SAFETY DATA SHEET



Product name: Lannate[™] Insecticide Issue Date: 06/01/2023

This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: Lannate[™] Insecticide

Recommended use of the chemical and restrictions on use

Identified uses: Insecticide

Uses advised against: Do not use product for anything outside of the above specified uses.

COMPANY IDENTIFICATION

Tessenderlo Kerley, Inc 2910 N. 44th St., Suite 100 Phoenix, AZ 85018 UNITED STATES

Customer Information Number : 602-889-8300

EMERGENCY TELEPHONE

24-Hour Emergency Contact CHEMTREK (Spill, Leak, Fire or Exposure) 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

This product is hazardous under the criteria of the Hazardous Products Regulation (HPR) as implemented under the Workplace Hazardous Materials Information System (WHMIS 2015).

Acute toxicity - Category 2 - Oral

Acute toxicity - Category 2 - Inhalation

Specific target organ toxicity - single exposure - Category 3

Label elements Hazard pictograms





Signal Word: DANGER!

Hazards

Fatal if swallowed or if inhaled.

May cause respiratory irritation.

May cause drowsiness or dizziness.

Precautionary statements

Prevention

Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear respiratory protection.

Response

IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

Storage

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture. Component	CASRN	Concentration
Methomyl	16752-77-5	90.0%
Amorphous precipitated silica	112926-00-8	>= 3.0 - < 10.0 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

For medical emergencies involving this product, call toll free 1-866-374-1975. See Label for Additional Precautions and Directions for Use. ATROPINE IS AN ANTIDOTE - SEEK MEDICAL ATTENTIONAT ONCE IN ALL CASES OF SUSPECTED POISONINGS. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Inhalation: Move to fresh air. Artificial respiration and/or oxygen may be necessary. Call a poison control center or doctor for treatment advice.

Inhalation: Move to fresh air. Artificial respiration and/or oxygen may be necessary. Call a poison control center or doctor for treatment advice.

Skin contact: Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: 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.

Ingestion: Call a physician or poison control centre immediately. If swallowed, drink 1 or 2 glasses of water and try once or twice to induce vomiting by touching the back of throat with finger. Induce vomiting if person is conscious. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Poisoning produces effects associated with anticholinesterase activity which may include: Weakness blurred vision Headache Nausea Abdominal pain discomfort in the chest constriction of pupils Sweating slow pulse muscle twitching

Indication of any immediate medical attention and special treatment needed

Notes to physician: Morphine, 2-PAM and oxime therapy are contra-indicated. Administer atropine sulphate as an antidote until complete atropinisation (1.2-2.0 mg i.v. every 10-30 minutes). However, for exposure to methomyl in combination with organophosphorous insecticides, 2-PAM (1-2 g slow i.v.) may be used as required to supplement the atropine sulfate treatment as described above. Artificial respiration and/or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until full recovery is assured. Morphine, 2-PAM and oxime therapy are contra-indicated. 2-PAM may be used as an antidote in conjunction with atropine sulphate but must not be used alone.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam

Unsuitable extinguishing media: Dry chemical

Special hazards arising from the substance or mixture Hazardous combustion products: No data available

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Applying foam will release significant amounts of hydrogen gas that can be trapped under the foam blanket. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Do not allow extinguishing medium to contact container contents. Most fire extinguishing media will cause hydrogen evolution, and once the fire is put out, may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid dust formation. Avoid breathing dust. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. Pick up and arrange disposal without creating dust. recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Handle in accordance with good industrial hygiene and safety practice. Avoid exposure - obtain special instructions before use. Smoking, eating and drinking should be prohibited in the application area. Avoid inhalation of vapour or mist. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Use with local exhaust ventilation.

Conditions for safe storage: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Consult local authorities for recommended exposure limits.

