



Control approach 2

Drum emptying using a drum pump

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Engineering control



This guidance sheet is aimed at employers to help them comply with the requirements of

the Control of Substances Hazardous to Health Regulations 2002 (COSHH) by controlling exposure to chemicals and protecting workers' health.

The sheet is part of the HSE guidance pack *COSHH essentials: easy steps to control chemicals*. It can be used where the guide recommends control approach 2 (engineering control) as the suitable approach for your chemical(s) and task(s).

This sheet provides good practice advice on using a drum pump to empty drums, and can be applied to tasks involving medium quantities of liquids. It describes the key points you need to follow to help reduce exposure to an adequate level.

It is important that all the points are followed.

Some chemicals can also be flammable or corrosive. Where they are, your controls must be suitable for those hazards too. Look at the safety data sheet for more information.

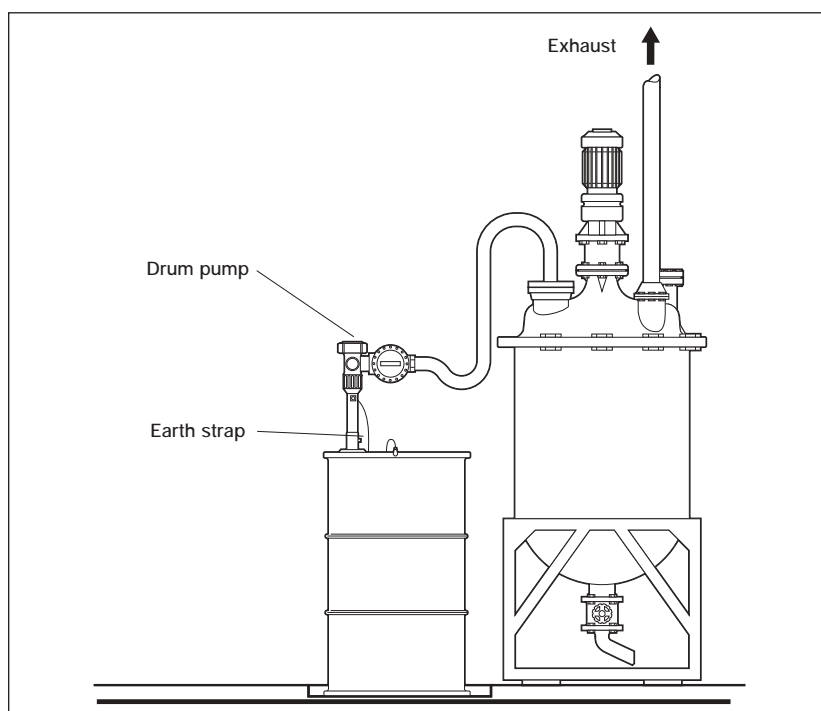
Depending on the scale of work, releases into the atmosphere may be regulated within the pollution prevention and control (PPC) framework. You should consult your local authority or the Environment Agency. In Scotland, consult the Scottish Environment Protection Agency (SEPA). They will advise you if PPC legislation applies to your company, and about air cleaning and discharging emissions into the air. Otherwise, minimise emissions into the air.

Access

- ✓ Restrict access to the work area to authorised staff only.

Design and equipment

- ✓ Ensure the area is well ventilated.
- ✓ Design the work area for ease of maintenance and, when possible, use equipment designed for easy maintenance.
- ✗ Take care not to touch the dip pipe after removal from the drum.
- ✓ Provide containment around the drum to catch drips and leaks.
- ✓ Ensure the pump is suitable for the liquid to be transferred.
- ✓ Provide transfer/storage arrangements for the pump and dip pipe to minimise contact with the liquid and to stop contamination.
- ✓ Consider how the drum will be moved to the transfer area. Avoid manual handling.
- ✓ Provide a suitable 'key' for removing and replacing the drum stopper.
- ✓ For flammable liquids, use suitable pumps/fans and appropriately earthed equipment to prevent sparking from build-up of static electricity.
- ✓ Where possible, locate the work area away from doors, windows and walkways.
- ✓ Discharge extracted air to a safe place away from doors, windows and air inlets.
- ✗ With vapours, re-circulation is not recommended.



Maintenance

- ✓ Maintain the equipment as advised by the supplier/installer, in effective and efficient working order.

Examination and testing

- ✓ Get information on the design performance of the equipment from the supplier. Keep this information to compare with future test results.
- ✓ Visually check equipment at least once a week for signs of damage.
- ✓ Keep records of all examinations and tests for at least five years.

Cleaning and housekeeping

- ✓ Clean work equipment, and the work and storage area daily. Clean other equipment and the workroom regularly - once a week is recommended.
- ✓ Deal with spills immediately - contain or absorb with granules or mats.
- ✓ Store drums in a safe place and dispose of empty drums safely (see CGS 101).

Personal protective equipment (PPE)

- ✓ Chemicals in **hazard group S** can damage the skin and eyes, or enter the body through the skin and cause harm. See CGS S100 and S101 for more specific advice. Check the safety data sheets to see what personal protective equipment is necessary.
- ✓ Ask your safety clothing supplier to help you select suitable protective equipment.
- ✓ Respiratory protective equipment should not be necessary for routine operations. It may be necessary for some cleaning and maintenance activities, eg cleaning up spills.
- ✓ Keep PPE clean, and replace it at recommended intervals.

Training

- ✓ Give your workers information on the harmful nature of the substance.
- ✓ Provide them with training on: handling chemicals safely; checking controls are working and using them; when and how to use any PPE you provide; and what to do if something goes wrong.

Supervision

- ✓ Have a system to check that control measures are in place and being followed.

Further information

- Safety data sheets
- Control guidance sheets 101, S100 and S101

Employee checklist for making the best use of the controls

- Make sure any ventilation system is switched on and is working.
- Always remove and replace the drum stopper using a 'key'.
- Always use the earth strap.
- Use handling aids when provided.
- Take care when removing the pump from the drum to minimise vapours and skin contact. Return the pump to its storage position.
- Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor. Do not carry on working if you think there is a problem.
- Wash hands before and after eating, drinking or using the lavatory.
- Do not use solvents to clean your skin.
- Clear up spills immediately. Contain or absorb liquids with granules or mats. Dispose of spills safely.
- Use, maintain and store any PPE provided in accordance with instructions.



COSHH essentials:
easy steps to control chemicals
October 2003

Printed and published by
the Health and Safety Executive