

# POISON

**KEEP OUT OF REACH OF CHILDREN**

**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

# Vapam<sup>®</sup>

Soil Fumigant

**ACTIVE CONSTITUENT: 423 g/L METHAM  
present as SODIUM SALT**

*Pre-planting treatment for control of soil-borne pests,  
as specified in the Directions for Use table.*

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**Contents 208 L and 1000 L**

## DIRECTIONS FOR USE

### RESTRAINTS

**DO NOT** apply to a dry soil.

**DO NOT** exceed specified rates.

**DO NOT** use in high winds.

**DO NOT** apply in low humidity or when temperature is above 32°C.

SITUATION	PESTS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Sites for Seedbeds, Lawns & other limited areas	<b>Germinating weed seeds including:</b> Winter Grass, Prince of Wales Feather, Fat Hen  Nematodes, Symphylids (Not Tas) (Garden Centipede)	All states	25–50 L per 50 L water per 1000 m <sup>2</sup>	<b>SOIL INJECTION:</b> Use the higher rate for heavier soils. Injection points or injection nozzles under a blade should be 12 cm apart, 10–15 cm deep in a well-prepared moist soil. Immediately after injection, compact the soil by rolling. Water lightly to prevent escape of gas. Repeat irrigation after 2–3 days for light soils or soils which crack or dry out quickly. Prevent run-off.
			1.1 L per 12 L water per 10 m <sup>2</sup>	<b>ROTARY TILLER:</b> Spray or sprinkle diluted solution in front of tiller. Roll immediately to compact soil. Lightly water as above.
Field: Application to Total Area	<b>Fungus diseases including:</b> Rhizoctonia, Pythium, Fusarium, Phytophthora, Verticillium, Sclerotinia and Club Root of Crucifers	Qld, NSW, SA, Vic, WA only	250–500 L per 400–700 L water per ha	<b>SOIL INJECTION:</b> Use the higher rate for heavier soils. Follow method for injection described under seedbeds.
			600–800 L per 900–1100 L water per ha	<b>APPROVED ONLY FOR TRICKLE IRRIGATION SYSTEMS</b> designed to apply agricultural chemicals as certified by the manufacturer and under plastic sheeting. Use the higher rate for heavier soils. Use system to give large droplet size. For shallow pests in the top 30 cm or less of soil – run system for 5–10 minutes. For next 10–20 minutes inject solution into irrigation system and continue watering until soil is wet as deep as control is needed. Keep moist for 2–3 days for light soils or soils which crack or dry out quickly. For control deeper than 45 cm divide recommended dose into three equal parts and apply at intervals during irrigation period.
			250–500 L per 400–700 L water per ha	<b>ROTARY TILLER:</b> Spray or sprinkle diluted solution in front of tiller. Roll immediately to compact soil. Irrigate at once with enough water to seal the soil surface. Repeat irrigation after 2–3 days for light soils or soils that crack or dry out quickly.
Field: Application to Beds or Rows		All states	250–500 L per 400–700 L water per ha	<b>SOIL INJECTION:</b> Use the higher rate for heavier soils. Solution may be injected into pre-formed beds or as a band treatment. Follow the instructions for injection above. For a wider treated band space use two or more injection points at intervals of 12 cm apart. All methods should be at a depth of 10–15 cm.
			400–800 L per 700–1000 L water per ha	<b>BEDS - SOIL COVERING METHOD:</b> Use the higher rate for heavier soils. Inject or drip into moist soil directly ahead of the bed shaper. Use sufficient water to ensure uniform application. Cover with 7–15 cm of moist soil. Immediately roll to compact soil.
			250–500 L per 400–700 L water per ha	<b>ROTARY TILLER:</b> Spray or sprinkle diluted solution in front of tiller. Roll immediately to compact soil. Irrigate at once with enough water to seal the soil surface. Repeat irrigation after 2–3 days for light soils or soils that crack or dry out quickly.
		Qld only	250–800 L per treated ha	<b>TRICKLE IRRIGATION:</b> Use the higher rate for heavier soils. 5–8 weeks prior to planting soil must be bed-formed with trickle tape and plastic mulch. Thoroughly wet soil to allow weed seed to germinate. Apply Vapam® Soil Fumigant to moist soil by injecting into mainline using a suitable pump sufficient to wet entire root zone. Use a longer injection period for heavier soils. Flush all lines and equipment with clean water after use. Puncture plastic 2 weeks after treatment to allow dissipation of Vapam Soil Fumigant. Heavy nematode infestation may require further treatment prior to second crop. ENSURE INJECTION CAPACITY CAN HANDLE LARGE RATES OR USE SPLIT APPLICATIONS.
Potting Soil		All States	600 mL per m <sup>3</sup> soil mixture	<b>CEMENT MIXER:</b> Mix moist soil thoroughly, adding Vapam Soil Fumigant to loaded mixer in a well-ventilated area. Empty soil into a pile and cover with plastic sheeting to keep in gas.
			1.1 L per 12 L water per 10 m <sup>2</sup>	<b>ROTARY TILLER METHOD:</b> Spread soil smooth not more than depth of 20 cm. Apply Vapam Soil Fumigant over entire surface and till to maximum adjustable depth of tiller. Treat further layers as necessary and seal top layer with water.

