



Safety Data Sheet

SECTION 1. IDENTIFICATION

Product Name: Lemur SP Methomyl Insecticide
EPA Registration No.: 82557-3-84237
Recommended Use: Insecticide
Manufacturer: Solera ATO, LLC
12230 E Del Norte
Yuma, AZ 85367
Customer Service (928) 503-1518

FOR MEDICAL EMERGENCIES, CONTACT the National Poison Information Center 1-800-222-1222
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

HAZARD CLASSIFICATION

Acute Oral Toxicity: Category 2; Acute dermal Toxicity: Category 5 Acute Inhalation Toxicity: Category 2;
Acute aquatic Toxicity: Category 1.

SIGNAL WORD Danger

HAZARD STATEMENTS

Fatal if swallowed. May be harmful in contact with skin. Fatal if inhaled. Very toxic to aquatic life.

PICTOGRAMS



PRECAUTIONARY STATEMENTS

Fatal if swallowed. Corrosive. Causes irreversible eye damage. May be fatal if inhaled. Harmful if absorbed through skin. Do not get into eyes or on clothing. Do not breathe dust. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

DESCRIPTION OF HAZARDS NOT OTHERWISE CLASSIFIED

This pesticide is toxic to fish, aquatic invertebrates, and mammals. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean highwater mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

This chemical is known to leach through soil into ground-water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Methomyl (S-methyl-N-[(methylcarbamoyl)oxy]thioacetimidate)	16752-77-5	90.0

SECTION 4. FIRST AID MEASURES

GENERAL

This Product is an N-Methyl Carbamate insecticide.

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

IF SWALLOWED:

Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not 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 further treatment advice.

ATROPINE IS AN ANTIDOTE --SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES OF SUSPECTED POISONING. If poisoning symptoms appear, 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 LEMUR LV label and seek medical attention at once.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of 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 LEMUR LV alone. However, for exposure to combinations of LEMUR LV and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

SECTION 5. FIRE FIGHTING MEASURES

FIRE EXTINGUISHING EQUIPMENT:

Water Spray, Water Fog, Dry Chemical, CO₂

FIRE AND EXPLOSION HAZARDS:

Fire or intense heat may cause violent rupture of packages. Heating can release vapors which can be ignited. Hazardous gases produced in fire under conditions that produce incomplete combustion may consist of SO₂, NO₂, CO₂, HCN, CH₃NCO, CO, CS₂. Complete combustion greatly reduces the amounts of CS₂, CO, HCN, and CH₃NCO generated.

PPE FOR FIREFIGHTERS/FIRE FIGHTING INSTRUCTIONS:

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Shut off source of fuel, if possible and without risk. Use water spray. Cool tank/container with water spray. Fight fire from maximum distance, use extreme caution as heat may decompose material and rupture containers.

If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing.

METHODS FOR CLEANING UP

Contain spill. Shovel or sweep up powder. Use sawdust, sand, oil dry or other absorbent material as an aid to removing remaining traces of spilled material. Do not allow the material to enter sewers, waterways or low areas. If product enters crevices and cannot be removed, treat with a sodium hydroxide solution and allow standing 4 hours.

SECTION 7. HANDLING AND STORAGE

HANDLING PROCEDURES

Avoid all contact with the skin, eyes, nose and mouth. When opening containers, transferring product, filling spray tanks, etc., wear full protective clothing including long sleeve cotton overalls, PVC or neoprene gloves and apron, rubber boots, goggles and a mask or respirator suitable for protection against toxic insecticides.

STORING PROCEDURES

Keep away from heat, sparks, and open flame. Do not subject liquid to temperatures < 0°C. Store in original container only. Discarded product is a hazardous waste under RCRA regulations.

WORK/HYGIENIC PROCEDURES

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Methomyl

PEL: (OSHA) 2.5 mg/m³ 8 hr. TWA

TLV (ACGIH) 2.5 mg/m³ TWA

ENGINEERING CONTROLS

Human flaggers must be in enclosed cabs.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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Water soluble packets when used correctly qualify as a closed loading system under the WPS. Handlers handling this product while it is enclosed in intact water-soluble packets are permitted to wear long-sleeved shirt, long pants, shoes plus socks, chemical-resistant gloves, and chemical-resistant apron, provided the other required PPE is immediately available in case the bag is opened.

Pilots must not assist in the mixing and loading operations.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and others exposed to the diluted spray solution must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

Mixers, loaders, cleaners, repairers of application equipment, and others exposed to the concentrate must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber
- Socks and chemical resistant footwear
- Protective eyewear (goggles, face shield, or safety glasses)
- Chemical resistant apron
- Respirator as outlined below

For handling activities, use a non-powered air purifying respirator equipped with an N-, R-, or P or HE-series filter.

For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or NIOSH approved respirator with an organic vapor (OV) cartridge or a canister with any R, P, or HE prefilter.

For exposures outdoors, Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P, or HE prefilter.

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.

