

# DEALING WITH CHEMICAL SPILLS AND EMERGENCY PREPAREDNESS

**Corporate Health and Safety Guidance**

July 2025

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# Introduction

A hazardous substance spill is an unintentional release of a hazardous substance out of its container or vessel.

Spills of any substance create an immediate slip hazard but when hazardous substances are involved there is the potential risk of harmful exposure.

Spillages can vary in size from a minor spill from an experiment or project, to a major spill where chemicals are stored in bulk.

It is important to know the correct action to take in both scenarios to prevent the situation getting worse. Regardless of the size, all spills must be dealt with immediately to prevent further contamination or injury.

Minor spills may require specialist equipment to be cleaned up or can be cleaned up using standard procedures and readily available laboratory cleaning materials, depending on the substance being used. Minor spills do not normally necessitate an immediate evacuation of the area or emergency response.

Procedures to deal with spills should be clearly defined within the [COSHH assessment](#)(s) for the substance(s) being used and include the level of protection required to clean up the spill, the equipment to be used to contain and clean up the spill and the disposal route for all waste following the clean-up procedure.

# Spills Prevention

The following factors are important considerations in relation to management of hazardous substances and minimising the likelihood of a hazardous spill:

- High standards of laboratory housekeeping and procedures;
- Detailed and up to date COSHH assessments;
- Maintenance of accurate and detailed chemical inventories;
- Training to include University arrangements and local arrangements specific to the working environment and substances in use or stored;
- Reducing storage of large volumes by purchasing smaller quantities more frequently;
- Where larger quantities are required, multiple smaller packs reduce the potential for a large spill;

- Regular maintenance and inspection of equipment including storage provisions, bunds and chemical containers to ensure they are in good condition and remain suitable for the substance they are holding;
- Understand the spill history in your area of work and awareness of any chemicals that may be particularly unstable;
- All work involving hazardous substances, where practicable, should be carried out inside a fume cupboard that is suitable for the specific substance;
- Ensure you have a regular waste disposal system implemented to prevent a build up of expired or unused chemicals and update your chemical inventories once completed.

## Procedure

### Clearing up a spill

#### Assess the risk – follow the COSHH/Risk Assessment

- From the moment a spill occurs and throughout, consider the risk to health, environment, equipment and property.
- Identify what has been spilt and the hazardous properties.
- Obtain the COSHH Assessment(s) and Safety Data Sheets (SDS) for the substance(s).
- In the event of gas, vapour, mist or fumes then ensure the area is vented as best as possible either by utilising any fume cupboards that are suitable for the substance or opening windows and prevent the spread of fumes, dusts and vapours by shutting the doors to other areas.
- If you are not already wearing it, ensure the correct Personal Protective Equipment (PPE) is worn as per the COSHH Assessment(s) and SDS(s).
- Restrict access to the area whilst the clean up process is being conducted to prevent further injuries by warning others, asking them to move away and/or cordon off the area with signs or barriers.

## Stop the Source

- If safe to do so, shut off any course of the spill (valve/tap etc).
- Consider and control any ignition sources and do not turn equipment on or off unnecessarily as this can create an ignition source (spark).
- Isolate electrical supplies if possible. If you're unsure of the location then contact Estates Helpdesk on ext 6677 (023 9284 6677) for further advice and guidance.
- Consider the risk of contamination from other chemicals.

## Secure the site

- Consider if you need to evacuate people from the area of the spillage and to what extent.
- Secure the area and restrict access to prevent further injuries by warning others, asking them to move away and/or cordon off the area with barriers.
- Put out signage or ensure appropriate entry/exit points are manned to prevent entry.

## First Aid

- Assist any injured/exposed persons to a safe distance away from spillage, if safe to do so.
- Summon first aid assistance if required by utilising the first aid posters located around campus or contacting Security on ext 3333 (023 9284 3333). Call 999 immediately if medical assistance is required and take note of the building and location.
- Make sure you follow the first aid recommendations from the COSHH Assessment(s) and if the injured person needs to go to hospital, send the SDS(s) with them.