SITUATION	PESTS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Tobacco Plant Bed	<b>Germinating weed seeds including:</b> Winter Grass, Prince of Wales Feather, Fat Hen  Nematodes, Symphylids (Not Tas) (Garden Centipede)  <b>Fungus diseases including:</b> Rhizoctonia, Pythium, Fusarium, Phytophthora, Verticillium, Sclerotinia and Club Root of Crucifers	Qld, NSW only	9.75 L per 700–900 L water per 100 m <sup>2</sup>	<b>TOBACCO SEED BED:</b> Use the higher rate for heavier soils. Apply in Autumn through an approved irrigation system, sprayers or any suitable approved equipment. Follow instructions for seedbeds or plant beds. DO NOT treat tobacco plant beds by hand directed methods.
	Onion Weed	WA only	1.1 L per 50 L water per 5 m <sup>2</sup>	<b>SPOT TREATMENT:</b> Spray entire surface area using drenching nozzles.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.**

**DO NOT USE BY HAND DIRECTED SPRAYING INCLUDING SPRINKLER CAN.  
 DO NOT TREAT POTTING SOIL BY LOOSE MIXED METHOD OR VIA SHREDDER.  
 DO NOT USE BY FLOOD IRRIGATION OR OVERHEAD SPRINKLER SYSTEMS.**

## GENERAL INSTRUCTIONS

### Mixing

After mixing with water do not allow mixture to stand.

### Application

Soil should be carefully prepared in advance according to the Directions for Use. Cultivate the area thoroughly and break up clods. Loosen soil deeply one week in advance of application. Soil should be kept moist until application, and if soil has crusted in the meantime, re-cultivate lightly. Soil temperature should be in the range 10–32°C to depth of 8 cm. Where fumes become unpleasant, spray with water to seal fumes in.

### Intervals for Cultivation and Planting after Application

Planting may take place 14–21 days after application if soil is light-medium texture and not excessively wet or cold. A minimum interval of 30 days is necessary where soil texture is heavy, high in organic matter, wet or soil temperature is less than 15°C. A 60-day interval is required if application rate is greater than 1100 L/ha. Cultivation should be carried out on wet, heavy soils to prevent crusting and promote drying, 5–7 days after application, and may be repeated when necessary. DO NOT mix treated soils with untreated soils. Sow an indicator crop to test that no toxic Vapam Soil Fumigant remains in the soil, approximately 7 days before main crop. Lettuce or radish is suitable for this purpose because of their rapid germination process. Check for root damage which will indicate whether or not soil is still toxic.

### Potting Soil

Heavy potting soil or heavy field soil, including soils high in clay or organic matter, ensure that proper aeration and drying of the soil takes place.

## PRECAUTIONS

Workers previously experiencing skin or respiratory tract irritation from metham-sodium or dazomet exposure should not work with metham-sodium products. After mixing with water do not allow mixture to stand as poisonous fumes are released on standing. Workers manually sealing should wear the personal protective clothing specified for applicators.

**Re-Entry Period****Field Use:**

DO NOT allow entry into treated areas for 48 hours. When prior entry is necessary, wear personal protective equipment specified for applicators. Clothing must be laundered after each day's use.

**Greenhouse Application, Including Under Plastic:**

DO NOT allow entry into treated areas for 7 days. When prior entry is necessary, wear personnel protective equipment specified for applicators. Clothing must be laundered after each day's use. Thoroughly ventilate greenhouses for 24 hours after removing plastic.

**Rehandling Period - Potting Soil:**

Treated soil is to remain covered by plastic sheeting or similar material impermeable to MITC, for 7 days after treatment. When prior handling is necessary, wear personal protective equipment specified for applicators. Clothing must be laundered after each day's use.

