



# Managing pesticide storage

Another chance for you to earn BASIS points as Graham Paul looks at the safe storage of pesticides

**For those whose job requires them to use pesticides, the chemical store is an important feature of the working environment.**

Since the Control of Pesticides Regulations (COPR) came into force in 1986 it became a legal requirement to store chemicals in a secure and safe manner that will not harm animals, the environment or pollute water. Storage of pesticides within the demands of the regulations can be achieved in a variety of ways; the chemical store can be a purpose-built structure, either standing alone from the rest of the maintenance facilities or as a sectioned-off part of a building. Alternatively, pesticides can be stored in special secure cabinets that have been adapted for the pur-

pose, or manufactured as chemical storage units.

A permanent purpose-built store must be constructed according to the specifications contained in the regulations. It must be resistant to fire, capable of containing leakage and spills and it must provide dry, well ventilated, frost-free conditions for storage that is secure from unauthorised access. The regulations relating to fire resistance state that materials used in the construction of chemical stores must be resistant to fire for at least 30 minutes. However, this does not include the roof. Retention of leakage and spills is usually achieved with the use of bund walls that physically surround the storage area and are sealed to prevent the egress of liquid products. The capacity con-







tained by the bund must be able to accommodate a volume of leakage or spillage greater than the capacity of the store; normally 110% of the total contents but in environmentally sensitive areas this needs to be 185%.

When the COPR came into force, many pesticide users found they did not have chemical storage facilities that complied with the new regulations and some chose to purchase a steel cabinet specifically designed to comply. One of the first such cabinets offered for this purpose was the 'Chemsafe' manufactured by Horstein Farmery. They initially produced two sizes a 200L/200kg model and a 70L/70kg 'mini Chemsafe'. Today there are many different chemical storage cabinets available – you can even find them on Amazon!

Some organisations with a lesser budget opted to convert a chest freezer or other type of metal container to provide storage. This is still a viable solution, provided

All chemical stores must be labelled with a general hazard sign to alert emergency services of the potential risks involved in dealing with incidents such as fire or security breaches in the vicinity of the store. The Hazard triangle sign must appear on the entrance to the store and all doors leading to the outside. 'No smoking' or 'Smoking and Naked Flames Forbidden' signs should also be displayed on the exterior door of the store. This applies to purpose built stores as well as cabinets.

The siting of chemical stores is critical to safe operation and for purpose-built stores requires consultation in the planning stage with local emergency services, the local authority planning department and the Environment Agency (EA) or the Scottish Environment Protection Agency (SEPA) in Scotland.

Some general rules on store location apply to all types of store; it must be at least four metres away from combustible materials such as



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**Left:** No smoking sign, danger sign and an Armourgard Chemical Transport box

**Top right:** How NOT to enter a storage cabinet

**Below:** Special boxes can be secured in a vehicle for transport

**Right:** Wetting agent pellets do not belong in a chemical store

**Main images:** The chemical store at Thorndon Park Golf Club



it meets the specifications published by the HSE in the guidelines AIS16 (See Ref. 1) Purpose built storage cabinets may have a sump or an internal bund to retain leakage and spillage below the level of the shelves on which the products are stored.

Converted chest freezers and other cabinets that do not have a suitable steel lining can be fitted with an internal steel tray to act as a bund located below the product shelf. Alternatively the whole freezer or cabinet can be stood inside a bunded area or in a steel tray bund. For all types of cabinet storage, whether purpose-built or converted, the capacity of the spillage sump or bund must be at least 110% of the capacity of all products stored within it.

flammable liquids, piles of timber, hay, straw and fertilisers. It must also be sited at least four metres away from domestic dwellings and potential sources of ignition such as welding or grinding machinery.

Stores should not be sighted where they might contaminate water such as wells, drains, water-courses, and areas that are liable to flooding. Most of these criteria will be considered during the consultation stages when a new permanent store is being planned but some additional rules apply to the siting of cabinet stores. They must not be located in domestic dwellings, offices, retail areas, staffrooms or places where food is prepared or consumed. Also, the access to a store must not be through any such area listed above.



Pesticides should never be carried in the cabs of tractors, self-propelled sprayers or other vehicles. For transportation, vehicles must have a floor-to-ceiling bulkhead separating the driver and other occupants from the load space. Alternatively a small quantity of pesticide concentrates may be carried on vehicles in specially constructed secure cabinets e.g. Transchem' box

These special containers must be kept locked when the vehicle is unattended and all contents must be returned to a chemical store within 24 hours.