Component	Regulation	Type of listing	Value/Notation
Methomyl	ACGIH	TWA Inhalable	0.2 mg/m3
		fraction and vapor	
	ACGIH	TWA	SKIN, BEI
	CA AB OEL	TWA	2.5 mg/m3
	CA BC OEL	TWA	2.5 mg/m3
	CA QC OEL	TWAEV	2.5 mg/m3

Amorphous precipitated CA QC OEL TWAEV respirable 6 mg/m3 silica dust

CA BC OEL TWA Respirable 1.5 mg/m3

CA BC OEL TWA Total 1.3 mg/m3

Exposure controls

Engineering controls: Use only with adequate ventilation.

Hygiene measures: Do not breathe dust or spray mist. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing.

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

Eyewash facility and safety shower should be available.

All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. End users of this product should follow label instructions for personal protection when using this product.

Individual protection measures

Eye/face protection: Safety glasses

Skin protection

Hand protection: Protective gloves

Other protection: Mixers, loaders, applicators and other handlers who may be exposed to the concentrate must wear: Long sleeved shirt and long pants Chemical-resistant gloves Chemical resistant footwear plus socks Protective eyewear Chemical resistant apron Protective eyewear Shoes plus socks Chemical-resistant gloves, Category A (such as butyl rubber, naturalrubber, neoprene rubber, or nitrile rubber), all greater than or equalto 14 mils Coveralls PPE required for early entry to treated areas that is permitted underthe Worker Protection Standard and that involves contact with anythingthat has been treated, such as plants, soil, or water, is:

Applicators and other handlers exposed to the diluted material must wear: Long sleeved shirt and long pants Chemical-resistant gloves Shoes plus socks Protective eyewear Wear protective clothing such as gloves, apron, boots, or coveralls, as appropriate. Mixers, loaders, applicators and other handlers who may be exposed to the concentrate must wear: Long sleeved shirt and long pants Chemical-resistant gloves Chemical resistant footwear plus socks Protective eyewear Chemical resistant apron PPE required for early entry to treated areas that is permitted underthe Worker Protection Standard and that involves contact with anythingthat has been treated, such as plants, soil, or water, is: Coveralls Chemical-resistant gloves, Category A (such as butyl rubber, naturalrubber, neoprene rubber, or nitrile rubber), all greater than or equalto 14 mils Shoes plus socks Protective eyewear

Applicators and other handlers exposed to the diluted material must wear: Long sleeved shirt and long pants Chemical-resistant gloves Shoes plus socks Protective eyewear **Respiratory protection:** For exposures in enclosed areas: A respirator with an organic 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 canister with any R, P, or HE prefilter. For exposures outdoors: A NIOSH approved dust/mist filtering respirator with any R, P, or HE filter or with approval number prefix TC-21C.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state solid powder Color white or blue Odor slight sulphurous **Odor Threshold** No data available рH No data available Melting point/range No data available Freezing point No data available Boiling point (760 mmHg) No data available Flash point Not applicable **Evaporation Rate (Butyl Acetate** No data available

= 1)

Flammability (solid, gas) No data available Lower explosion limit No data available **Upper explosion limit** No data available No data available **Vapor Pressure Relative Vapor Density (air = 1)** No data available Relative Density (water = 1) 1.2946 at 25 °C Water solubility 58 g/L at 25 °C Partition coefficient: n-No data available

octanol/water

Auto-ignition temperature

Decomposition temperature

Kinematic Viscosity

Explosive properties

Oxidizing properties

Bulk density

Molecular weight

No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: No decomposition if stored and applied as directed. Stable under normal conditions.

Possibility of hazardous reactions: None known.

No hazards to be specially mentioned.

Conditions to avoid: None known.

Incompatible materials: None.

Hazardous decomposition products: Sulphur oxides Methyl isocyanate Hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

High toxicity if swallowed. Swallowing a small amount may cause serious injury; swallowing larger amounts may be fatal.

LD50, Rat, 23 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Acute inhalation toxicity

Brief exposure (minutes) is not likely to cause adverse effects. Prolonged excessive exposure to mist may cause serious adverse effects, even death.

LC50, Rat, 4 Hour, dust/mist, 0.258 mg/l

Skin corrosion/irritation

Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

Essentially nonirritating to eyes.

