



Control approach 1



This guidance sheet is for employers including the self-employed and franchisees

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 HSE guidance *COSHH essentials: easy steps to control chemicals*. It describes the key points you need to follow to help reduce exposure to an adequate level. It is important to follow all the points, or use equally effective measures.

Get safety data sheets from your product supplier. Use these to identify the more dangerous chemicals, and less dangerous substitutes. Also check for flammability.

Some concentrates are biocidal products. Authorised products are safe for use so long as you follow the instructions on the label.

Water treatment chemicals also include corrosion and scale inhibitors, softeners and biofilm dispersants.

Skin damage may occur from splashes when handling concentrate, handling contaminated equipment (eg dip tubes), and when dilute solutions dry out.

General ventilation is the recommended approach.

Note: the use of cooling towers and evaporative condensers must be notified to your local authority.

Water treatment – concentrates and treated water

SR09

General ventilation

Workplace and access

- Water treatment is common in boilers and cooling systems, such as wet cooling towers.
- ✓ Restrict access to those people who need to be there.

Design and equipment

- ✓ Use automated dispensing systems (eg meters and dip-tubes).
- ✓ Ensure the equipment using the product works properly, without leaks.
- ✓ Buy liquid chemicals in containers that are easy to pour from, don't dribble, and don't trap liquid in a rim.
- ✗ Never decant concentrate into an unlabelled container.
- ✗ Never re-use a concentrate container. Dispose of it safely or return it to your supplier.
- ✓ You need washing facilities for decontamination after handling products.

Procedures

- ✓ Try to buy solid chemicals in tablet form, or in a wide-necked container such that it is easy to scoop out the granules.
- ✓ Store products containing chemicals securely in a cool, dry, dark place, capable of keeping in spills. Don't store far more than you need.
- ✓ Read the instructions on labels carefully - follow the instructions for use.
- ✓ Keep chemicals off your skin - wash off any splashes immediately.
- ✓ Put the cap back on the container immediately.
- ✓ Clean up spills promptly - practise how to do this.
- ✓ Take special care when changing dip-tubes - wear PPE.
- ✓ Wipe hands dry of diluted solutions immediately.

Special care

- Contact with many chemicals can lead to skin soreness, itching, rashes, and blistering (dermatitis). Some can also damage the eyes.
- Some products may cause asthma or cancer - check the safety data sheet.
- Try to avoid products that contain formaldehyde, glutaraldehyde or hydrazine. Or use them at the lowest possible concentration. You need respiratory protective equipment (RPE) when using these chemicals - seek advice from a protective equipment supplier.
- Take special care using caustic soda (sodium hydroxide). This can erupt when mixed with water. Splashes in the eye can cause blindness.

Maintenance

- ✓ Follow instructions in maintenance manuals.
- ✓ Keep equipment in effective and efficient working order.
- ✓ If the equipment is faulty, get it repaired immediately.

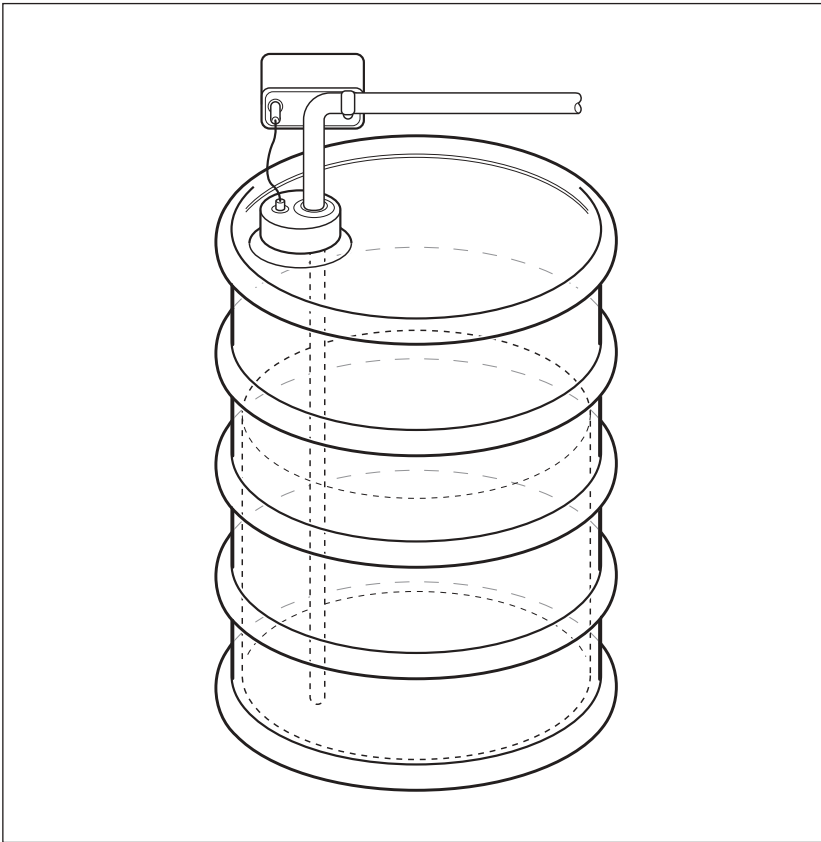
- ✓ Special care is needed to decontaminate dispensing systems. Seek advice or use a specialist contractor.

