Storing chemicals

Control approach 1
General ventilation

What this sheet covers
This sheet describes good practice for storing chemicals.
It covers the key points you need to follow to help reduce exposure to an adequate level, as part of your COSHH assessment.

Hazards
✓ There is a wide range of hazards from these substances.
✓ Check safety data sheets (SDSs).
✓ See ‘Further information’ for information on exposure limits.

Access
✓ Restrict access to the chemical store.
✓ Provide a store with sufficient space, well organised, well lit and well ventilated.
✓ The store should have an impervious floor that is resistant to the chemicals used and is easy to clean.
✓ Store incompatible materials safely – see HSG71. Define the areas and put up clear signs.
✓ Keep tanks and containers in defined, bunded areas.
✓ Label tote tanks, containers and lines clearly.
✓ Provide bulk storage with dust filtration or air cleaning for the displaced air.
✓ Provide explosion relief where necessary.
✓ Vent air displaced from bulk liquids to a safe place.
✓ Segregate vehicle routes from walkways, where possible.
✓ Eliminate or control ignition sources.

Planning
✓ Minimise the range of chemicals that need to be stored.
✓ Develop emergency procedures that are suitable for the chemicals and amounts stored.
✓ Provide spill clear-up kits.
✓ Provide suitable fire extinguishing equipment.
✓ Make arrangements for the removal of waste packaging.
✓ Impose permit-to-work procedures for work on tanks and silos. The method must include purging and air testing.
Control procedures
 ✓ Check for damage and leaks at least once a day. Stack containers to make finding leaks easy.
 ✓ Repackage and label, or dispose of the contents of leaking containers as soon as possible.
 ✓ Clean up spills immediately. This may need personal protective equipment.

Personal protective equipment (PPE) – see OCM3
 ✓ Respiratory protective equipment (RPE) is not normally needed – check safety data sheets.
 ✓ RPE may be needed for clearing up spillages.
 ✓ Where necessary, provide CE-marked RPE with an assigned protection factor of at least 20 for the air contaminants.
 ✓ Disposable RPE (FFP3) or cartridge RPE is acceptable.

Other protective equipment
 ✓ Provide standard or disposable coveralls. Check that coveralls have fire retardant properties.
 ✓ Provide clean chemical-resistant gloves and new gloves when these are damaged.
 ✓ Tell workers to discard single-use gloves every time they take them off.

Cleaning and housekeeping
 ✓ Clean the store once a week.
 ✓ Collect liquid spills with absorbent material, then use wet cleaning methods.
 ✓ Clean up solid spills with a Class H vacuum cleaner.

Caution: Don’t use a brush or compressed air for cleaning. Never use compressed air to remove dust from clothing.

Waste
 ✓ Segregate waste from other stored goods. Label it clearly.

Training and supervision
 ✓ Provide supervision – ensure that safe work procedures are followed.
 ✓ Tell workers, including maintenance workers, what the hazards and risks are.
 ✓ Explain the early signs of dermatitis.
 ✓ Explain the importance of segregation for storage.
 ✓ Supervise storage and inventory record keeping.
 ✓ Training includes toolbox talks on:
   ▪ emergency procedures;
   ▪ safe handling procedures;
   ▪ good record keeping;
   ▪ how to use RPE and check that it is working;
   ▪ how to clean up spills correctly; and
   ▪ what to do if something goes wrong.
 ✓ Involve managers and supervisors in health and safety training.

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Employee checklist

☐ Are all air vents and grilles free of blockages?
☐ Use handling aids to minimise the risk of spills.
☐ Look for signs of leaks, wear and damage before every job.
☐ Clean up leaks and spills immediately.
☐ If you find any problem, get it fixed. Don’t just carry on working.
☐ Use, look after and store your PPE in accordance with instructions.
☐ Discard single-use gloves every time you take them off.
☐ Wash hands before eating, drinking or using the lavatory.
Essential information
OCM8 Advice for managers
OCM3 Personal protective equipment (PPE)
OCM4 Respiratory protective equipment (RPE)
OCM5 Emergency planning

Other hazards
- Musculoskeletal disorders – manual handling awkward/ heavy items in restricted places
- Static electricity – earthing fuel lines, storage tanks
- Slips and trips
- Vehicle movements
- Substances harmful to the marine environment

Further information
Chemical warehousing: The storage of packaged dangerous substances HSG71 (Fourth edition) HSE Books 2009 ISBN 978 0 7176 6237 1
www.hse.gov.uk/pubns/books/hsg71.htm

Tote tanks
www.stepchangeinsafety.net

www.hse.gov.uk/pubns/books/hsg103.htm

You can find the full Offshore COSHH essentials series at
www.hse.gov.uk/coshh/index.htm

This guidance was developed by representatives from the UK offshore oil and gas industry and trade unions, with HSE.