**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

DO NOT spray desirable plants and lawns and avoid spray drift. DO NOT apply within 1 metre of drip line of plants. DO NOT use in greenhouses where plants are present. DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands and pastures.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

DO NOT contaminate streams, rivers or watercourses with the chemical or used containers.

**STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

**For Refillable Containers**

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

**SAFETY DIRECTIONS**

Harmful if absorbed by skin contact or swallowed. Poisonous if inhaled. Will damage the eyes, nose, throat and skin. Repeated exposure may cause allergic disorders. Interacts with alcohol – avoid alcohol on day(s) of use. DO NOT inhale vapour or spray mist. The fumes first cause smarting, then watering of the eyes. This should be taken as a warning sign. The liquid can cause burns. Use and store in well-ventilated areas. When opening the container and preparing product for use, wear cotton overalls buttoned to the neck and wrist, a washable hat, apron (chemical resistant) elbow-length (nitrile, neoprene) gloves, chemical resistant footwear, full facepiece respirator with organic vapour/gas cartridge or canister (or goggles and a half facepiece respirator with organic vapour cartridge or canister). When using the prepared solution, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length (nitrile, neoprene) gloves, chemical resistant footwear, a full facepiece respirator with organic vapour/gas cartridge (or goggles and a half facepiece respirator with organic vapour cartridge or canister).

If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product on skin, immediately wash area with soap and water. If product or vapour in eyes, wash it out immediately with 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, goggles, respirator and if rubber wash with detergent and warm water and contaminated clothing. DO NOT re-use footwear until thoroughly aired.

**FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. Avoid giving alcohol. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

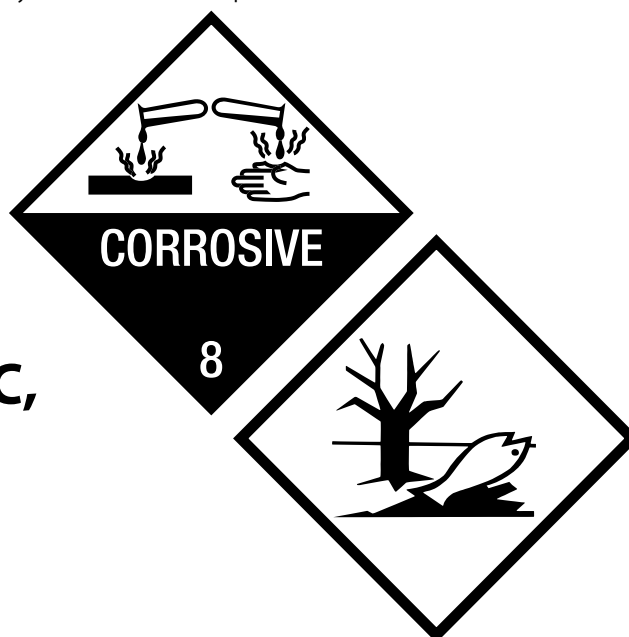
**SAFETY DATA SHEET**

If additional hazard information is required refer to the Safety Data Sheet. For a copy visit our website at [agnova.com.au](http://agnova.com.au)

**CONDITIONS OF SALE**

AgNova Technologies Pty Ltd shall not be liable for any consequential or other loss or damage relating to the supply or subsequent handling or use of this product, unless such liability by law cannot be lawfully excluded or limited. All warranties, conditions or rights implied by statute or other law which may be lawfully excluded are so excluded. Where the liability of AgNova Technologies Pty Ltd for breach of any such statutory warranties and conditions cannot be lawfully excluded but may be limited to it resupplying the product or an equivalent product or the cost of a product or an equivalent product, then the liability of AgNova Technologies Pty Ltd for any breach of such statutory warranty or condition is so limited.

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**UN No. 3266**  
**CORROSIVE LIQUID BASIC,**  
**INORGANIC N.O.S.**  
**(METHAM SODIUM)**  
**PACKING GROUP: III**  
**HAZCHEM: 2X**

Additional statements as required by Safe Work Australia  
in accordance with the Globally Harmonised System of Classification and Labelling (GHS).

**May be corrosive to metals. Causes eye irritation. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.**

Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. Rinse mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Absorb spillage to prevent material damage.

In a transport emergency dial 000, Police or Fire Brigade.  
For specialist advice in an emergency only, call 1800 033 111 (24 hours).

**APVMA Approval No.: 62355/121121**

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