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# DuPont™ Lannate® L

## insecticide

### Technical Information

#### Active Ingredient:

200 g/litre METHOMYL (a carbamate) in the form of a soluble concentrate.

Also contains 511 g/litre HYDROCARBON liquid.

#### Pack Sizes:

5 litres



**DANGER-HIGHLY FLAMMABLE LIQUID AND VAPOUR**



**TOXIC**

Keep out of reach of children

GROUP

**1A**

INSECTICIDE

FOR THE CONTROL OF INSECTS IN HORTICULTURAL CROPS.

Registered pursuant to the ACVM Act 1997 No. P02244

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to the HSNO Act 1996 Code HSR000584

READ LABEL BEFORE MIXING AND APPLYING

#### HAZARD CLASSIFICATION

3.1B, 6.1C, 6.1D, 6.4A, 6.8B, 6.9A, 9.1A, 9.2D, 9.3B, 9.4A

#### APPROVED HANDLER

This product must only be applied by an approved handler, or under the direct supervision of an approved handler.

Use of this substance in any manner contrary to this label may be an offence under the HSNO Act.

#### TRACKING

This product must be tracked – see current version of NZS 8409 Management of Agrichemicals.

#### RECORD KEEPING

Records as described in NZS 8409 - Management of Agrichemicals must be kept where members of the public may lawfully be present or where the substance is likely to enter air or water and leave the place.

#### DANGER

Highly flammable liquid and vapour - keep away from sources of ignition. Toxic if swallowed. Harmful if inhaled or in contact with skin. Causes serious eye irritation and damage to organs through prolonged or repeated exposure. May cause damage from repeat oral exposure at high doses.

#### ECOTOXIC

Very toxic to aquatic life with long lasting effects. Avoid contamination of any water supply with product or empty container. **DO NOT** allow spray drift over aquatic environments or outside the target area. Very toxic to terrestrial invertebrates. Toxic to terrestrial vertebrates.

#### PRECAUTIONS

##### PERSONAL PROTECTION:

**DO NOT** eat, drink or smoke while using. Avoid inhalation of vapour or spray mist. Avoid skin and eye contact. When mixing, loading, applying or entering an application area within the Restricted Entry Interval (REI), wear full personal protective equipment (PPE) including chemical resistant coveralls, chemical resistant gloves, chemical resistant footwear plus socks, protective eyewear, and chemical resistant headgear for overhead exposures. Respiratory protective equipment (RPE) appropriate to protect against respiratory exposure to the product must be worn. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after use.

## STORAGE

**DO NOT** store near heat or flame. Store in original container tightly closed and a locked, dry, cool, well-ventilated area, away from sources of ignition. **DO NOT** store with Class 1, 2, 3.2, 4 or 5 substances. **DO NOT** store near food, fertilisers or seeds. Stores containing more than 100 L of DuPont Lannate® L insecticide require secondary containment and are subject to signage. (See Safety Data Sheet for further information). When stored appropriately, this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

## DISPOSAL

Container disposal: Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in an approved landfill. **DO NOT** reuse container. Dispose of product by using in accordance with label instructions. Always follow local authority requirements.

## SYMPTOMS OF POISONING

Symptoms of poisoning may include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest.

## FIRST AID DIRECTIONS

If swallowed **DO NOT** induce vomiting. For advice, contact the National Poisons Centre 0800 POISON (0800 764766) or a doctor immediately.

**FIRST AID FOLLOWING SKIN AND EYE CONTACT:** If spilt on the skin, remove contaminated clothing and wash affected areas of skin immediately. **DO NOT** SCRUB THE SKIN. If concentrate is splashed in eyes, flush with running water for at least 15 minutes. Take to hospital without delay. For advice contact the National Poisons Centre 0800 POISON (0800 764766)

## NOTE TO PHYSICIAN

TREATMENT - Atropine sulfate should be used for treatment. Administer repeated doses, 1.2 to 2.0 mg intravenously every 10 to 30 minutes until full atropinization is achieved. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until recovery is assured.

**DO NOT** use 2-PAM for exposure to DuPont Lannate® L insecticide alone. However, for exposure to combinations of DuPont Lannate® L insecticide and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. **DO NOT** use morphine.

## SPILLAGE

In case of spillage, shut off ignition. No smoking or flares. Keep people away and upwind. When entering area wear self-contained breathing apparatus, and protective clothing including boots and gloves. Try to remove leaking containers and put them into leak-proof containers. Absorb spills in earth or sand and treat with sodium hypochlorite solution (laundry bleach). Prevent liquid from entering sewers or bodies of water. If contamination occurs notify Authorities.