## Personal Protective Equipment (PPE)

- PPE that is provided to be used to manage spillages or other emergencies should be stored in an easily accessible location.
- It is vital that the PPE provided is suitable for the chemicals that are used, will provide suitable protection and fits correctly. This information should be taken from both the SDS(s) and the COSHH Assessment(s) with any face fit testing carried out by Health Safety and Compliance.

- PPE should be maintained, checked for signs of damage before use and reported to your line manager to enable replacements.
- Ensure that all PPE is kept as clean as possible to ensure its effectiveness in maintaining the integrity of the equipment.

## Contain and confine the spillage

- Clear up the spill using absorbent materials such as absorbent towels, pads, booms or granules as outlined in your COSHH assessment(s).
- Block drains with appropriate barriers if it is safe to do so.
- Reduce actions that may increase the potential risk of exposure through other routes of entry (e.g. sweeping up and creating inhalable dusts).

## Clean up

- Waste disposal routes should be included in your COSHH assessment(s) for the specific substance(s) and any materials required to contain a spill.
- Collect waste in appropriate containers
  - Bag for normal waste
  - Bag for hazardous waste
  - Sealed containers separating incompatible materials.
- Dispose or store all waste until hazardous waste collection has been arranged either through the Faculty designated person(s) or by contacting Estates Helpdesk on Ext. 6677 (023 9284 6677) or email to: [estateshelpdesk@port.ac.uk](mailto:estateshelpdesk@port.ac.uk).

## Decontaminate

- If appropriate and able to do so, equipment can be decontaminated locally. If this is not possible, request specialist cleaners and/or disposal via Estates Helpdesk ext. 6677 (023 9284 6677).
- Contact Health Safety and Compliance for further advice on ext. 3075 or if the spillage occurred out of normal working hours, call Security on ext. 3333 (023 9284 3333).
- Consideration should also be given to disposal of contaminated PPE or decontamination of reusable PPE.

## Report

- Even small spills should be reported. Inform your line manager and ensure that all local procedures are followed, so that the incident can be monitored and additional controls be implemented where required and appropriate spill response materials can be restocked.
- Complete an [HS1 form](#) including as much detail as possible, such as injuries, consequences of the spills and action taken.
- Health Safety and Compliance will follow up on all incidents.

## Major Spills

For a major spill that is too large for the available local resources or competencies to sufficiently deal with, or where the spill represents an immediate threat to health and the environment (such as substantial quantities of corrosive, toxic, carcinogenic, mutagenic, reprotoxic or environmentally hazardous substances) or assistance is required to manage the scene, contact Estates Helpdesk on 6677 (023 9284 6677) or Security immediately on 3333 (023 9284 3333) who will coordinate the emergency chemical spill response procedure through our designated contract providers. Ensure that access is restricted to prevent further injuries and monitor at a safe distance until help arrives. Never put yourself in danger.

## Training

Health Safety and Compliance provide internal training for all staff. In order to obtain the most information and understanding, it is recommended that all persons who deal with chemicals whilst at work attend COSHH training. The training calendar can be found [here](#). For training on Dealing with Spills, this can be provided as bespoke training when requested for your school/department and can be arranged by contacting the Health Safety and Compliance help desk on [hsservicedesk@port.ac.uk](mailto:hsservicedesk@port.ac.uk).

If more specialist training is required for certain chemicals or areas, this should be arranged within the Faculty and undertaken on a regular basis.



## Further information

[Health & Safety Executive \(HSE\) Blood borne viruses](#)

[Health & Safety Executive \(HSE\) Emergency response/spill control](#)

[World Health Organisation \(WHO\) Chemical Incidents](#)

[World Health Organisation \(WHO\) Manual on Biosafety on Laboratories](#)

[UK Health Security Agency Chemical Hazards Information](#)