

OCCUPATIONAL HEALTH AND SAFETY UNIT

GUIDANCE NOTE - OHSU G9 (1995)

STORAGE AND USE OF HIGHLY FLAMMABLE LIQUIDS IN EDUCATIONAL ESTABLISHMENTS



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STORAGE AND USE OF HIGHLY FLAMMABLE LIQUIDS IN EDUCATIONAL ESTABLISHMENTS

Lecturers, teachers, students, technicians, caretakers, janitors and cleaners frequently use flammable liquids.

Typical examples of highly flammable liquids in use in educational establishments include some laboratory chemicals, solvents, thinners, paints, adhesives, cleaning liquids and reprographic fluids.

If you are unsure whether a material is a highly flammable liquid, read the label on the receptacle it is supplied in. The symbol and the words '**Highly Flammable**' should be visible.

The safe storage and use of these liquids is of the utmost importance. Follow those guidelines in the leaflet which apply to the way you store and use the liquids and you will contribute to your own and other people's safety.

ALWAYS REMEMBER - IF IN DOUBT ASK THE PERSON WHO KNOWS

FIRE PREVENTION - THE MAIN PRINCIPLES

- Exclude sources of ignition eg: naked flames, cigarettes etc.
- Keep containers secure to avoid accidental breakages or interference and to prevent ~~spill~~ ^{spillage}.
- Keep containers closed except when in use.
- Use only the minimum quantities necessary and return containers promptly to secure storage.

POINTS YOU SHOULD CONSIDER WHEN OBTAINING MATERIALS

What should I order ?

- Select non-flammable and non-toxic materials where possible.
- Only order enough for your immediate needs.
- Keep down volume stored by frequent deliveries.

What procedures should I follow for reception of deliveries ?

- Follow the written procedure for reception of deliveries.
- Know where your reception point(s) for deliveries are.
- Know who is responsible for checking

POINTS YOU SHOULD CONSIDER FOR STORAGE

Where I should store the liquids ?

- Either in an appropriately constructed storeroom.
or
- In a fire resisting cupboard or bin.
- Keep the storeroom, cupboard or bin locked.

How should I mark the store ?

- The store should be marked "**Highly Flammable**", and
- '**No Smoking. No Naked Lights**'.

Can I store anything else with the liquids ?

- Store them on their own.
- Never store them with oxidising agents, flammable or highly reactive metals, cellulose ~~nitrate~~, highly toxic or corrosive non-flammables, paper towels, stationary or cleaning cloths.

What should I do with empty containers ?

- Whenever possible, empty containers should be immediately freed from vapours. They should always be made safe before disposal.

Can I store the liquids in refrigerators ?

- Only in purpose-built or modified refrigerators.
- Modification should exclude all sources of ignition such as lights and switches from the cold chamber.
- Cold chambers should be vapour-tight and sealed from working compartments.
- Refrigerators which can be used for flammables storage should be clearly marked/labelled.
- Make sure there is an external indication that the refrigerator is working.
- Close or seal any container stored in the refrigerator.

POINTS YOU SHOULD CONSIDER FOR USE

Which stock should I use ?

- Use stock on 'first in first out' principle.
- Date stamp containers or keep a log so you know which to use first.
- Withdraw from stock, eg: ethers on expiry of shelf life and dispose of safely.

How should I dispense ?

- Follow the written safe system of work.
- Dispense in a safe well-ventilated place.
- Contain spillage by dispensing over a tray.

Where should there be 'No Smoking Signs ?

- 'No Smoking' signs should be posted in all areas where highly flammable liquids are dispensed or used.

What type of ventilation do I need ?

- For dispensing and use you need adequate natural or mechanical ventilation.
- Use a fume cupboard if ventilation is inadequate.
- Always remember toxic as well as flammable risks.

How should I deal with spillage:

- Follow the written instructions for dealing with spillage.
- Have means to soak spillage, eg: cloth or absorbent materials, readily available.
- If contamination of a cloth is small, wash it immediately with detergent and rinse well.
- Otherwise keep used contaminated cloths or material in a lidded metal bin.
- Empty the bin daily and dispose of its contents safely.

How should I dispose of waste liquids ?

- Collect waste liquids in suitable and clearly marked containers set aside for the purpose.
- Collect incompatibles separately.
- Sit containers in a tray.
- Transfer full containers to the store to await removal from site and safe disposal.

- Small quantities of accumulated waste (up to 2 litres) may occasionally be disposed of by evaporation in a safe place in the open air.
- Accumulated waste quantities of up to 100ml may occasionally be disposed of by evaporation in an appropriate fume cupboard.

What should I do if a fire occurs ?

- Follow the written emergency procedures.
- Make sure a copy of the procedures is posted in your workplace.
- Have a suitable means to cope with fire available at all times.

WHAT TRAINING SHOULD I HAVE RECEIVED ?

- Training should have been received on safe storage and use of highly flammable liquids.
- Training should have included adequate instruction on the nature of any dangers which the material to be stored/used may give rise.
- Training should also have included adequate instruction on emergency procedures, including use of fire extinguishers.

WHERE CAN I GET MORE DETAILED ADVICE ?

The HSE, Fire Brigade and other Bodies produce guidelines from time-to-time. Details of these are available from the University Safety Adviser Ext 2779.