



SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC) or
1-866-374-1975 (Tessengerlo Kerley)

1. IDENTIFICATION

PRODUCT NAME: Lannate® LV
DESCRIPTION: A liquid insecticide
EPA Reg. No.: 61842-55

COMPANY IDENTIFICATION: Tessengerlo Kerley, Inc.
 2910 N. 44th Street, Suite 100
 Phoenix, AZ 85018-7272
 (602) 889-8300

2. HAZARD IDENTIFICATION

DANGER

Causes serious eye damage (H318)
 Fatal if swallowed (H300)
 May cause damage to organs (eyes, central nervous system, respiratory system) (H371)
 Harmful if inhaled (H332)
 Flammable liquid and vapor (H226)
 Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Eye Damage/Irritation	1	Flammable	3
Acute Toxicity, Oral	2		
Specific Target Organ Toxicity, Single Exposure	2	Environmental Hazards	Category
Acute Toxicity, Inhalation	4	Hazardous to the Aquatic Environment – Acute	1
		Hazardous to the Aquatic Environment – Chronic	1

HAZARDS NOT REQUIRING CLASSIFICATION

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

PRECAUTIONARY STATEMENTS

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear eye protection and other protective clothing as described in Section 8. (P210+P280)

Do not breathe mist/vapors/spray. Wash hands and exposed skin thoroughly after handling. Do not touch eyes. Do not eat, drink or smoke when using this product. Use only outdoors or with adequate ventilation. (P260+P264+P265+P270+P271)

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help. (P305+P354+P338+P317)

IF SWALLOWED: Get emergency medical help immediately. Specific treatment see Section 4 for additional medical information. Rinse mouth. (P301+P316+P321+P330)

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help. (P304+P340+P317)

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. In case of fire: Use extinguishing mediums listed in section 5. (P303+P361+P353+P370+P378)

IF exposed or concerned: Get emergency medical help immediately. (P308+P316)

Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)

Store locked up. (P405)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Common Name</u>	<u>Chemical Name</u>	<u>CAS #</u>	<u>Composition</u>
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5	29.0%
Cyclohexanone		108-94-1	30.0-40.0%
Methanol		67-56-1	3.0-10.0%

NOTE: Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

ATROPINE IS AN ANTIDOTE - SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES OF SUSPECTED POISONING.

If poisoning symptoms appear (see POISONING SYMPTOMS), get medical attention.

POISONING SYMPTOMS: Methomyl poisoning produces effects associated with anticholinesterase activity which may include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest, constriction of pupils, sweating, slow pulse, muscle tremors. If poisoning symptoms appear, refer to First Aid section on front panel of LANNATE® LV label and seek medical attention at once.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate gastric lavage.

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 LANNATE® LV alone. However, for exposure to combinations of LANNATE® LV and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

5. FIREFIGHTING MEASURES

Flammability/Flash Point (cc): 39-43°C

Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Vapors may form explosive mixtures with air. Do not allow run-off from fire fighting to enter drains or water courses. Flash back possible over considerable distance.

Extinguishing Medium: Water spray, alcohol-resistant foam, carbon dioxide (CO₂), dry chemical.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: Evacuate personnel and keep upwind of fire. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Do not allow run-off from firefighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

NFPA Ratings: Health – 3 / Flammability – 2 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document. Ensure adequate ventilation.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Spill Cleanup: Dike spill using suitable absorbent or impervious materials such as sand or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.

7. HANDLING AND STORAGE

Handling: Do not get in eyes, or on clothing. Wear protective eyewear. Avoid contact with skin or breathing spray mist. Wash hands thoroughly with soap and water after handling.

Storage: Do not subject to temperatures below 32 degrees F. Store product in original container only. Not for use or storage in or around the home.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS No.	Value type (Form of exposure)	Control parameters/ permissible concentration	Basis
Methomyl (ISO)	16752-77-5	TWA (Inhalable fraction and vapor)	0.2 mg/m ³	ACGIH
		TWA	2.5 mg/m ³	OSHA P0
Cyclohexanone	108-94-1	TWA	50 ppm 200 mg/m ³	OSHA Z-1
		TWA	25 ppm 100 mg/m ³	OSHA P0
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m ³	OSHA Z-1
		TWA	200 ppm 260 mg/m ³	OSHA P0
		STEL	250 ppm 325 mg/m ³	OSHA P0

Biological occupational exposure limits

Components	CAS No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Cyclohexanone	108-94-1	1,2-Cyclohexanediol	Urine	End of shift at end of work-week	80 mg/l	ACGIH BEI
		Cyclohexanol	Urine	End of shift (As soon as possible after exposure ceases)	8 mg/l	ACGIH BEI
Methomyl (ISO)	16752-77-5	Acetylcholinesterase activity	In red blood cells	End of shift	70 % of an individual's baseline	ACGIH BEI
		Butyrylcholinesterase activity	In serum or plasma	End of shift	60 % of an individual's baseline	ACGIH BEI
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT.)

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: Wear long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate or butyl rubber \geq 14 mil, socks and chemical-resistant footwear, protective eyewear, chemical-resistant apron. For exposures in enclosed areas, also wear a respirator with either a vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or a canister approved for pesticides (NIOSH approval number prefix TC-14g), or a NIOSH approved respirator with an organic vapor (OV) cartridge or a canister with any R, P, or HE prefilter. For exposures outdoors, also wear a dust/mist filtering respirator (NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P, or HE prefilter.

