

US EPA ARCHIVE DOCUMENT

# Consumer Factsheet on: CARBOFURAN

[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**

This is a factsheet about a chemical that may be found in some public or private drinking water supplies. It may cause health problems if found in amounts greater than the health standard set by the United States Environmental Protection Agency (EPA).

## What is Carbofuran and how is it used?

Carbofuran is a white crystalline solid with a slightly phenolic odor. This broad spectrum insecticide is sprayed directly onto soil and plants just after emergence to control beetles, nematodes and rootworm. The greatest use of carbofuran is on alfalfa and rice, with turf and grapes making up most of the remainder. Earlier uses were primarily on corn crops.

Carbofuran is allowed for use on only a few U.S. crops, and will soon be banned from use on corn and sorghum in California.

The list of trade names given below may help you find out whether you are using this chemical at home or work.

## Trade Names and Synonyms:

Niagara 10242  
Furadan 4F or 3G  
Brifur  
Crisfuran  
Chinufur  
Curaterr  
Yaltox  
Pillarfuran  
Kenofuran  
Carbofuran

## Why is Carbofuran being Regulated?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals.

The MCLG for carbofuran has been set at 40 parts per billion (ppb) because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

The MCL has also been set at 40 ppb because EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove this contaminant should it occur in drinking water.

These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

## **What are the Health Effects?**

Short-term: EPA has found carbofuran to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: headache, sweating, nausea, diarrhea, chest pains, blurred vision, anxiety and general muscular weakness. These effects are reversible.

Long-term: Carbofuran has the potential to cause the following health effects from long-term exposures at levels above the MCL: damage to the nervous and reproductive systems.

## **How much Carbofuran is produced and released to the environment?**

Carbofuran enters surface water as a result of runoff from treated fields and enters ground water by leaching of treated crops.

EPA's 1990 National Pesticide Survey did not detect carbofuran levels above the MCL in rural domestic wells or Community Water System wells. EPA's Pesticides in Ground Water Database found very low levels of carbofuran in ground water between 1971 and 1991.

## **What happens to Carbofuran when it is released to the environment?**

If released to soil or water, carbofuran will be broken down by reactive chemicals and microbes, particularly in alkaline conditions. Carbofuran may leach significantly in many soils, as has been seen in the detection of carbofuran in sandy aquifers in NY and WI. Leaching may not occur, however, in very high organic content soils. It is not expected to accumulate in aquatic organisms.

## **How will Carbofuran be Detected in and Removed from My Drinking Water?**

The regulation for carbofuran became effective in 1992. Between 1993 and 1995, EPA required your water supplier to collect water samples every 3 months for one year and analyze them to find out if carbofuran is present above 0.9 ppb. If it is present above this level, the system must continue to monitor this contaminant.

If contaminant levels are found to be consistently above the MCL, your water supplier must take steps to reduce the amount of carbofuran so that it is consistently below that level. The following treatment methods have been approved by EPA for removing carbofuran: Granular activated charcoal.

## **How will I know if Carbofuran is in my drinking water?**

If the levels of carbofuran exceed the MCL, 40 ppb, the system must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies, may be required to prevent serious risks to public health.

## **Drinking Water Standards:**

Mclg: 40 ppb

Mcl: 40 ppb

## **Learn more about your drinking water!**

EPA strongly encourages people to learn more about their drinking water, and to support local efforts to protect and upgrade the supply of safe drinking water. Your water bill or telephone book's government listings are a good starting point.

Your local water supplier can give you a list of the chemicals they test for in your water, as well as how your water is treated.

Your state Department of Health/Environment is also a valuable source of information.

For help in locating these agencies or for information on drinking water in general, call: EPA's Safe Drinking Water Hotline: (800) 426-4791.

For additional information on the uses and releases of chemicals in your state, contact the: Community Right-to-Know Hotline: (800) 424-9346