## GENERAL INSTRUCTIONS

DuPont Lannate® L insecticide is a water soluble concentrate to be diluted with water and applied as a spray by properly calibrated, well maintained ground or aerial spray equipment.

## INSECT RESISTANCE WARNING

Some naturally occurring insect biotypes resistant to DuPont Lannate® L insecticide and similar Mode of action insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if DuPont Lannate® L insecticide and other similar Mode of action insecticides are used repeatedly. The effectiveness of DuPont Lannate® L insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use DuPont accepts no liability for any losses that may result from the failure of DuPont Lannate® L insecticide to control resistant insects. DuPont Lannate® L insecticide may be subject to specific resistance management strategies. To help prevent the development of resistance to DuPont Lannate® L insecticide, use DuPont Lannate® L insecticide in accordance with resistance management strategies established by The N.Z. Insecticide Resistance Task Group. These strategies may include incorporation of cultural and biological control practices, alternation of active classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local DuPont Agricultural Products representative for details.

## INTEGRATED PEST MANAGEMENT

The preservation of beneficial arthropods, including pollinators, is an important aspect of sustainable pest control. DuPont Lannate® L insecticide is very toxic to bees. **DO NOT** apply DuPont Lannate® L insecticide to any plant or tree likely to be visited by bees at the time of application, immediately after application until spray has dried, or in areas where bees are foraging. DuPont Lannate® L insecticide has limited residuality with the ability to move in the plant. Thus DuPont Lannate® L insecticide has good potential to be integrated into IPM programmes that maximise the effects of beneficial insects. IPM programmes will vary with crop, application timing and agricultural practice and it is recommended that local agricultural Advisors be consulted for detailed information.

## MIXING

Spray equipment must be clean and free of previous pesticide deposits before applying DuPont Lannate® L insecticide. Fill spray tank ¼ to ½ full of water. Add DuPont Lannate® L insecticide directly to spray tank and mix thoroughly, using mechanical or hydraulic means. **DO NOT** use air agitation.

If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. **DO NOT** allow spray mix to sit overnight, as resuspension may be difficult.

## SURFACTANT/WETTING AGENT

Add surfactant when spraying difficult to wet plants.

## COMPATIBILITY

DuPont Lannate® L insecticide is compatible with most other insecticides and fungicides, specifically the following groups of compounds: organophosphate and carbamate insecticides, dithiocarbamate fungicides including mancozeb fungicides, and wettable sulphur.

DuPont Lannate® L insecticide is incompatible with alkaline materials such as lime sulphur and Bordeaux mixture. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

However, since the formulations of products are always changing, it is advisable to test the physical compatibility of desired tank mixes and check for adverse effects like settling out or flocculation. To determine the physical compatibility, add the recommended proportions of the tank mix products to water, mix thoroughly and allow to stand for 20 minutes. If the combination remains mixed, or can be re-mixed readily, it is considered physically compatible. Avoid complex tank mixtures of several products or very concentrated spray mixtures.

The crop safety of all potential tank-mixes, including additives and other pesticides, on all crops has not been tested. Before applying any tank-mixture not specifically recommended on this label or other DuPont supplemental labelling, the safety to the target crop must be confirmed. To test for crop safety, apply the combination to a small area of the target crop in accordance with the label instructions to ensure that a phytotoxic response will not occur.

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules, wettable powders, water based suspension concentrates, water soluble concentrates (DuPont Lannate® L insecticide), oil dispersion concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers.

## CROPS CULTIVARS NOT TESTED

Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops have been individually tested for crop safety. It is not possible to evaluate for crop safety all applications of DuPont Lannate® L insecticide on all crops within a crop group, on all varieties, cultivars, or hybrids of those crops, or under all environmental conditions and growing circumstances.

To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator.

## APPLICATION

Apply at the recommended rates when insect populations reach locally determined economic thresholds. Consult with professional Consultants or other qualified Authorities to determine appropriate threshold levels in your area. Follow-up treatments of DuPont Lannate® L insecticide should be applied, as needed, to keep pest populations within threshold limits. On most crops, DuPont Lannate® L insecticide should be applied at 5 to 7 day intervals to maintain control.

Use sufficient water volumes to obtain thorough, uniform coverage. The rates suggested are for high volume spraying to run-off. For concentrate spraying, adjust dilution rate accordingly.

Since DuPont Lannate® L insecticide is a fast-acting contact insecticide, best results follow direct spraying of the target insect.

