

SAFE STORAGE OF FUEL AND OTHER FLAMMABLE SUBSTANCES

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.

