

# Cymoxanil -MATERIAL SAFETY DATA SHEET

## Manufacturer/information service:

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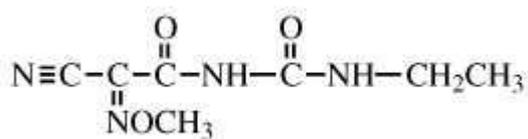
## 1. Chemical Product Identification

Product Name: Cymoxanil

Molecular Formula: C<sub>7</sub>H<sub>10</sub>N<sub>4</sub>O<sub>3</sub>

Molecular Weight: 198.18

Structural Formula:



Chemical Name: 2-cyano-N-[(ethylamino)carbonyl]-2-(methoxyimino) acetamide

Form: Solid

Color: White

Odor: Odorless

CAS No.: 57966-95-7

## 2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Cymoxanil	57966-95-7	98.0
Other ingredients		2.0

## 3. Hazards Identification

Emergency Overview: WARNING! MAY BE FATAL IF SWALLOWED. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco.

Potential Health Effects: Based on animal data, inhalation of Cymoxanil may cause eye irritation with tearing, pain or blurred vision, irritation of the nose and throat with sneezing,

sore throat or runny nose, and incoordination. Based on animal data, skin contact with Cymoxanil may cause irritation with itching, burning, redness, swelling or rash. Based on animal data, eye contact with Cymoxanil may cause eye irritation with tearing, pain or blurred vision. Based on animal data, ingestion of Cymoxanil may cause temporary central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness, changes in hematology measurements, pathological changes in the liver, and weight loss.

#### **4. First Aid Measures**

Swallowed: Call 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 do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Skin contact: Flush contaminated hair and skin with copious amounts of fresh water. Wash skin and hair with soap and water.

Ingestion: If accidental oral ingestion occurs, the stomach should be emptied by vomiting and lavage with water, followed by a saline cathartic, such as sodium sulfate.

Eye contact: Flush contaminated eyes with copious amounts of fresh water.

#### **5. Fire-Fighting Measures**

Flammable Properties: The material poses no explosion hazard in granular form.

Extinguishing Media: Water Spray, Foam, Dry Chemical, CO<sub>2</sub>.

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. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

#### **6. Accidental Release Measures**

Safeguards (Personnel)

NOTE: Review fire fighting measures and handling (Personal) sections before proceeding with clean-up. Use appropriate personal protective equipment during clean-up.

Emergency Response -Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use approved respirator protection.

Initial Containment

Remove source of heat, sparks, flame, impact, friction or electricity.

Follow applicable Federal, State/Provincial and Local laws/ regulations.

Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up: Shovel or sweep up.

## 7. Handling And Storage

Handling (Personnel): Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove personal protective equipment immediately after handling this product. Do not breathe dust. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not store or consume food, drink or use tobacco in areas where they may become contaminated with this material.

Handling (Physical Aspects): Avoid dust generation.

Storage: Keep container tightly closed. Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

## 8. Exposure Controls/Personal Protection

Engineering Controls: Use only with adequate ventilation. When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Workers Protection Standard (WPS) for agricultural pesticides, the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment: Always follow the label instructions when handling this product. Applicators and other handlers must wear:

Long-sleeved shirt and long pants. Protective Gloves Shoes plus socks. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls over long sleeved shirt and long pants. Chemical Resistant Gloves Shoes Plus Socks During aerial application, human flaggers must be in enclosed cabs.

## 9. Physical and Chemical Properties

**Appearance: White solid**

Density: 1.31@25°C

Melting Point: 159-160°C

Vapor pressure:  $8 \times 10^{-5}$  Pa@25°C

Solubility: In water 890mg/l (pH5, 20°C), and soluble in most organic solvents (g/l, 20°C): hexane1.85, toluene5.29, methyl cyanide57, ethyl acetate28, n-butyl alcohol1.43, methyl alcohol22.9, acetone62.4, methylene chloride133

## 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials: None reasonably foreseeable.

Polymerization: Polymerization will not occur.

## 11. Toxicological Information

Acute Toxicity: The acute toxicity data show that this chemical is not acutely toxic by the oral, inhalation, and dermal routes of exposure.

Chronic Toxicity: In a combined chronic/carcinogenicity study, the NOEL was 4.08 mg/kg/day for males and 5.36 mg/kg/day of females. In a chronic toxicity study in dogs, the NOEL was 5.7 mg/kg/day for males and 3.1 mg/kg/day for females.

Carcinogenicity: Cymoxanil showed no evidence of carcinogenic potential and was classified as a "Not Likely" carcinogen.

Developmental Toxicity: In a prenatal developmental toxicity study in rats, the maternal and developmental NOEL was 10 mg/kg/day. In a prenatal developmental toxicity study in rabbits, the maternal and developmental NOEL was 16 mg/kg/day. In another prenatal developmental toxicity study in rabbits, the maternal and developmental NOEL was 4 mg/kg/day.

Reproductive Toxicity: In a two-generation reproduction study in rats, the parental systemic NOEL was 100 ppm (6.5 mg/kg/day for males and 7.9 mg/kg/day for females) and the offspring NOEL was 100 ppm.

## 12. Ecological And Ecotoxicological Information

Birds:

The acute oral LD<sub>50</sub> for bobwhite quail and mallard duck was greater than the highest dose administered, 2000 mg/kg. For bobwhite quail, the dietary LC<sub>50</sub> was also greater than the highest concentration administered, 5200ppm.

Fish:

LC<sub>50</sub> (96h,mg/l): Rainbow trout 61, bluegill sunfish 29, carp 91

Bees:

The acute contact and oral toxicities of cymoxanil to honeybees was greater than the maximum dose administered, 85.3 and 100µg/bee for oral or contact administration, indicating that the compound is poses low risks to foraging honey bees.

## 13. Disposal Considerations

Waste Disposal: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not contaminate

water supply, food or feed by storage or disposal. Do not flush to surface water or sanitary sewer system. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **14. Transport Information**

Shipping Information

DOT/IMO

Proper Shipping Name: NOT REGULATED

#### **15. Regulatory Information**

Not applicable.

#### **16. Other Information**

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.