## Minimising Spray Drift

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions. The most effective way to reduce drift potential is to apply large droplets (volume mean diameter (VMD) > 250 - 300 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT MINIMISE DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVOURABLE ENVIRONMENTAL CONDITIONS.** When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

**DO NOT** apply when wind speed is less than 3 or more than 20 kilometres per hour at the application site.

## SPRAY TANK CLEANOUT

Prior to application start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom and nozzles with clean water. Loosen and physically remove all visible deposits. Fill the sprayer with clean water and add household ammonia (one litre of 3% active to every 100 L of water). Flush hoses, boom and nozzles. Turn off the boom and top off the tank with clean water. Circulate through the spraying system for at least 15 minutes. Then, flush the hoses, boom and nozzles with the cleaning solution. Drain the tank. Remove and clean nozzles, screens, strainers in a bucket of fresh cleaner and water. Thoroughly rinse the sprayer, hoses, boom and nozzles with clean water several times.

Take all necessary safety precautions when cleaning equipment. **DO NOT** clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

**RESTRICTED ENTRY INTERVAL (REI)**

**DO NOT** allow entry into treated areas for 24 hours post application when applying 1.5 L/ha, or 48 hours post application when applying > 1.5 L/ha.

The person in charge of the application area shall ensure that no person who is authorised to be there enters the application area until the end of the REI.

A person may enter the application area before the end of the REI;

- if PPE and RPE is worn as if that person is applying the substance (refer Personal Protection section).
- if entering an indoor treated area, for the purpose to carry out tasks associated with ventilation of the building or structure.

**NOTICE TO BUYER**

DuPont warrants that this product conforms to the chemical description on the label thereof and if reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use of application, all of which are beyond the control of DuPont. To the extent permitted at law DuPont shall not be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer.

TO THE EXTENT PERMITTED AT LAW, DUPONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

## DIRECTIONS OF USE

### It's an offence to use this product on animals

For wide-dispersive applications, no person may apply, or engage another person to apply, DuPont Lannate® L insecticide unless that person has given written notice of the proposed application to any person likely to be directly affected by the application, including occupiers and owners of land, dwellings or buildings or property that is immediately abutting the application area.

The notice must be given at least two (2) working days but not more than four (4) weeks in advance of each application; and specify;

- the location of the application area that DuPont Lannate® L insecticide will be applied to;
- the date and approximate duration of each application;
- the steps to be taken by the notified parties to avoid exposure;
- the name of the organisation undertaking the application;
- contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application)

The person applying this product must not cause adverse effects beyond the boundary of the treated property, and must also avoid adverse effects from spray drift occurring. Mitigation measures employed must be recorded as part of the application records.

Crop	Insect	Rate	Recommended Programme	Withholding Period
Beans	Green peach aphid, Looper caterpillar	1.5 – 2 L/ha	Spray at the first sign of insect attack and repeat when needed. <b>DO NOT</b> apply more than two (2) applications to any one crop per season. Further treatments should be made with alternative mode of action insecticides.	2 days
Cabbage Cauliflower				7 days
Glasshouse Crops – Capsicums Cucumbers Tomatoes	Whitefly	120 mL/100 L	Apply when adults reach threshold levels and repeat as necessary with up to 4 sprays at 4 day intervals. To control subsequent generations, a cluster of applications of a different pesticide group should be made to minimise the development of resistance. When the substance is applied indoors, application using hand-gun spray equipment is not permitted.	2 days
Lettuce	Green peach aphid	2 L/ha	Spray at the first sign of insect attack and repeat when needed. <b>DO NOT</b> apply more than two (2) applications to any one crop per season. Further treatments should be made with alternative mode of action insecticides.	7 days
	Looper caterpillar	1.5 - 2 L/ha		
Strawberries	Leafroller caterpillar, Aphids	120 mL/100 L	Apply as a full season spray programme commencing at petal fall. <b>DO NOT APPLY TO PLANTS IN FLOWER EXCEPT IN THE EVENING. DO NOT</b> apply more than two (2) applications to any one crop per season. Further treatments should be made with alternative mode of action insecticides.	2 days
Tomatoes	Green peach aphid	2 L/ha	Spray at the first sign of insect damage and repeat when needed. <b>DO NOT</b> apply more than two (2) applications to any one crop per season. Further treatments should be made with alternative mode of action insecticides.	
	Looper caterpillar, Tomato fruit worm	1.5 - 2 L/ha		

**It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards.**

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