

# MATERIAL SAFETY DATA SHEET

# CARBARYL 4L

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

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Carbaryl 4L

**Synonyms and Chemical name:** Carbaryl (1-naphthyl n-methylcarbamate), propylene glycol

**EPA Reg. No.:** 34704-447

**Company ID:** Platte Chemical Company  
419 18<sup>th</sup> Street  
Greeley, CO 80631

**Phone #s:** Emergency Phone Number: **CHEMTREC 1-800-424-9300**  
Medical Emergency Phone Number: **1-800-228-5635 extension 136**

**Revisions:** Sections 14 and 15

**MSDS Number:** 000447

**Date:** 11/19/02

**Supersedes:** 3/28/01

## 2. COMPOSITION INFORMATION ON INGREDIENTS

		Percent by Weight	
<b>Chemical Ingredients:</b>	<b>Active Ingredient:</b>	Carbaryl (CAS No. 63-25-2)	43.2%
	<b>Inert Ingredients:</b>	Propylene Glycol (CAS No. 57-55-6)	56.8%

See section 8 for PPE and exposure limits.

## 3. HAZARDS IDENTIFICATION

**Emergency Overview:** *This formulation is considered to be of moderate toxicity. The most likely route of entry is dermal. Product contains methyl carbamate insecticide, which is a cholinesterase inhibitor.*

**Warning Statements:** **Caution!** May be harmful if swallowed or inhaled.

**NOTE TO PHYSICIAN:** All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. Specific treatment consists of parenteral atropine sulfate. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. Mild cases may be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosage for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours. Persons regularly exposed in manufacturing and handling this product should have pre-exposed and periodic red blood cell cholinesterase level checks. Narcotics and other sedatives should not be used. Further, drugs like 2-PAM (pyridine-2-aldoxime methiodide) are NOT recommended.

**Potential Adverse Health Effects:**

**Eye Contact:** Causes redness, irritation, tearing.

**Dermal Contact:** Harmful if absorbed through the skin. May produce symptoms similar to those from ingestion.

**Ingestion:** Harmful if swallowed. Contact a physician if material is ingested. Medical emergency telephone number is 1 800-228-5635 extension 136. This product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with some pronounced signs and symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression and convulsions.

**Inhalation:** Harmful if inhaled, may cause symptoms similar to ingestion. Contact a physician if material is inhaled and breathing is difficult.

**Chronic Effects:** This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected carcinogens.

## 4. FIRST AID MEASURES

**If on Skin:** Wash skin, hair and fingernails thoroughly with soap and water. If irritation persists seek medical attention. Remove all contaminated clothing. Wash clothing before reuse.

**If Inhaled:** Remove to fresh air. If breathing is difficult, please administer oxygen. If breathing stops administer artificial respiration. Get medical attention immediately.

**If Swallowed:** Drink 1 to 2 glasses of water. Do not induce vomiting or give anything by mouth to an unconscious person. Call a physician to get medical attention; the emergency telephone number is 1-800-228-5635 extension 136.

**If in eyes:** Flush with running water for at least 15 minutes while holding open eyelids to help flush out material. If irritation persists, seek medical attention.

**5. FIRE FIGHTING MEASURES**

**Flash Point (°F):** 200° F Method: PMCC

**Fire Extinguishing Media:** Dry chemical and carbon dioxide on small fires. For large fires alcohol foam, polymer foam or water spray.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.

**Unusual Fire or Explosion Hazards:** Thermal decomposition products include, but are not limited to, oxides of nitrogen and carbon and methyl isocyanate in trace amounts.

**6. ACCIDENTAL RELEASE MEASURES**

**Release or Spill:** Contain spill, absorb with clay or other absorbent material; sweep up material and place in container for possible land application according to label use or for proper disposal. Check local, state and federal regulations for proper disposal.

**7. HANDLING AND STORAGE**

**Handling** Store in a cool dry place away from children, feed and food products, seed and fertilizer. Do not store above 100° F. Do not store beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling. See Section 8 for PPE.

