

# MATERIAL SAFETY DATA SHEET

# CARBARYL 4L INSECTICIDE

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### FORMULATED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

**24-Hour Emergency Phone:** 1-800-424-9300  
**Medical Emergencies:** 1-866-944-8565  
**U.S. Coast Guard National Response Center:** 1-800-424-8802

**PRODUCT NAME:** CARBARYL 4L INSECTICIDE  
**CHEMICAL NAME:** Carbaryl: 1-naphthyl N-methylcarbamate  
**CHEMICAL FAMILY:** Carbamate Insecticide  
**EPA REG. NO.:** 34704-447  
**MSDS Number:** 000447-10-LPI **MSDS Revisions:** All sections reviewed

**Date of Issue:** 08/17/10 **Supersedes:** 05/19/06

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – CAUTION –** Harmful if swallowed, absorbed through the skin, or inhaled. Avoid breathing of spray mist. Avoid contact with skin, eyes, or clothing.

This product is white to beige opaque liquid with mild odor.

**Overexposure May Cause:** Salivation, watery eyes, pinpoint eye pupils, blurred vision, muscle tremors, difficult breathing, excessive sweating, abdominal cramps, nausea, vomiting, diarrhea, weakness, headache. IN SEVERE CASES: CONVULSION, UNCONSCIOUSNESS, AND RESPIRATORY FAILURE MAY OCCUR. SIGNS AND SYMPTOMS OCCUR RAPIDLY FOLLOWING OVEREXPOSURE TO THIS PRODUCT.

**NOTE TO PHYSICIAN:** Carbaryl contains N-methyl carbamate that inhibits cholinesterase. Drugs like 2-PAM (pyridine-2-aldoxime methiodide) are not recommended. To aid in the confirmation of diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Consultation on therapy can be obtained at all hours by calling the appropriate emergency number 1-866-944-8565.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Carbaryl	43.00	63-25-2	0.5 mg/m <sup>3</sup> IFV
Inert Ingredients, including Propylene Glycol	57.00	57-55-6	not listed

## 4. FIRST AID MEASURES

**If swallowed:** Immediately call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

**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.

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

**If in eyes:** Hold eye open and rinse slowly and gently with water 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT (°F/Test Method):** >212°F/>100°C (PMCC)  
**FLAMMABLE LIMITS (LFL & UFL):** LFL: 2.6% (V); UFL: 19% (V)  
**EXTINGUISHING MEDIA:** Dry powder, carbon dioxide (CO<sub>2</sub>), foam, or water spray.  
**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition products include, but are not limited to, oxides of nitrogen and carbon and methyl isocyanate in trace amounts.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue.

**CAUTION:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**7. HANDLING AND STORAGE**

**HANDLING:** 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 PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Store unused CARBARYL 4L insecticide in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 100° F. Do not contaminate water, food or feed by storage or disposal.

**Personal Protective Equipment (PPE):** **Handlers applying with open cab airblast equipment rates equal to or greater than 5 quarts of Carbaryl 4L per acre must wear:** coveralls over long sleeved shirt and long pants, chemical-resistant gloves, chemical-resistant footwear plus socks, chemical-resistant headgear, and NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or NIOSH-approved respirator with any N, R, P, or HE filter. **All other mixers, loaders, applicators, and handlers must wear:** long sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, and chemical-resistant apron, when mixing, loading, or cleaning up spills or equipment. **In addition, mixers and loaders supporting aerial or chemigation applications must wear:** a NIOSH-approved dust/mist filtering respirator with NIOSH/MSHA approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter. Follow manufacturer's instructions for cleaning and maintaining Personal Protective Equipment (PPE). If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Pilots must use and enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. See product label for additional requirements in the State of California for citrus application and for requirements pertaining to Rangeland Grasshopper and Mormon Cricket Suppression programs through APHIS (Animal and Plant Health Inspection Service) or affiliated state programs.

**RESPIRATORY PROTECTION:** Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved pesticide respirator.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear protective clothing: long-sleeved shirts and pants, shoes with socks. Wear waterproof gloves.

	<b>OSHA PEL 8 hr TWA</b>	<b>ACGIH TLV-TWA</b>
Carbaryl	5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup> IFV*

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b> White to beige opaque liquid with mild odor.	<b>SOLUBILITY:</b> Miscible
<b>SPECIFIC GRAVITY (Water = 1):</b> 1.10 g/ml	<b>BULK DENSITY:</b> 9.18 lbs/gal.
<b>VAPOR PRESSURE:</b> 17.8 mm Hg @ 68°F/20°C	<b>BOILING POINT:</b> 208°F/98°C
<b>PERCENT VOLATILE (by volume):</b> Not established	<b>EVAPORATION RATE:</b> Not established

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**INCOMPATIBILITY:** Strong bases and acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition – oxides of nitrogen and carbon and trace amounts of methyl isocyanate.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Excessive heat, open flame or extreme cold.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Oral LD<sub>50</sub> (rat):</b> 699 mg/kg	<b>Acute Dermal LD<sub>50</sub> (rat):</b> > 4000 mg/kg
<b>Eye Irritation (rabbit):</b> Slight irritation	<b>Skin Irritation (rabbit):</b> Slight irritation
<b>Inhalation LC<sub>50</sub> (rat):</b> 3.8 mg/L (4 hr).	<b>Skin Sensitization (guinea pig):</b> Not a sensitizer

**Carcinogenic Potential:** None listed in OSHA or NTP. IARC lists Carbaryl as IARC-3: Unclassifiable as to Carcinogenicity in Humans. ACGIH lists Carbaryl as TLV-A4: Not Classifiable as a Human Carcinogen. ACGIH has recommended a Biological Exposure Index for Carbaryl: BEI<sub>A</sub>: Acetylcholinesterase Inhibiting Pesticides

**12. ECOLOGICAL INFORMATION**

Carbaryl is extremely toxic to aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not apply when weather conditions favor drift from area treated. Drift and runoff may kill aquatic invertebrates in water adjacent to treated areas. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters. Highly toxic to bees exposed to direct treatment or to residues on crops or weeds in bloom. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL**

**Nonrefillable Container (five gallons or less):** Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Offer for recycling, if available. If not recycled, then puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. **Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then puncture and dispose of in a sanitary landfill, incinerate or burn, if allowed by state and local authorities. Stay out of smoke from burning container. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **Refillable Container:** Refillable container. Refill this container with Carbaryl only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** LESS THAN 25 GALLONS NOT REGULATED BY USDOT.

**DOT Shipping Description:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, UN3082, III (CARBARYL) RQ ERG GUIDE 171

**U.S. Surface Freight Classification:** INSECTICIDES, INSECT REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120, CLASS: 60)

**Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.**

**15. REGULATORY INFORMATION**

<b>NFPA &amp; HMIS Hazard Ratings:</b>		<b>NFPA</b>		<b>HMIS</b>
2	Health	0	Least	2 Health
1	Flammability	1	Slight	1 Flammability
1	Instability	2	Moderate	1 Reactivity
		3	High	H PPE
		4	Severe	

**SARA Hazard Notification/Reporting**

<b>SARA Title III Hazard Category:</b>	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** Carbaryl (CAS: 63-25-2): 100 pounds

**SARA, Title III, Section 313:** Carbaryl (CAS: 63-25-2) 43.0%

**RCRA Waste Code:** U279

**CA Proposition 65: WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm

**16. OTHER INFORMATION**

**MSDS STATUS:** All sections reviewed and/or revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental/ Regulatory Services

\*Measured as inhalable fraction and vapor.

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