

Consumer Fact Sheet on: 2,4,5-TP (SILVEX)

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

<http://www.epa.gov/safewater/dwh/c-soc/silvex.html>

This is a fact sheet 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 Silvex and how is it used?

2,4,5-TP is a white organic powder with little odor. Its use has been banned since 1985. The greatest use of 2,4,5-TP was as a post-emergence herbicide for control of woody plants, and broadleaf herbaceous weeds in rice and bluegrass turf, in sugarcane, in rangeland improvement programs, on lawns. Aquatic uses included control of weeds in ditches and riverbanks, on floodways, along canals, reservoirs, streams, and along southern waterways.

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:

Weed-B-Gon	Aqua-Vex	Fruitone T
Propon	Color-Set	Garlon
Silvi-Rhap	Ded-Weed	Kuran
Sta-fast	Fenoprop	Kurosol G/SL
Miller Nu Set	Fenormone	Silvex

Why is Silvex 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 2,4,5-TP has been set at 0.05 parts per million (ppm) 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 0.05 ppm 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 2,4,5-TP to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: depression and other nervous system effects, weakness, stomach irritation and minor damage to liver and kidneys.

Long-term: 2,4,5-TP has the potential to cause the following effects from a lifetime exposure at levels above the MCL: minor liver and kidney damage.

How much Silvex is produced and released to the environment?

In 1982, 2,4,5-TP production was 500,000 pounds. Former releases were from spraying on rangelands, runoff from fields, and direct release to water for control of aquatic weeds.

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

2,4,5-TP will strongly bind to soils and is degraded by microbes, so it isn't likely to leach to ground water. If released to water, 2,4,5-TP will bind to sediment, where microbes will slowly degrade it. It has a very low potential for accumulating in aquatic life.

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

The regulation for 2,4,5-TP 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 2,4,5-TP is present above 0.2 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 2,4,5-TP so that it is consistently below that level. The following treatment methods have been approved by EPA for removing 2,4,5-TP: Granular activated charcoal.

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

If the levels of 2,4,5-TP exceed the MCL, 0.05 ppm, 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: 0.05 ppm

Mcl: 0.05 ppm

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.

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