### Operating a chemical store

Make sure that staff understand the need to wear protective clothing when accessing a chemical store.

All staff working in the vicinity of a store should be trained on how to deal with an emergency situation such as a fire or spillage. It is advisable to provide equipment for dealing with leakage or spills and this should include a brush and shovel, absorbent granules and impermeable containers to accommodate any leaking packs.

Keep the store tidy, removing waste cardboard packaging and maintain an accurate stock list. Remove any items that have been placed in the store that do not need to be in there, e.g. wetting agents. They occupy vital space that might be needed for pesticide products and cause unnecessary exposure of staff to potential contamination.

Store powders above liquids to avoid contamination by leakage and keep products away from direct sunlight but ensure that there is adequate lighting to enable staff to read labels etc.

Carry out a regular check on the contents of the store to ensure that products are used in rotation and, most importantly, that products no longer approved are earmarked for disposal. Use a marker pen to write on the label "DO NOT USE". When product approval is withdrawn there is normally a specified 'use-up' date, so that the user can avoid unnecessary disposal costs. Ask your chemical supplier to keep you informed when products they have supplied are scheduled to be withdrawn.

### Special instructions for storing gassing compounds used for the control of vertebrate pests such as moles

These can only be stored by someone who has been trained and certificated for using gassing

compounds. These products are extremely dangerous to humans and animals when they become moist, as they give off highly toxic phosphine gas. The safest way to store gassing compounds is to keep them in their original packaging, tightly closed inside a small, locked metal container that is clearly labelled "Gassing Compound - DO NOT OPEN" This locked metal container is then stored inside a locked chemical store.

### Disposal of empty pesticide containers.

Empty pesticide containers should never be re-used for any purpose unless it is to replace a damaged or leaking container of exactly the same product. Always consult the product label for advice on disposal. Make sure the container is completely empty before rinsing.

Triple rinsing is normally recommended as a thorough rinse but some viscous formulations may require more. Carry out the rinsing as soon as the container is emptied and before topping up the spray tank with water to achieve the desired level. Rinse the cap and seals as well as any contamination on the outer surface of the main container and add the rinsings to the spray tank.

Some containers are not suitable for rinsing (for example, paper sacks and cardboard cartons) these should be emptied completely and stored securely, as if they still contained the pesticide, until they can be disposed of through a licensed waste-disposal contractor. Rinsed empty containers should be stored upright in a separate, secure, weatherproof area; away from stored pesticides or in a separate part of a chemical store room, until they can be sent to a licenced waste contractor for disposal. Ask your chemical supplier for details of waste disposal services they can supply.

### Special instructions for gassing compounds.

Always read the label for specific instructions on disposal. In general, you must not rinse or clean empty containers that hydrogen cyanide gassing powders or Aluminium, magnesium or zinc phosphides have been supplied or kept in; because of the dangerous gases they give off when they come into contact with moisture. Handle and store empty flasks as if they still contained the product and dispose of them through a licenced waste contractor.







## SELF ASSESSMENT

Use the questions below to check your understanding of this topic. Readers can claim BASIS points by visiting the 'BASIS Points Article' section on the Sherriff Amenity website – [www.sherriff-amenity.com](http://www.sherriff-amenity.com) and answer the questions correctly.

1) What capacity of leakage or spillage ( % of total stored contents ) must a purpose-built store be able to retain when sited in an area that is not environmentally sensitive?

- 185%
- 100%
- 110%
- 90%

2) When deciding where to locate a new pesticide storage cabinet, how far should it be away from a mower cylinder grinding machine?

- 10 metres
- at least 4 metres
- 3 metres
- 8 to 10 metres

3) Who is legally allowed to store gassing compounds for mole control on a golf course?

- The Head Greenkeeper or Course Manager
- The Club Secretary or Club Manager
- Anyone who holds PA1 & PA2 or PA6 NPTC certificates
- Any person who has been trained, and who holds a certificate, to use gassing compounds.

4) Which of the following statements is true regarding converted chest freezers?

- They are not suitable for storing pesticides.
- They may be used for storing pesticides providing they meet the specifications laid out in the guidelines issued by the HSE (Agriculture Information Sheet No 16)
- They can only be used for storing fungicides
- They may be used as temporary stores for pesticides, provided they are painted red.

5) How long may pesticides be stored in a vehicle transport box?

- 24 hours
- One week
- up to 1 month
- four days