Sensitization

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Evaluation of available data suggests that this material is not an STOT-RE toxicant.

Carcinogenicity

Did not cause cancer in laboratory animals.

Teratogenicity

Did not cause birth defects in laboratory animals.

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Mutagenicity

Did not show mutagenic effects in animal experiments.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Methomyl

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Amorphous precipitated silica

Acute dermal toxicity

LD50, > 2,000 mg/kg Estimated.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

General Information

Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate. Do not apply this product if bees are visiting the treatment area. See product label for additional application instructions relating to environmental precautions. No data is available on the product itself. See product label for additional application instructions relating to environmental precautions. Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate. Do not apply this product if bees are visiting the treatment area. See product label for additional application instructions relating to environmental precautions. No data is available on the product itself. See product label for additional application instructions relating to environmental precautions. No other ecological effects to be specially mentioned. See product label for additional application instructions relating to environmental precautions.

Toxicity

Acute toxicity to fish

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 Hour, 2.49 mg/l, OECD Test Guideline 203

LC50, Lepomis macrochirus (Bluegill sunfish), 96 Hour, 0.63 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, Daphnia (water flea), static test, 48 Hour, 0.017 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

ErC50, Desmodesmus subspicatus (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

Toxicity to Above Ground Organisms

The toxicological data has been taken from products of similar composition. Information source: Internal study report

LC50, Colinus virginianus (Bobwhite quail), 8 d, > 5,620 mg/kg

Oral

The toxicological data has been taken from products of similar composition.

Information source: Internal study report

LD50, Apis mellifera (bees), 2 d, 0.00028 mg/kg

Contact

The toxicological data has been taken from products of similar composition.

Information source: Internal study report

LD50, Apis mellifera (bees), 2 d, 0.00016 mg/kg

Persistence and degradability

Methomyl

Biodegradability: Not readily biodegraded.

Amorphous precipitated silica

Biodegradability: Biodegradation is not applicable.

Bioaccumulative potential

Methomyl

Bioaccumulation: Does not bioaccumulate.

Amorphous precipitated silica

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil

Amorphous precipitated silica

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

TDG

Proper shipping name CARBAMATE PESTICIDE, SOLID, TOXIC(Methomyl)

UN number UN 2757 Class 6.1 Packing group

Classification for SEA transport (IMO-IMDG):

Proper shipping name CARBAMATE PESTICIDE, SOLID, TOXIC(Methomyl)

UN number UN 2757 Class 6.1 Packing group

Marine pollutant Methomyl

Transport in bulk Consult IMO regulations before transporting ocean bulk

according to Annex I or II of MARPOL 73/78 and the

IBC or IGC Code

Classification for AIR transport (IATA/ICAO):

Proper shipping name Carbamate pesticide, solid, toxic(Methomyl)

UN number UN 2757 Class 6.1 Packing group II

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.

15. REGULATORY INFORMATION

National Fire Code of Canada

Not applicable

Canadian Domestic Substances List (DSL)

This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements.

Pest Control Products Act

Pest Control Products Act (PCPA) Registration Number: 10868

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control products label:

PCPA Label Hazard Communications:

Read the label and booklet before using. Keep out of reach of children.

DANGER POISON

May be fatal if swallowed, inhaled or absorbed through the skin or eyes.

This product is toxic to fish, birds and other wildlife.

This product is toxic to bees exposed to direct application.

This product is toxic to:

Aquatic organisms

Birds

Small wild mammals

Bees

Certain beneficial insects

16. OTHER INFORMATION

Other information

Take notice of the directions of use on the label.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	Canada. British Columbia OEL
CA QC OEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1:
	Permissible exposure values for airborne contaminants
SKIN, BEI	Absorbed via Skin, Biological Exposure Indice
TWA	8-hour time weighted average
TWAEV	Time-weighted average exposure value

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS -Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC -Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL -International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS -Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Tessenderlo Kerley, Inc., urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.