

CARBOFURAN

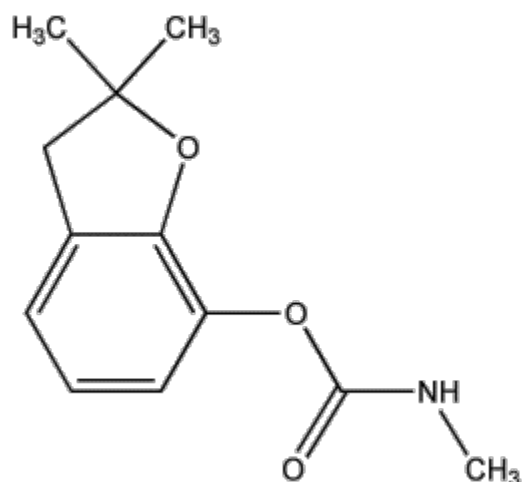
Overview

Carbofuran is one of the most toxic [carbamate](#) pesticides and is most often marketed under the trade names Furadan and Curater. It is extremely toxic to birds, fish, and bees. In 2008 the US EPA moved to revoke registration of carbofuran, effectively banning its use in agriculture ([EPA carbofuran](#)).

Just the facts

Physical Information
Name: Carbofuran
Use: pesticide
Source: synthetic chemistry
Recommended daily intake: none
Absorption: dermal, ingestion
Sensitive individuals: all
Toxicity/symptoms: highly toxic
Regulatory facts:
General facts:
Environmental:
Recommendations:

Chemical Structure



Structure retrieved from [PAN](#)

2,3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate

Chemical Description

Carbofuran is a white crystalline solid at room temperature after a phenolic odor.

Uses

Carbofuran is used sparingly in the US. Is applied directly onto soil around plants after their emergence to control beetles, nematodes, and rootworm. It is used most often on alfalfa and rice and was once used on corn, though that use has been terminated.

Health Effects

It is an acutely toxic [carbamate pesticide](#). From [#EXTOXNET PIP](#):

"As with other [carbamate](#) compounds, carbofuran's cholinesterase-inhibiting effect is short-term and reversible. Symptoms of carbofuran poisoning include: nausea, vomiting, abdominal cramps, sweating, diarrhea, excessive salivation, weakness, imbalance, blurring of vision, breathing difficulty, increased blood pressure, and incontinence. Death may result at high doses from respiratory system failure associated with carbofuran exposure. Complete recovery from an acute poisoning by carbofuran, with no long-term health effects, is possible if exposure ceases and the victim has time to regain their normal level of cholinesterase and to recover from symptoms."

It is not been shown to be a [Carcinogens](#) or have any [teratogenic effects](#) but chronix exposure can damage the nervous and reproductive systems ([EPA](#)).

Environmental Effects

Carbofuran is soluble in water and is moderately persistent in the environment and it is highly toxic to birds, aquatic organisms, and other organisms including bees.

"Millions" bird kill-offs have been a result of granular carbofuran for the past 40 years and were the main driving force behind the movement to cancel use of the [pesticide](#).

Regulation

Regulation of carbofuran began in 1974 when Congress passed the [Safe Drinking Act](#) which required the [Environmental Protection Agency](#) to determine safe levels of chemicals in drinking water called "Maximum Contaminant Level Goals (MCLG)" ([#EPA](#)). The MCLG level for carbofuran was initially set at 40 ppb. It is still at this level because many feel that it is the lowest possible level capable of removal from a water source.

In 1994, the [EPA](#) banned all use of the granule form of carbofuran because birds eat the granules, which are highly toxic to birds, and large scale bird kills were being observed. There is no ban on liquid carbofuran and both it and granular carbofuran are classified as [Restricted Use Pesticides](#) and carbofuran formulations are rated anywhere from "moderately toxic" to "highly toxic"

Then, in August of 2006, the [EPA](#) proposed cancellation of all forms of carbofuran.

Source : <http://www.toxipedia.org/display/toxipedia/Carbofuran>