

US EPA ARCHIVE DOCUMENT

Consumer Factsheet on: METHOXYCHLOR

[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 Methoxychlor and how is it used?

Methoxychlor is a colorless organic solid with a slightly fruity odor. It is an insecticide preferred to DDT for use on animals, in animal feed, and on DDT-sensitive crops such as squash, melons, etc. Since methoxychlor is more unstable than DDT, it has less residual effect. It has been used extensively in Canada for the control of biting flies, and is also effective against mosquitoes and houseflies.

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:

Dimethoxy-DDT
Methoxy-DDT
Chemform
Maralate
Methoxo
Methoxcide
Metox
Moxie

Why is Methoxychlor 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 methoxychlor 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 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 methoxychlor to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: central nervous system depression, diarrhea, and damage to liver, kidney and heart tissue.

Long-term: Methoxychlor has the potential to cause the following effects from a lifetime exposure at levels above the MCL: damage to liver, kidney and heart tissue; retards growth.

How much Methoxychlor is produced and released to the environment?

Production of methoxychlor has decreased: from 3.7 million lbs. in 1978 to 700,000 lbs in 1982. Release of methoxychlor to the environment occurs due to its use as an insecticide and from losses during the manufacture, formulation, packaging, and disposal of methoxychlor.

From 1987 to 1993, according to EPA's Toxic Chemical Release Inventory, methoxychlor releases to land and water totalled only about 2000 lbs.

What happens to Methoxychlor when it is released to the environment?

Methoxychlor does not tend to persist when released to soil or water. If released to soil, methoxychlor will adhere to soils, though some may leach into groundwater as suggested by the detection of methoxychlor in some groundwater samples. It is broken down by soil and sediment microbes under some conditions. In water, methoxychlor degrades quite rapidly - within days compared to months as in soil. It may accumulate in some shellfish, but not in fish.

How will Methoxychlor be Detected in and Removed from My Drinking Water?

The regulation for methoxychlor 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 methoxychlor is present above 0.1 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 methoxychlor so that it is consistently below that level. The following treatment methods have been approved by EPA for removing methoxychlor: Granular activated charcoal.

How will I know if Methoxychlor is in my drinking water?

If the levels of methoxychlor 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