

US EPA ARCHIVE DOCUMENT

# Pendimethalin

CAS Number: 40487-42-1

## What is pendimethalin?

Pendimethalin is a crystal-like solid that appears orange yellowish in color and has a fruity odor. It is a man-made chemical that is used primarily as a herbicide.

## What is pendimethalin used for?

Pendimethalin is used primarily as a herbicide to destroy or prevent the growth of certain plants like weeds. It is also used on crops and residential lawns and ornamentals (plants that are grown for their beauty). It is used and applied in various forms including a liquid, solid, granular etc.

## How can pendimethalin enter and leave your body?

Pendimethalin can enter your body if you breathe contaminated air or eat contaminated food. It can also be absorbed by your skin if you come into contact with the substance. Pendimethalin can leave your body through urine and feces.

## How can you be exposed to pendimethalin?

You can be exposed to pendimethalin released to the air if you work in an industry where it is made or used. You can be exposed to pendimethalin through your diet. Traces of pendimethalin applied to crops can be digested. If you work in an industry that makes or uses pendimethalin, you can be exposed to the substance. If you work in an occupation where you are responsible for the application of

the herbicide to crops or lawns, you are at greater risk of exposure. Homeowners who use pendimethalin for lawn care may also be at risk.

## What are the health effects of exposure to pendimethalin?

Pendimethalin is considered of low acute toxicity. However, it has caused thyroid problems in male and female rats. Exposure to pendimethalin through diet is extremely low. So is the risk of cancer through this route. In addition, it has been classified as a possible cancer causing substance.

Although animal studies show that pendimethalin has a low toxicity, it is slightly toxic if you are exposed to it by eating or drinking contaminated food or water. It is also toxic if it gets in the eyes. Exposure is "practically" non-toxic if you breathe pendimethalin or if it is absorbed through the skin.

## What levels of exposure have resulted in harmful health effects?

Animal studies show that short-term exposure of animals to > 5,000 milligrams per kilogram of pendimethalin resulted in the death of 50% of experimental animals. This number is called a lethal dose (LD<sub>50</sub>).

## Where can you get more information?

Contact your state health or environmental department, or:

Agency for Toxic Substances and Disease  
Registry  
Division of Toxicology  
1600 Clifton Road, N.E., E-29  
Atlanta, Georgia 30333

## References

1. U.S. Environmental Protection Agency. *R.E.D. FACTS, Pendimethalin*. Office of Prevention, Pesticides and Toxic Substances, 1997.
2. Extension Toxicology Network. *Pesticide Information Profile for Pendimethalin*. Cornell University, Ithaca, NY.