

US EPA ARCHIVE DOCUMENT

# Technical Factsheet on: OXAMYL

## [List of Contaminants](#)

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:  
**National Primary Drinking Water Regulations**

### Drinking Water Standards

MCLG: 0.2 mg/L

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HAL(child): 1- to 10-day: 0.2 mg/L; Longer-term: 0.2 mg/L

### Health Effects Summary

Acute: EPA has found oxamyl to potentially cause the following health effects from acute exposures at levels above the MCL: tremors, salivation and tearing due to cholinesterase inhibition.

Drinking water levels which are considered "safe" for short-term exposures: For a 10-kg (22 lb.) child consuming 1 liter of water per day, up to a 7-year exposure to 0.2 mg/L.

Chronic: Oxamyl has the potential to cause the following health effects from long-term exposures at levels above the MCL: decreased body weight.

Cancer: There is no evidence that oxamyl has the potential to cause cancer from a lifetime exposure in drinking water.

### Usage Patterns

Oxamyl is widely used for control of insects, mites and nematodes on field crops, fruits and ornamentals. The majority of oxamyl is applied to apples (36 percent), potatoes (33 percent), and tomatoes (20 percent).

EPA estimated that 400,000 lbs. of oxamyl were produced in the US in 1982.

### Release Patterns

Oxamyl is released directly to the environment in its use as an insecticide and during its manufacture, handling and storage.

Since oxamyl is not a listed chemical in the Toxics Release Inventory, data on releases during its manufacture and handling are not available.

### Environmental Fate

Oxamyl is highly soluble in water, and is relatively stable in aqueous solutions at acidic pH. It hydrolyzes and photodegrades rapidly to an oximino compound.

Biodegradation is also rapid in soils under both aerobic and anaerobic conditions. While laboratory studies have found oxamyl to be mobile in soils, field data indicates only limited mobility, most likely due to rapid biodegradation.

Bioconcentration is not expected as oxamyl is rapidly absorbed, metabolized and eliminated in toxicological tests. However, some accumulation has been noted in the skin and hair of rodents, so accumulation may occur in species that do not readily metabolize the compound.

Exposure data are limited, but oxamyl has been found in drinking water at levels averaging 5 percent of the MCL.

### **Chemical/ Physical Properties**

CAS Number: 23135-22-0

Color/ Form/Odor: White crystals with slight sulfurous odor.

M.P.: 100-192 C, different crystalline form at 108-110 C

Vapor Pressure: N/A

Octanol/Water Partition (Kow): N/A

Density/Spec. Grav.: N/A

Solubility: 280 g/L of water at 25 C; Very soluble in water

Soil sorption coefficient: N/A

Odor/Taste Thresholds: N/A

Bioconcentration Factor: N/A

Henry's Law Coefficient: N/A

Trade Names/Synonyms: Vydate K; Thioxamyl; Dioxamyl; DPX 1410; Dupont 1410; Methyl N',N'-dimethyl-N-((methylcarbamoyl)oxy)- 1-thioxamimidate

### **Other Regulatory Information**

Monitoring For Ground/Surface Water Sources:

Initial Frequency- 4 quarterly samples every 3 years

Repeat Frequency- If no detections during initial round:

2 quarterly per year if serving >3300 persons;

1 sample per 3 years for smaller systems

Triggers - Return to Initial Freq. if detect at > 0.002 mg/L

Analysis:

#### **Reference Source Method Numbers**

EPA 600/4-88-039 531.1

Standard Methods 6610

Treatment- Best Available Technologies:

Granular Activated Charcoal

**For Additional Information:**

EPA can provide further regulatory and other general information:  
EPA Safe Drinking Water Hotline - 800/426-4791

Other sources of toxicological and environmental fate data include:  
Toxic Substance Control Act Information Line - 202/554-1404  
Toxics Release Inventory, National Library of Medicine - 301/496-6531  
Agency for Toxic Substances and Disease Registry - 404/639-6000  
National Pesticide Hotline - 800/858-7378