

LEGAL REQUIREMENTS

FOR STORING AND TRANSPORTING FLAMMABLES
AND CHEMICALS

SAFE STORAGE OF PETROL AND OTHER FLAMMABLE SUBSTANCES – FIXED LOCATION

Small quantities of dangerous goods can be found in most workplaces. Whatever they are used for, the storage and use of such goods can pose a serious hazard unless basic safety principles are followed.

There is an enormous variety of flammable substances to be found in the workplace. They range from the obvious, e.g. petrol, paint thinners, welding gases and heating fuels, to the not so obvious, e.g. packaging materials, dusts from woodworking and dusts from food stuffs such as flour and sugar etc.

Three ingredients are needed for a fire: a fuel at the right concentration, a good supply of air, and a source of ignition. If you can control these ingredients, fires can be prevented.

SAFETY PRINCIPLES

By applying the following five 'VICES' principles you will be well on the way to making sure that you are working safely with flammable substances.

Ventilation

Is there plenty of fresh air where flammables or gases are stored and used? Good ventilation will mean that any vapours given off from a spill or leak will be rapidly dispersed.

Ignition

Have all the obvious ignition sources been removed from the storage and handling areas? Ignition sources can be very varied and they include sparks from electrical equipment or welding and cutting tools, hot surfaces, open flames from heating equipment, smoking materials etc.

Containment

Are your flammable substances kept in suitable containers? If you have a spill will it be contained and prevented from spreading to other areas. Use of suitable lidded containers and suitable bunded trays can help to prevent spillages spreading.

Exchange

Can you exchange a flammable substance for a less flammable one? Can you eliminate them from the process altogether? Is there another way of carrying out the job safer?

Separation

Are flammable substances stored and used well away from other process and storage areas? Are they stored away from other harmful chemicals? Separating your hazards will contribute to a safer workplace.

Think about flammable substances you have in the workplace and apply these five principles wherever possible. Tell workers and all others who need to know about the hazards and how they should control them.

Think VICES – keep a strong grip on your workplace safety!

Flammable liquids can give off large volumes of flammable vapours at room temperature. These vapours, when mixed with air, can ignite, often violently. Spilled flammable liquids can, if not contained, flow a long way to an ignition source, and then flash back to the source of the leak. Spills on clothing can represent a serious risk of injury if ignited. To help control these risks:

- Store flammable liquids in a separate storage area, or in a purpose-made bin or cupboard
- Dispense and use them in a safe place where there is good ventilation and no source of ignition
- Keep containers closed when not in use.
- Always dispense liquids over a tray and keep a non-flammable spill kit to hand
- Dispose of contaminated materials safely or call in disposal experts
- Always keep adequate number of fire extinguishers at hand.

It is recommended that no more than 50 litres of flammable liquids with a flashpoint of below 55°C are stored in any working area, and no more than 250 litres of liquids with a flashpoint of higher than 55°C.

All storage cabinets must be designed to retain spills (110% volume of the largest vessel normally stored in it, or 25% of the total amount stored, whichever is the greater)

All flammable liquids must be stored in closed containers and kept in a store which is manufactured from materials that will sustain 30 minutes fire.

SAFE STORAGE OF PESTICIDES AND OTHER HARMFUL CHEMICALS – FIXED LOCATION

All harmful pesticides must be kept in secure lockable containers when stored. The store needs to be large enough to hold your peak requirements and any part used containers. Also, you need to provide adequate storage for rinsed empty containers awaiting disposal.

LOCATION

Site your store away from areas that present a risk of fire and at least four metres away from hay, straw, diesel, oils, paints, fertilisers, paper, wood stacks, gas containers and other combustible materials. Must also be kept away from domestic dwellings and sources of ignition. Do not site stores near to drains, watercourses, wells and boreholes, or areas liable to flooding.

Ensure that all staff know what to do in the event of a chemical spillage or fire, and that there is ready access for chemical deliveries or the emergency services.

CONSTRUCTION

You need to provide a store that is resistant to fire for 30 minutes, capable of retaining leakage/spillage, adequately ventilated and secure against unauthorised access. The store should be able to contain leakage or spillage to a volume of 100% of the total quantity likely to be stored (185% if you are in an 'environmentally sensitive area') Ensure sure that doors/lids provide adequate security and are kept locked

ORGANISING

Mark the exterior of the store with the general chemical danger warning sign and put 'No Smoking' or 'Smoking and Naked Flames Forbidden' prohibitory signs on it.

