



SAFETY DATA SHEET

DREXEL CARBARYL 4L INSECTICIDE

Section 1: Material Identification

Product Name: Drexel Carbaryl 4L Insecticide

EPA Reg No.: 19713-49

CAS NO: 63-25-2

Formula: $C_{12}H_{11}NO_2$

Company: Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

Synonyms: 1-naphthyl methylcarbamate

Identifiers:

EINECS:	200-555-0
RTECS:	FC5950000
DOT label:	UN-3082, Environmentally Hazardous Substance, Liquid, (Carbaryl), 9 PG-III, Marine Pollutant RQ 100 Lbs.

Emergency Telephone Number:

CHEMTREC
Tel: 1-800-424-9300

Drexel Chemical Co.
901-774-4370

This product is an EPA FIFRA registered pesticide. Some of the classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see **Section 15. REGULATORY INFORMATION** for explanation.

Section 2: Hazard Identification

(As defined by the OSHA Hazard Communication Standard, 29)

GHS Classification

Health hazards

Acute toxicity - oral	Category 4
Acute toxicity – inhalation	Category 4
Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

Aquatic acute toxicity	Category 1
Aquatic chronic toxicity	Category 1

GHS label elements

Signal word

Danger



Hazard statements

Harmful if swallowed
Harmful if inhaled
Causes skin irritation
Causes eye irritation
Causes damage to nervous system
May cause damage to nervous system through prolonged or repeated exposure
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention

Wash thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear eye protection/face protection (see Section 8)
Wear protective gloves
Wash face and hands thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in well-ventilated area
Prevent from entering into sewers, waterways and/or groundwater. See Section 12, Ecological Information

Response

If swallowed: Immediately call a poison control center/doctor. Rinse mouth.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. 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: Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
If exposed: Call poison center/doctor. Specific treatment see Note to Physician, Section 4.

Storage

Store locked up.

Disposal

Disposal of contents/container must be in accordance with your local or area regulatory authorities.

Section 3: Composition Information

<u>Components</u>	<u>% By Wt.</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>
Active Ingredient:			
Carbaryl	43.4%	N/Av	5 mg/m ³
Inert Ingredients:	56.6%	N/A	N/A

Section 4: First-Aid Measures

Eye Contact: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes for at least 10 minutes. Obtain medical attention without delay, preferably from an ophthalmologist

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water then have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Have product label with you when calling a poison control center or doctor.

Skin Contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands.

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.

Note to Physician: This product contains a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing respiratory depression. Decontamination procedures such as whole body washing, gastric lavage and administration of activated charcoal are often required. If symptoms are present, administer atropine sulphate in large doses as soon as possible. Repeat at 5 to 10 minute intervals until signs of atropinization appear. Maintain full atropinization until all organophosphate is metabolized. Pralidoxime chloride (2-PAM) may be administered as an adjunct to, but not a substitute for atropine. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Very close supervision of the patient is indicated for at least 48 hours, depending on the severity of poisoning.

Section 5: Fire Fighting Measures

Fire Hazards: Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Thermal decomposition during a fire can produce fumes and irritating gases.

Flammability classification (OSHA 29 CFR 1910.1200): Non-Combustible

Flash point: Non-Combustible

Lower flammable limit (% by volume): N/Av

Upper flammable limit (% by volume): N/Av

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Dike and collect fire-extinguishing water to prevent environmental damage and excessive waste runoff.

Firefighting media: Use carbon dioxide or dry chemical for small fires. Use alcohol foam, polymer foam or water spray for large fires. Do not use water jet, as this may spread burning material. Minimize the use of water to avoid environmental contamination. Contain all runoff.

Special Protective Equipment for Firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Hazardous Combustion Products: Carbon oxides, nitrogen oxides, trace amounts of methyl isocyanate, irritating fumes and smoke.

(NFPA):	Health:	Flammability:	Reactivity:
	3	0	0

Section 6: Accidental Release Measures

Steps to be taken if Material is Released or Spilled:

- Contain spilled material if possible. Small spills: Apply suitable absorbent then sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Drexel Chemical Co. for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

- Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Section 7: Handling and Storage

KEEP OUT OF REACH OF CHILDREN

Handling: **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear chemical protective equipment when handling. Keep away from heat, sparks and flame. See Section 8, Exposure Controls and Personal Protection.