**Other Precautions :** Toxic to fish and other aquatic organisms. Do not contaminate water supplies by handling and storage of product. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Personal Protective Equipment:**

**Eye Protection:** Chemical goggles or shielded safety glasses.

**Skin Protection :** Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

**Respiratory Protection:** Not normally required, if vapors exceed acceptable levels, wear a MSHA/NIOSH approved pesticide respirator.

**Ventilation:** Not normally required. If vapors exceed the acceptable levels, wear MSHA/NIOSH approved respirator with cartridges for pesticide vapors.

	<b>OSHA PEL 8 hr TWA</b>	<b>ACGIH TLV-TWA</b>
Carbaryl	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Propylene Glycol	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

**EPA Handler Requirements WORKER PROTECTION STANDARD 40 CFR 170**

Note, the following PPE requirements address handler/applicator requirements under FIFRA and may differ from what is felt necessary to address a clean up needs during formulation/manufacturing or other incidents with this product.

**Personal protective Equipment:** Applicators and other handlers must wear: Coveralls over long-sleeve shirt and long pants, chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or viton), chemical-resistant shoes and socks, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing or loading. Maintain the PPE accordingly to manufacturer's instructions. If no instructions, use detergent and hot water. Keep and wash PPE separately from other domestic laundry.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b> Off-white to pale yellow liquid	<b>Odor:</b> Mild odor	<b>Solubility:</b> Miscible in water
<b>Specific Gravity (water= 1):</b> 1.10 g/ml @ 68° F	<b>Bulk Density:</b> 9.18 lbs/gal	<b>pH:</b> 4-5 (5% wt/wt in H <sub>2</sub> O)
<b>Vapor Pressure:</b> 23.3 torr	<b>Freezing Point:</b> 27° F	<b>Boiling Point:</b> 208° F
<b>Percent Volatile (by volume):</b> 57%		

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.

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable      **Conditions to Avoid:** Excessive heat, open flame or extreme cold

**Incompatibility with Other Materials:** Strong bases, acids and oxidizers

**Hazardous Decomposition Products:** Oxides of nitrogen and carbon trace amounts of methyl isocyanate.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute Oral LD<sub>50</sub> (rat):** 590 mg/kg      **Acute Dermal LD<sub>50</sub> (rabbit):** >2000 mg/kg      **Acute Inhalation LC<sub>50</sub> (rat):** > 1.8 mg/L (4 hour)

**Eye Irritation:** Slight      **Skin Irritation:** Minimal      **Mutagenic Potential:** None observed

**Carcinogenic Potential:** None listed in OSHA, NTP, IARC or ACGIH      **Target Organs:** Carbaryl – Cholinesterase inhibitor

## 12. ECOLOGICAL INFORMATION

This product is extremely toxic to aquatic and estuarine invertebrates. For terrestrial uses, do not apply directly to water or to inter-tidal areas below the mean high water mark. Do not contaminate water supplies by cleaning of equipment or disposal of wastes.

## 13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Plastic Jugs: Triple rinse (or equivalent), then offer for recycling at an ACRC site or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state and federal regulations.

## 14. TRANSPORT INFORMATION

**DOT Shipping Description:** Less than 25 gallons not regulated by US DOT

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

**RQ:** 100 pounds Carbaryl (> 25 gal Carbaryl 4L)

**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

**SARA Hazard Notification/Reporting  
NFPA & HMIS Hazard Ratings:**

NFPA		HMIS
3 Health	0 Least	3 Health
1 Flammability	1 Slight	1 Flammability
0 Reactivity	2 Moderate	0 Reactivity
	3 High	H PPE

**SARA Title III Hazard Category:**

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:** 100 pounds

**SARA, Title III, Section 313:** Carbaryl (CAS: 63-25-2) 43.2%

**RCRA Waste Code:** U279

**CA Proposition 65:** Not listed

## 16. OTHER

Reason for revision: Correction of information, Sections 14 and 15

Prepared by: Registrations and Regulatory Affairs

Reviewed by: Environmental/ Regulatory Services

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