



Safely using insecticides containing terbufos on plants



Terbufos is toxic

Terbufos is an organophosphate that is an active ingredient in some granular insecticides to control symphillids on pasture, fodder and forage crops, kumara and other root vegetables. However, terbufos is toxic to both people and the environment. You should only use terbufos if there are no safer alternatives and as part of an integrated pest management system (IPM).

Products that contain terbufos

The product label of insecticides will list the active ingredients. Check the label to see if terbufos is one of the actives. If it is, you need to follow the practices outlined in this document.

The insecticide **Counter 20G** contains terbufos.

This document contains

This document provides guidance for people using terbufos-containing insecticides for plant protection. It incorporates information about both the old and the new rules for using terbufos and provides guidance on protecting your health, the health of others and the environment.

There are other rules about storing and disposing of these products safely that you must also follow but are not included in this document.

For all of the rules that apply to terbufos, check the controls for approved hazardous substances database on our website.

✚ Protect your health

You need to take extra care when using terbufos so that you are exposed to as little of the product as possible.

- While using the product you must wear the right safety gear – this is explained in more detail under the heading *Wear the right safety gear*.
- After using terbufos you must wash your hands thoroughly with soap and water before eating, drinking, chewing gum, smoking or using the toilet. If you don't, you will end up consuming some of the insecticide, which can cause long-term health problems.
- Once you have finished using terbufos for the day remove the clothes you were working in, have a shower or bath with soap and water, shampoo your hair, and put on clean clothes.
- Wash your work clothes separately from other clothes before wearing them again.



Wear the right safety gear

Because of the toxicity of terbufos you must wear the right safety gear to protect your health. If you are an employer, you must provide your staff with this gear and train them to wear it properly.

The new rules specify that full personal protective equipment (PPE) and respiratory protective equipment (RPE) (see box below) must be worn when mixing, loading or applying terbufos.

The product label and safety data sheet will give you information about what PPE and RPE you must wear when handling the product. If you can't find this information, call the supplier of the product or contact the Labour Group at the Ministry of Business, Innovation and Employment during business hours on 0800 20 90 20.

Protect yourself – with full PPE

When using terbufos you must wear:

- chemical resistant coveralls
- chemical resistant gloves
- chemical resistant footwear plus socks
- protective eyewear
- chemical resistant headgear.

And RPE

You must also wear appropriate respiratory protective equipment to protect against breathing in the dust of this insecticide.

After wearing PPE make sure you clean it according to the manufacturer's instructions before you, or anyone else, wears it again.

If the insecticide label offers specific instructions on how to clean the PPE, follow those instructions.

If there are no instructions available you should wash the PPE in detergent and hot water. The person washing the PPE should wear gloves when handling it.

Applying terbufos while in an enclosed cab

If you apply terbufos using a vehicle and you are in a fully enclosed cab that prevents contact with terbufos you are not required to wear full PPE. The enclosed cab must totally surround the person in the cab and be equipped with a functioning ventilation system that protects the person inside the cab from dust and volatile organic compounds. The cab must be maintained frequently and according to the manufacturer's instructions.



However, even if you apply terbufos using an enclosed cab you must wear coveralls so that your skin is not exposed and socks and shoes. You must also have full PPE and RPE available so that you can put it on if you need to get out of the cab in an area where terbufos has been applied (for example if you need to get out to unblock nozzles). Before re-entering the cab you will need to take off the PPE and RPE and store them in chemical resistant containers to prevent the cab becoming contaminated with insecticide and to stop the RPE filters from continuing to absorb contaminants.

Always have a safety data sheet (SDS) available for your products. Information about what to do in the event of a poisoning is usually given in Section 4 of the SDS.



Monitor your health

Wearing safety gear does not eliminate exposure to a hazardous substance. If you are an employer and your staff are using organophosphates, such as terbufos, you are required under the Health and Safety in Employment (HSE) Act to monitor your staff's exposure to organophosphates and, with their informed consent, monitor their health.

This monitoring is usually done by a health service provider such as an occupational health nurse or general practitioner with a qualification in occupational health.

For further information on how to set up a monitoring regime see the information sheet *Organophosphates: health effects, monitoring and first aid* on the www.business.govt.nz/healthandsafetygroup website.



Terbufos is toxic to the environment

Terbufos is very toxic to the environment, especially to birds, fish and water. It is also harmful to insects.

You must not apply terbufos into or onto water.

Cover granules

After applying terbufos granules you must make sure that all of the granules are completely covered with soil so they are no longer visible. This is important to protect birdlife.



Applying terbufos

Approved handler

You must be an approved handler or be under the direct supervision of an approved handler to handle insecticides containing terbufos.

Application amount and frequency

From 1 July 2015, terbufos must only be applied at a maximum of 1500 g of terbufos per hectare.

Approval expires 1 July 2023

Because of the toxic nature of terbufos, the approval is time limited. After 1 July 2023 terbufos can no longer be imported or manufactured in New Zealand and safer alternatives must be used in place of it.

Contact Us

For further information contact the EPA Hazardous Substances Information line on **0800 376 234** or email hsinfo@epa.govt.nz