Cleaning and housekeeping

- ✓ Deal with spills immediately - absorb liquid spills. This needs coveralls, respiratory protection and single-use gloves.
- ✓ Dispose of waste through a specialist contractor.

Personal protective equipment (PPE)

- ✓ Follow the instructions on product labels.
- ✓ Respiratory protective equipment (RPE) may be needed. Seek advice from an RPE supplier. Make sure you fit the right cartridge before starting work.



- ✓ Make sure you know how to check that RPE fits correctly. Seek advice from your supplier.
- ✓ Wear protective gloves - single-use nitrile gloves are acceptable. If you must use latex gloves, use only 'low-protein, powder-free' gloves.
- ✓ Throw away single-use gloves every time you take them off.
- ✓ Skin creams are important for skin protection and help in washing contamination from the skin. These are **not** 'barrier creams'. After work creams help to replace skin oils.
- ✗ Workers must not take work clothing home for washing. Use a contract laundry.

Health advice

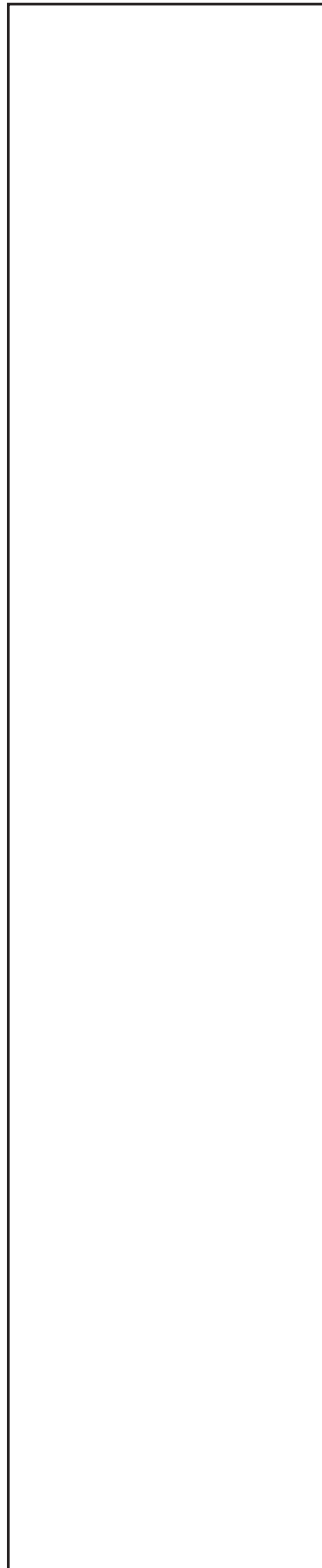
- ✓ Ask your workers to check their skin for dryness or soreness every six months. If these effects appear, check the proper use of skin creams and PPE.
- ✓ If you use a product labelled 'may cause sensitisation by skin contact' or 'may cause sensitisation by inhalation', seek specialist advice. See Further information.

Training

- ✓ Show your workers this sheet and check that they understand it.
- ✓ Tell them about the risks of using the product - see product labels or Section 15 of the safety data sheet from your product supplier.
- ✓ Ensure training includes how to keep exposures low, how to use and look after PPE and RPE, and what to do if something goes wrong.
- ✓ Make sure everyone knows how to clear up spills promptly and safely.

Supervision

- ✓ Get safety data sheets from your suppliers and identify the more dangerous chemicals. Consider substitution.
- ✓ Check the proper procedures for decontamination are being followed.



Further information

- *General ventilation in the workplace: Guidance for employers* HSG202 HSE Books 2000 ISBN 0 7176 1793 9
- *The selection, use and maintenance of respiratory protective equipment: A practical guide* HSG53 (Second edition) HSE Books 1998 ISBN 0 7176 1537 5
- *Assessing and managing risks at work from skin exposure to chemical agents: Guidance for employers and health and safety specialists* HSG205 HSE Books 2001 ISBN 0 7176 1826 9
- *Preventing dermatitis at work: Advice for employers and employees* Leaflet INDG233 HSE Books 1996 (single copy free or priced packs of 15 ISBN 0 7176 1246 5)
- *Legionnaires' disease: A guide for employers* Leaflet IAC27(rev2) HSE Books 2001 (single copy free or priced packs of 15 ISBN 0 7176 1773 4)
- Health and safety consultants: the BOHS Faculty of Occupational Hygiene keeps lists of qualified hygienists who can help you. Contact BOHS on 0133 229 8087 or at www.bohs.org/
- Occupational health professionals: details of doctors and nurses can be found in the Yellow Pages under 'Health and safety consultants' and 'Health authorities and services'. Also visit the NHS website at www.nhsplus.nhs.uk

Employee checklist

- Look for signs of leaks, wear and damage.
- Check that your RPE works properly every time you put it on.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Wash your hands after use, and before and after eating, drinking, smoking and using the lavatory.
- Never clean your hands with concentrated cleaning products or solvents.
- Clear up chemical spills promptly. Absorb liquid spills in granules and dispose of them safely.
- Use and store your protective equipment according to instructions.
- Throw away single-use gloves every time you take them off.
- Check your skin regularly for dryness or soreness - tell your supervisor if these symptoms appear.
- Use skin creams provided as instructed.



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