



National Primary Drinking Water Regulations

Aldicarb and its by-products

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).

**DRINKING WATER
STANDARDS:**

MCLG: 1 PPB

MCL: 3 PPB

**WHAT IS
ALDICARB
AND HOW IS IT USED?**

Aldicarb is a white crystalline solid with a sulfurous odor. Aldicarb is an insecticide applied to the soil for control of chewing & sucking insects like aphids and on nematodes. It is used in glasshouse & outdoor ornamentals, and on crops: primarily cotton, but also sugar beet, strawberries, potatoes, onions, hops, and others.

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

**WHY IS ALDICARB
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 (MCLGs).

The MCLG for aldicarb has been set at 1 part per billion (ppb) because EPA believes this level of protection would not cause any of the potential health problems described below. MCLGs have also been set for aldicarb sulfone and aldicarb sulfoxide, since aldicarb quickly breaks down into these chemicals once it is applied to crops.

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 3 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.

**TRADE NAMES AND
SYNONYMS:**

TEMIK
CARBAMYL
CARBANOLATE;
SULFONE
ALDOXYCARB
UNION CARBIDE
21149

**WHAT ARE THE
HEALTH EFFECTS?**

Short-term: EPA has found aldicarb or its breakdown products to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively

short periods of time: nausea, diarrhea and relatively minor neurological symptoms. These effects are reversible.

Long-term: Aldicarb has the potential to cause the following effects from a lifetime exposure at levels above the MCL: sweating, constricted eye pupils and leg weakness.

Release of aldicarb to the environment will occur due to its manufacture and use as a systemic insecticide, ascaricide and nematocide for soil use. As the result of the aldicarb contamination of drinking water wells, Union Carbide Corporation excluded the use of aldicarb products in Suffolk County, Long Island, New York. The company also limited the use of aldicarb products to once every two years and only after plant emergency in the States of Maine and Wisconsin and the Counties of Hartford in Connecticut, Kent and New Castle in Delaware, Franklin and Hampshire in Massachusetts, Worcester in Maryland, Atlantic, Burlington, Cumberland, Monmouth and Salem in New Jersey, Newport and Washington in Rhode Island, and Accomack and Northampton in Virginia.

Aldicarb may be applied at planting for aphid control in the State of Maine.

If aldicarb is released to the soil it should not bind to the soil. Microbes and chemicals in soils will breakdown aldicarb into its metabolites, aldicarb sulfoxide and aldicarb sulfone. It tends to persist in soils for up to 15 days. Aldicarb may leach to the groundwater in some soils where the rates of breakdown are relatively slow, as in acidic soils. If aldicarb is released to water it should not adsorb to sediments or bioconcentrate in aquatic organisms. It tends to persist in water longer than in soil.

NOTE: The MCLs for aldicarb and its metabolites are not in effect at present. By December 31 1995, your water supplier must have completed its collection of a series of water samples - every 3 months for one year - and analyze them to find out if aldicarb or its metabolites are present.

HOW MUCH ALDICARB IS PRODUCED AND RELEASED TO THE ENVIRONMENT?

WHAT HAPPENS TO ALDICARB WHEN IT IS RELEASED TO THE ENVIRONMENT?

HOW WILL ALDICARB BE DETECTED IN AND REMOVED FROM MY DRINKING WATER?

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) 535-0202.