General: Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	amber liquid	pH:	not available
Melting point:	39-43°C (102-109°F)	Kinematic viscosity:	not available
Boiling point:	not available	Solubility (water):	soluble
Flammability:	not available	Partition coefficient:	not available
Flammability limits (upper/lower):	75 vol % / 5 vol %	Vapor pressure:	75.981 hPa (77°F/25°C)
Flash point (cc):	102-109°F/39-43°C	Relative Density:	1.021 (77°F/25°C)
Auto-ignition temperature:	581°F/305°C	Density:	1.02 g/cm ³ (77°F/25°C)
Decomposition temperature:	not available	Relative vapor density:	not available
Odor:	unpleasant, solvent	Particle characteristics:	not available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Heat, flames and sparks.

CHEMICAL STABILITY: No decomposition if stored and applied as directed. Stable under normal conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products depend upon temperature, air supply and the presence of other materials.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

The following information is for the product, Lannate LV:

ORAL TOXICITY (rat LD₅₀): 49-89 mg/kg

DERMAL TOXICITY (rabbit LD₅₀): >2,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): 1.1 mg/L (4 hours)

EYE IRRITATION: Corrosive (Rabbits)

SKIN IRRITATION: No skin irritation (Rabbits)

SKIN SENSITIZATION: Does not cause skin sensitization. (Guinea pigs)

The following information is for the individual components of the product:

CARCINOGENICITY:

EPA: Evidence of non-carcinogenicity for humans (methomyl)

ACGIH: Not listed **NTP:** Not listed

IARC: Not listed **OSHA:** Not listed

GERM CELL MUTAGENICITY: Animal testing did not show any mutagenic effects.

REPRODUCTIVE TOXICITY: In animal studies, did not interfere with reproduction. Did not cause birth defects in laboratory animals.

11. TOXICOLOGICAL INFORMATION (CONT.)

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: Central nervous system. May cause drowsiness or dizziness.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish, aquatic invertebrates, and mammals.

The following information is for the active ingredient, methomyl:

AQUATIC TOXICITY - Acute

Bluegill Sunfish (96-hour LC₅₀): 0.63 mg/L

Water Flea (48-hour EC₅₀): 0.017 mg/L

Algae (72-hour ErC₅₀): > 100 mg/L

AQUATIC TOXICITY – Chronic

Fathead minnow (35-day NOEC): 0.073 mg/l

Water flea (21-day NOEC): 0.0016 mg/l

AVIAN TOXICITY

Mallard Duck (8-day LC₅₀): 3,952 mg/kg

Bobwhite Quail (8-day LC₅₀): >5,620 mg/kg

HONEYBEE TOXICITY

Honeybee (2-day Oral LD₅₀): 0.00028 mg/kg

Honeybee (2-day Oral LD₅₀): 0.00016 mg/kg

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance.

CONTAINER DISPOSAL: Nonrefillable and refillable containers. See container label for container handling and disposal instructions. Dispose of contents /container to local and national hazardous waste disposal regulations.

14. TRANSPORT INFORMATION

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

US-DOT:

UN2991, Carbamate pesticide, liquid, toxic, flammable, (methomyl), 6.1 (3), PG II, Marine Pollutant

IMDG:

UN2991, Carbamate pesticide, liquid, toxic, flammable, (methomyl), 6.1 (3), PG II, Marine Pollutant

IATA:

UN2991, Carbamate pesticide, liquid, toxic, flammable, (methomyl), 6.1 (3), PG II, Marine Pollutant

EMS Number:

F-E, S-D

Note: In accordance with 49 CFR 171.4(c), non-bulk packagings (max capacity of 119 gal. (450 L) or less for liquids or 882 lbs. (400 kg) or less for solids) transported by motor vehicle, rail car or aircraft are excepted from all Marine Pollutants regulations in 49 CFR and therefore do not have to be labeled as such. All bulk shipments or any shipment transported partially or entirely by vessel are treated as regulated Marine Pollutants and should be labeled accordingly.

15. REGULATORY INFORMATION

FIFRA –

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the GHS classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. FATAL IF SWALLOWED. CONTAINS METHANOL; MAY CAUSE BLINDNESS. CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE.

Do not get in eyes, or on clothing. Wear protective eyewear. Harmful if inhaled or absorbed through skin. Avoid contact with skin or breathing spray mist. Wash hands thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, and mammals.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use.

This chemical can contaminate surface water through spray drift.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame. Keep container closed. Use with adequate ventilation.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

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

Section 355 (extremely hazardous substances):

Not listed

SARA Title III – Section 302 Extremely Hazardous Substances

Methomyl (CAS No. 16752-77-5): 29.0%

Methanol (CAS No. 67-56-1): 5.0-10.0%

SARA Title III – Section 311/312 Hazard Categories

Immediate (Acute)

Section 313 (Toxic Release Reporting-Form R):

Methanol (CAS No. 67-56-1): 5.0-10.0%

CERCLA/SUPERFUND:

Methomyl (CAS No. 16752-77-5): 29.0% (100 lbs.)

Methanol (CAS No. 67-56-1): 5.0-10.0% (5,000 lbs.)

Cyclohexanone (CAS No. 108-94-1): 30-40.0% (5,000 lbs.)

California Proposition 65

⚠ WARNING: This product can also expose you to methanol, which is known to the State of California to cause developmental toxicity. For more information, go to www.P65Warnings.ca.gov.

RCRA Classification

RCRA Codes: P066, U154, U057

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.

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