Managing pesticide storage

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 safe 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 purpose, 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 environmen-
tally sensitive areas this needs to
be 185%.

When the COPR came into force,
many pesticide users found they did
do not have chemical storage facilities
that complied with the new regula-
tions 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 Horstain 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
cabinet 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 deal-
ing 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 con-
sultation 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 loca-
tion apply to all types of store; it
must be at least four metres away
from combustible materials such as
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 consulta-
tion 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 maintaining an accurate stock list. Remove any items that have been placed in the store that do not need to be 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. 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. Rinse 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 licensed 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 licensed waste contractor.

Special 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 disposing of it.

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.

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**SAFE 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 SheriffAcreity website – 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?
   a) 24 hours
   b) One week
   c) Up to 1 month
   d) Four days

2) When deciding where to locate a new pesticide storage cabinet, how far should it be away from a mower or grinding machine?
   a) 10 metres
   b) 20 metres
   c) 3 metres
   d) 10 to 30 metres

3) Who is legally allowed to store gassing compounds for mole control on a golf course?
   a) The Head Greenkeeper or Course Manager
   b) The Club Secretary or Club Manager
   c) Anyone who holds PA1 & PA2 or PA6 NPTC certificates
   d) 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?
   a) They are not suitable for storing pesticides
   b) They can only be used for storing fungicides provided they meet the specifications laid out in the guidelines issued by the HSE (Agriculture Information Sheet No 16)
   c) They can only be used for storing pesticides
   d) They may be used for storing fungicides provided they are painted red.

5) How long may pesticides be stored in a vehicle transport box?
   a) 24 hours
   b) One week
   c) Up to 1 month
   d) Four days
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

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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 ‘use-up’ date, so that the user can be informed when products they have supplied are scheduled to be supplied are scheduled to be used up. Make sure the container is completely empty before rinsing.

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 certified 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.

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