Storage: Store in a cool, dry, ventilated and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls/ Personal Protection

Exposure Limits: TLV Carbaryl 5 mg/m³

Personal Protection:

Eye/Face Protection: Wear safety glasses with side shields or chemical splash goggles to prevent vapors or mists from entering the eyes. If using a full face shield, always use safety glasses or goggles along with the face shield to ensure adequate protection of the eyes.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as

face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of mists are generated or prolonged exposure is possible in excess of the TLV, use 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).

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls:

Ventilation: When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with and eyewash facility and safety shower.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	White
Odor:	Mild odor
Flash Point:	Non-Combustible
Vapor Pressure (mmHg):	17.8 mmHg @ 20°C
Boiling Point:	212°F
Vapor Density (air = 1):	0.62
Bulk Density (H₂O = 1):	9.25 lbs. /gal.
Freezing Point:	N/Av
Solubility in water (wt. %) weight):	Dispersible
pH:	4.5 – 5.0
Viscosity:	N/Av

Section 10: Stability and Reactivity

Stability/Instability:	Thermally stable at typical use temperatures and in closed containers.
Conditions to Avoid:	Avoid heat of open flame. Avoid high temperatures above 130°F (54.4°C).
Incompatible Materials:	Avoid contact with: Strong acids. Strong bases.
Hazardous Polymerization:	Will not occur
Thermal Decomposition:	Decomposition products can include: Carbon oxides, nitrogen oxides, trace amounts of methyl isocyanate.

Section 11: Toxicological Information

Acute toxicity data from studies conducted on a similar, but not identical, formulation containing a similar percentage of active ingredient carbaryl. The non-acute information pertains to technical grade carbaryl.

Acute Toxicity

Ingestion:

- LD50, (rat): 699 mg/kg

Dermal:

- LD50 (rat): >4,000 mg/kg
- LD50 (rabbit): >2,000 mg/kg

Inhalation:

- LC50 (4h), (rat): 3.8 mg/l

Eye Irritation (rabbit):

- Slight irritation.

Skin Irritation (rabbit):

- Slight irritation.

Sensitization Skin (Guinea Pigs):

- Non-sensitizer.

Chronic Toxicity:

- Reversible cholinesterase inhibition occurred in chronic toxicity studies in rates and dogs. The principal organs affected from high doses of carbaryl included urinary bladder, thyroid, kidneys and liver.

Carcinogenicity:

- Listed as Likely to be carcinogenic in humans by EPA.

Teratogenicity, mutagenicity, and other reproductive effects: None known

Section 12: Ecological Information

Based on active ingredient carbaryl:

Environmental Fate:

- Not persistent in soil – quickly degrades in aerobic soil, more slowly in anaerobic soil. Degraded in soil through hydrolysis, photolysis and by microorganisms.

Ecotoxicity:

- Moderate to highly toxic to fish. Extremely toxic to aquatic and estuarine invertebrates. Highly toxic to bees.

Aquatic Toxicity:

- Rainbow Trout: 96 hour LC50: 4.3 mg/L
- Bluegill 96 hour LC50: 6.76 mg/L
- Daphnia magna: 48 hour EC50: 0.00067 mg/L

Bees:

- LC50: 1.54 – 26.5 µg/bee

Bird Toxicity:

- Mallard Duck 8-day LD50: > 5000 mg/kg
- Bobwhite Quail 8-day LD50: > 5000 mg/kg

Section 13: Disposal Considerations

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.

Section 14: Transport Information

DOT: UN-3082, Environmentally Hazardous Substance, Liquid, (Carbaryl), 9, PG-III, Marine Pollutant RQ 100 Lbs.

IMDG: RQ, Environmentally Hazardous Substance, Liquid, N.O.S., (Carbaryl), 9, UN3082, PG III, Marine Pollutant

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. 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.

Section 15: Regulatory Information

OSHA Hazard Communication Standard:

- This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- **EPA FIFRA INFORMATION**
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below. The pesticide label also includes other important information, including directions for use.
- **EPA/CERCLA Reportable Quantity:** 100 lbs.

SARA/TITLE III:

- **Sec 302: Extremely Hazardous Substance Notification:** This material is not known to contain any Extremely Hazardous Substances.
- **Sec. 311/312. Hazard Categories:** Immediate health hazard
Chronic health hazard
- **Section 313 Toxic Chemical(s):** Carbaryl (CAS 63-25-2)
- **RCA Waste Code:** U279

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

- This product is not listed.

Toxic Substances Control Act (TSCA):

- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Section 16: Other Information

Drexel Chemical Company recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this 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 below. 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 SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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