Ensure that products can be adequately seen by staff. As a general rule, store powders above liquids and provide absorbent granules and a spill kit to deal with any spillages

TRANSPORTING PESTICIDES AND OTHER CHEMICALS

Pesticides or other chemicals should never be kept in a vehicle for long periods of time – maximum time would be a 24 hour period.

Never carry pesticides or other chemicals in the cab of tractors or any other vehicles. Use a vehicle with a floor to ceiling bulkhead if possible, between the driver/passenger compartment and the load compartment.

All chemicals must be strapped or secure somehow during transit. It is highly recommended to fit secure containers/cabinets to the vehicle, either inside, or securely mounted to the outside or on a trailer. Chemical safes must be sturdy, lockable and fixed down to the vehicle. Ventilation is not necessary.

When away from your fixed store, pesticides must always be secure against unauthorised access. Park your mobile store away from any location where water pollution could occur. Try to work within sight of your mobile store, especially in public areas. Always ensure the cabinet or vehicle is locked.

It is essential that the driver has access on the vehicle to PPE, spillage kit, first aid including eye wash, and also spare impermeable sealable containers in which to place split containers and any other contaminated material.

TRANSPORTING PETROL AND OTHER FLAMMABLES

The purpose of the regulations dealing with the carriage of dangerous goods is to protect everyone either directly involved, or who might become involved, such as members of the emergency services or public. Regulations place duties on everyone involved in the carriage of dangerous goods, to ensure that they know what they have to do to minimise the risk of incidents and guarantee an effective response.

Regulations regarding purchasing, transporting and storing fuel are becoming much more stringent. The following guidelines are for businesses transporting flammables

FILLING UP CONTAINERS AT PETROL STATIONS

All petrol stations are under licence to supply fuel, very similar to alcohol licence. If they are caught breaching these licences they could lose their right to supply fuel. By law, the only type of can which can be filled up is one approved to UN1203. Most petrol stations have restrictions in place now which prevents any more than 2 cans being filled in one visit. Typical containers purchased from car accessory shops may not be so approved.

TRANSPORTING FUEL IN APPROVED CONTAINERS

Ensure that you do not carry over the maximum allowed by law, without having an ADR licence. This is 333 litres, but HSE will always look at the amount you should have 'reasonably been carrying' if you are involved in an accident. A typical case of transporting fuel would be with 2 or 3 jerry cans. Providing those cans are UN approved, marked UN1203 and labelled with the flammable diamond, the only requirements by law are:

- Driver training in accordance with ADR1.3
- Carry 2kg fire extinguisher
- Stow the jerry cans securely to avoid damage or loss from the vehicle

The HSE class vans as 'workplaces' during the working day. If a vehicle is involved in an accident, not only do the above regulations come into force, but also The Health and Safety at Work Act. This involves safe storage of the fuel cans, and requires that they are stored in secure lockable vented containers.

There is also the risk of spillage of goods, which could lead to fire, explosion or environmental damage. It is highly recommended that an absorbent spill kit is kept on board every vehicle carrying any form of dangerous liquids.

Fire extinguishers are the subject of conditions from HSE also. They must be easily accessible to the vehicle crew and protected against the effects of the weather.

REFERENCES

The information contained within this document has been wholly taken from The Health and Safety Executive's website, and also the website of VOSA. Alongside this, information has been gathered from HSE publications relating to the safe storage of chemicals and flammable substances. Contact was also made with responsible persons with the HSE and VOSA organisations to clarify all points

DISCLAIMER

The storage of chemicals, flammable substances and gases is the subject of many regulations. Some substances must be stored outside away from buildings. Others can be stored inside but are sometimes subjected to quantity limits. We would always recommend that you should seek the advice of the Health and Safety Inspectorate, your local Fire Officer, Trading Standards Office or any other qualified body. Armorgard Security Products are not advisors as to where goods shall be stored and can take no liability for any storage situation

All information can be found at www.hse.gov.uk or by calling HSE's information line.

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