

Gassing of rabbits and vertebrate pests

HSE information sheet

Agriculture Information Sheet No 22

Introduction

This information sheet provides advice on the steps you need to take under the Control of Substances Hazardous to Health Regulations 2002 (COSHH) to assess the risks when using moisture-activated gassing compounds for vertebrate pest control in open areas and decide what precautions are necessary in your circumstances. It is aimed at employers and technicians who carry out fumigation operations.

It does not cover the use of these compounds in buildings, ships or other enclosed areas. If you carry out gassing work in such areas you should refer to HSE's booklet *Fumigation: Health and safety guidance for employers and technicians carrying out fumigation operations*.

Moisture-activated gassing compounds are pesticides and must only be used for the pest control activities specified on the product container label. They are available as formulations of aluminium phosphide that, when activated by moisture, release the toxic gas phosphine.

Gassing operations must be carried out only by competent operators working in accordance with the instructions given on the product container label. See 'Training' for details of suitable training providers.

Do I need to use a moisture-activated gassing compound?

All moisture-activated gassing compounds are classified as 'very toxic' chemicals and will expose operators to health risks when used. Before using these compounds you should consider other methods of pest control or other pesticides which present a lower risk. For example:

- rabbits – shooting, lamping, ferreting or fencing;
- moles – trapping;
- rats – rodenticide baits.

It could be that a combination of these measures (including using gassing compounds) will produce the most effective results. If you decide to use a gassing compound, you need to compare the different types available and select the one that will achieve effective pest control with least risk to the operators and others, ie carry out a risk assessment. Factors to consider in your assessment include:

- the nature of the compound, eg powder or pellets;
- how it is to be handled, eg by spoon, pump, or pellet applicator;
- steps to prevent exposure to operators, eg label instructions, training, personal protective equipment (PPE);
- precautions to protect other people and non-target animals, eg warning signs, barriers etc;
- steps to deal with an emergency, eg communications, first-aid training and equipment;
- the system you will use to ensure control measures (such as PPE) and first-aid equipment remain in good working order or are replaced as necessary.

You must ensure that operators know what the risks are and how you propose to control them. Write down the results of your risk assessment.

Safe use

General precautions

Before starting work:

- **READ THE PRODUCT LABEL.** It is essential that operators know how to use the product safely and the appropriate first-aid measures to take in the event of an emergency;
- carefully consider the number of operators needed for the work (and to raise help in an emergency);
- check that weather conditions are suitable – do not use compounds in wet weather (including heavy mists) or strong winds.

At the site:

- select the 'fumigation area' (ie the area of burrows or runs to be gassed);
- never treat burrows or runs within 10 m of any building occupied by humans or non-target animals;
- define the 'risk area' (ie the area around the fumigation area into which gas may escape and pose a danger to operators and others – check the wind direction);
- where necessary (eg in urban areas) take steps to exclude the public and non-target animals from the risk area by putting up physical barriers, warning signs or remaining on site until the compound has completed its work;
- keep gassing compound stocks dry at all times.

When gassing:

- check the wind direction before opening containers;
- open containers out of doors;
- begin work in the part of the fumigation area which is furthest downwind;
- stand sideways-on to the wind when handling compounds;
- seal each burrow or entry point to be as gastight as possible;
- keep a check on the wind direction during gassing operations;
- never place, or leave, gassing compounds on the ground surface;
- do not eat, drink or smoke when working with gassing compounds;
- never inhale or swallow any gassing compounds.

At the end of an operation:

- if there is any risk to people or non-target animals ensure that precautions against entry to the risk area remain in place until the gassing compound has completed its work and any residues have dispersed.

Additional precautions

Operators should wear the protective clothing specified on the product label. This will normally include:

- synthetic rubber or PVC gloves at least 300 mm in length; and
- it is recommended that operators also wear coveralls and rubber boots.

Phosphine gas can spontaneously combust on initial contact with oxygen. When opening the container, always point it away from yourself and others. Try not to return part-used containers to your store at the end of a job.

Some products containing aluminium phosphide need to be applied using a mechanical applicator specifically designed for this purpose.

Safe storage and transport

People have died as a result of poor storage of these compounds at fixed stores and in transit. Using water to fight a fire can present a significant danger to the emergency services. In your fixed store, provide a separate storage cabinet which should be:

- made of metal or fire-resistant materials;
- located above the level of the store bunding and away from direct sunlight and sources of heat;
- provided with adequate stability, eg bolted to the wall;
- marked 'Gassing Compound – Do Not Use Water'.

During transport, reduce the risk of exposure if an accident happens by:

- storing gassing compounds in a separate vapour-proof container within the load space;
- providing some means of securing the container in the load space, eg a frame bolted to the structure in which the container can be strapped.

Emergency procedures

Exposure to phosphine gas can be fatal, so plan what to do in an emergency. Anyone poisoned by these compounds will need to receive medical attention as soon as possible. Before handling gassing compounds:

- discuss the medical treatment of phosphine poisoning with your general practitioner or local provider of medical care;
- estimate how long it would take for medical services to reach a casualty;
- consider providing operators with a mobile phone or radio if it would significantly reduce the time taken for the emergency services to reach the casualty.

Employers of peripatetic workers (people who travel to different workplaces) may need to consider providing them with more detailed information on hospitals capable of dealing with acute phosphine poisoning.

Disposal

These products are extremely dangerous to the aquatic environment so water courses must not be contaminated with the chemical or used containers.

Follow the label instructions.

Training

Advice on training can be obtained from:

- British Pest Control Association (BPCA) – website: www.bpca.org.uk;
- City & Guilds NPTC – website: www.nptc.org.uk;
- Lantra - website: www.lantra.co.uk;
- local agricultural colleges.

Further reading

A step by step guide to COSHH assessment HSG97 (Second edition) HSE Books 2004
ISBN 978 0 7176 2785 1
www.hse.gov.uk/pubns/books/hsg97.htm

Working with substances hazardous to health: A brief guide to COSHH Leaflet INDG136(rev5) HSE Books 2012
www.hse.gov.uk/pubns/indg136.htm

Control of substances hazardous to health (Fifth edition). The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved Code of Practice and guidance L5 (Fifth edition) HSE Books 2005 ISBN 978 0 7176 2981 7
www.hse.gov.uk/pubns/books/l5.htm

Fumigation: Health and safety guidance for employers and technicians carrying out fumigation operations HSG251 HSE Books 2005 ISBN 978 0 7176 2999 2
www.hse.gov.uk/pubns/books/hsg251.htm

Risk assessment Leaflet HSE Books
www.hse.gov.uk/pubns/indg163.pdf

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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