.511 mg/L4h ^[2]	Skin (rabbit): slight*	
	Oral (Rat) LD50; 14.7 mg/kg ^[2]		
Legend:	Value obtained from Europe ECHA Registered Substanc specified data extracted from RTECS - Register of Toxic Ef.	ses - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise fect of chemical Substances	
	toxicity via skin contact is low to moderate. Its rapid metabo eye irritation, increased pigmentation, sperm abnormalities,	sphorus pesticides. It requires higher dose to produce toxicity or mortality. However, it blism causes acute toxic effect but subsequent rapid recovery. It may cause skin and sensitization, cancer, mutations and genetic and foetal defects. It is easily absorbed	
METHOMYL	through the skin, mucous membranes, airway and digestive tract. It can cause changes to the function of the blood-making system and the live and kidney, at higher concentrations it can cause degeneration of the liver, kidney and testes. Its metabolites are detectable in urine. For methomyl Methomyl is highly toxic if swallowed; symptoms of poisoning include weakness, blurred vision, headache, nausea, abdominal cramps, chest discomfort, constriction of pupils, sweating, muscle tremors, and decreased pulse. In severe poisoning there may be twitching, giddiness, confusion, muscle inco-ordination, slurred speech, low blood pressure, heart irregularities, and loss of reflexes. Death can result from stoppagy breathing, paralysis of the muscles of breathing, intense constriction of airways or all three. Inhaling dust or aerosol may cause irritation, lung a eye problems, with symptoms of chest tightness, blurred vision, tearing, wheezing and headaches. Other whole-body symptoms of cholinesterase inhibition may appear within minutes to hours of exposure. It is slightly toxic through skin contact, and is only slowly absorbed through the skin. However, if sufficient amounts are absorbed through the skin, symptoms similar to those caused by inhalation or swallowing develop. Localised sweating and inco-ordinated muscle contraction develops around the area of contact within 0.25-4 hours. Within a few minutes of eye contact with methomyl, there will be pain, short-sightedness, blurring of distant vision, tearing, and other eye disturbances.		

minutes of eye contact with methomyl, there will be pain, short-sightedness, blurring of distant vision, tearing, and other eye disturbances. Prolonged or repeated exposure to methomyl may cause symptoms similar to its acute effects. Repeated exposure to small amounts may cause flu-like symptoms which persist for 2-6 weeks; it is reversible when exposure is discontinued.

Animal testing has not shown methomyl to have reproductive effects, cause birth defects, or cancer. Methomyl can potentially affect the lungs, skin, eyes, digestive tract, kidneys, spleen and blood-forming organs, depending on route of entry, duration of exposure, and dosage. Methomyl is broken down in the liver and excreted via breathing and in urine.

ADI (Acceptable Daily Intake) humans: 0.01 mg/kg/day** **ADI List, Commonwealth Department of Health and Family Services, 4/97. ADI: 0.01 mg/kg/day NOEL: 1.25 mg/kg/day

Acute Toxicity	✓	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Leaend:

X − Data either not available or does not fill the criteria for classification

- Data available to make classification

SECTION 12 Ecological information

Toxicity

0.0	Endpoint	Test Duration (hr)	Species	Value	Source
OzCrop Methomyl 225 SL Insecticide	Not Available	Not Available	Not Available	Not Available	Not Available

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	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>=50mg/l	4
	EC50	48h	Crustacea	0.019-0.022mg/l	4
methomyl	NOEC(ECx)	504h	Crustacea	0.001mg/L	4
	LC50	96h	Fish	0.2-0.68mg/l	4
	EC50	96h	Algae or other aquatic plants	5.85mg/L	4

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Toxic to flora.

Toxic to soil organisms.

Toxic to bees.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methomyl	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
methomyl	LOW (LogKOW = -0.0343)

Mobility in soil

Ingredient	Mobility
methomyl	LOW (KOC = 22.76)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

- ▶ Containers may still present a chemical hazard/ danger when empty.
- ▶ Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Consult manufacturer for recycling options.
- Consult Land Waste Management Authority for disposal options.
- For disposal of residue:
- Add with stirring to strongly alkaline solution of calcium hypochlorite. Let stand for 24 hours and then route cyanate to sewage treatment plant.

OR

- ▶ Mix with flammable solvent and spray into incinerator equipped with afterburner and scrubber.
- ► Decontaminate empty containers
- Return containers to drum reconditioner or recycler.

OR

▶ Puncture containers to prevent reuse and bury at an authorised landfill.

SECTION 14 Transport information

Labels Required



Marine Pollutant



HAZCHEM

•3WE

OzCrop Methomyl 225 SL Insecticide

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UN number	2758		
UN proper shipping name	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23°C		
Transport hazard class(es)	Class 3 Subrisk 6.1		
Packing group	II		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions 61 274 Limited quantity 1 L		

Air transport (ICAO-IATA / DGR)

UN number	2758			
UN proper shipping name	Carbamate pesticide, liq	uid, flammable, toxic * flash point less th	nan 23°C	
	ICAO/IATA Class	3		
Transport hazard class(es)	ICAO / IATA Subrisk	6.1		
	ERG Code	3P		
Packing group				
Environmental hazard	Environmentally hazardous			
			T	
	Special provisions		A4	
	Cargo Only Packing Instructions		364	
	Cargo Only Maximum Qty / Pack		60 L	
Special precautions for user	Passenger and Cargo	Packing Instructions	352	
	Passenger and Cargo Maximum Qty / Pack		1 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y341	
	Passenger and Cargo	Limited Maximum Qty / Pack	1 L	

Sea transport (IMDG-Code / GGVSee)

UN number	2758
UN proper shipping name	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC flashpoint less than 23°C
Transport hazard class(es)	IMDG Class 3 IMDG Subrisk 6.1
Packing group	Ш
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number F-E, S-D Special provisions 61 274 Limited Quantities 1 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
methomyl	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
methomyl	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

methomyl is found on the following regulatory lists

Australia Chemicals with non-industrial uses removed from the Australian Inventory of Chemical Substances (old Inventory)

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule $\boldsymbol{6}$

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 7 $\,$

National Inventory Status

National Inventory	Status

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OzCrop Methomyl 225 SL Insecticide

National Inventory	Status		
Australia - AIIC / Australia Non-Industrial Use	Yes		
Canada - DSL	No (methomyl)		
Canada - NDSL	No (methomyl)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	Yes		
Japan - ENCS	No (methomyl)		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	No (methomyl)		
USA - TSCA	No (methomyl)		
Taiwan - TCSI	Yes		
Mexico - INSQ	Yes		
Vietnam - NCI	Yes		
Russia - FBEPH	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

SECTION 16 Other information

Revision Date	10/12/2021
Initial Date	12/07/2019

SDS Version Summary

Version	Date of Update	Sections Updated
3.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1	10/12/2021	Classification change due to full database hazard calculation/update.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory

NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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