Discard clothing or other absorbent materials that

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White powder
Odor	Moderate characteristic odor
Melting Point	Not available
Boiling Point	Not applicable
Flash point	Not applicable
Vapor Pressure	0.72 mPa (25 °C) (tech)
Density	Bulk density 0.5847 g/ml at 20 °C
Solubility	Soluble in water
pH	Approx. 7.0 (1% w/v solution)
Vapor Density	Not available
Volatility	Not available
Log Pow	0.12 (pH 4); 0.15 (pH 7 & 9) at 25°C (Tech.)
Flammability	Non-flammable
Explosive Properties	Non-explosive
Oxidizing Properties	Non-oxidizing
Decomposition Temperature	Not Available
Autoignition Temperature	Not Available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability:

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

Incompatible with strong bases.

Decomposition:

Thermal decomposition and combustion will produce hazardous gases. They may include sulfur oxides, methyl isocyanate and HCN.

Hazardous Polymerization:

Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Acute oral	LD50 23 mg/kg in rats.
Acute dermal	LD50 >2000mg/kg for rats.
Acute inhalation	LC50 0.258 mg/L in rats (4h).
Eye irritation	Slight irritation (rabbit)
Skin irritation	Non-irritation (rabbit)
Skin sensitization	Non-sensitive to skin (guinea pig)

CHRONIC TOXICITY

Prolonged or repeated exposure to methomyl may cause symptoms similar to the pesticide's acute effects. Repeated exposure to small amounts of methomyl may cause an unsuspected inhibition of cholinesterase, resulting in flu-like symptoms, such as weakness, lack of appetite, and muscle aches. Cholinesterase-inhibition may persist for two to six weeks. This condition is reversible if exposure is discontinued. Since cholinesterase is increasingly inhibited with each exposure, severe cholinesterase-inhibition symptoms may be produced in a person who has had previous methomyl exposure, while a person without previous exposure may not experience any symptoms at all.

Based on a 5 mg/kg NOEL in a two-year feeding study with dogs, and utilizing a 100 fold safety margin, the EPA has established an ADI (Acceptable Daily Intake) for methomyl of 0.025 mg/kg of body weight/day.

MUTAGENIC TOXICITY

In all of several assays (including Ames test, a reverse mutation assay, a recessive lethal assay, three DNA damage studies, an unscheduled DNA synthesis assay, and in vivo and in vitro cytogenetic assays), methomyl was not mutagenic. Methomyl showed no transforming activity in a host mediated hamster cell culture. There is no evidence that methomyl is a mutagen.

SECTION 12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish, aquatic invertebrates, and mammals. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean highwater mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

This chemical is known to leach through soil into ground-water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result

Aquatic toxicity

Aquatic toxicity	96hour LC50- Bluegill sunfish: 0.72mg/L
	MATC, fathead minnows: 104ug/L
	48hour LC50-Daphnia magna: 0.0076-0.0317 ppm

Avian toxicity

Avian toxicity	Acute Oral LD50- Bobwhite Quail: 24.2mg/kg
	Acute Oral LD50-Mallard Duck: 15.9mg/kg
	Acute Dietary LC50-Bobwhite Quail: 1000ppm
	Acute Dietary LC50-Mallard Duck: 2883ppm
	Oral LD50-Pheasant: 15.4mg/kg
	Dietary LC50-Pheasant: 1975ppm

Mobility:

A silty clay loam, a silt loam and two sandy loams were made up as slurries and spread on TLC plates. Methomyl and a minor soil metabolite, S-methyl-N-hydroxy-thioacetimidate (MHTA) were applied at 1 µg/spot and the plates developed. Methomyl and its metabolite were considered to be very mobile, with R_f values of 0.64~0.79 and 0.86~0.93, respectively, in the four soils (US EPA, 1988).

Persistence and Degradability:

Stable in water for 30 d (pH 5 and 7); DT50 c. 30 d (pH 9). Stable up to 140 °C. Stable to sunlight when exposed for 120 d.

Bioaccumulative Potential:

Bioaccumulation by rainbow trout did not occur in a flow-through study. Depuration occurred within one day of transfer to clean water. Trout were discoloured when exposed to levels between 0.075 and 0.75 mg/litre, an effect that disappeared within 5 days, the time depending on original exposure concentration.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

DISPOSAL

Do not contaminate water, food or feed by storage. 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

Completely empty bag into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

MARITIME TRANSPORT

IMDG: Proper shipping name	Carbamate Pesticide, Liquid, Toxic, Flammable (methomyl, Cyclohexanone
UN number	2757
Class	6.1
Packing group	II
Marine pollutant	Yes

AIR TRANSPORT (IATA)-INTERNATIONAL

Proper shipping name	Carbamate Pesticide, Liquid, Toxic, Flammable (methomyl, Cyclohexanone)
UN number	2757
Class	6.1
Packing Group	II

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s): Methanol

Title III hazard classification:

Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire: Yes

Reactivity/Physical hazard: No

Pressure: No

CERCLA Reportable Quantity: 110 lbs

Based on the percentage composition of this chemical in the product: Methomyl

SARA Reportable Quantity: 110 lbs

Based on the percentage composition of this chemical in the product: Methomyl

SECTION 16. OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating

Health : 2

Flammability : 1

Reactivity : 1

NPCA-HMIS Rating

Health : 3

Flammability : 1

Reactivity : 1

(0: Minimal; 1: Slight; 2: Moderate; 3: Serious; 4: Extreme)

Revision Date : 09-30-15