

SR20

**COSHH essentials
for service and retail**



This information will help employers, the self-employed and franchisees to comply with the Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended, to control exposure and protect workers' health.

It is also useful for trade union and employee safety representatives.

This sheet describes good practice using engineering control - fixed extraction.

It covers the points you need to follow to reduce exposure to an adequate level.

It is important to follow all the points, or use equally effective measures.

Main points

- Fume can cause asthma.
- Keep exposure as low as possible using all the controls in this sheet.
- Design, install, commission and maintain engineering controls. See sheet G406.
- Health surveillance is usually needed. See sheet G402.
- See manufacturers' safety data sheets - select safer consumables.

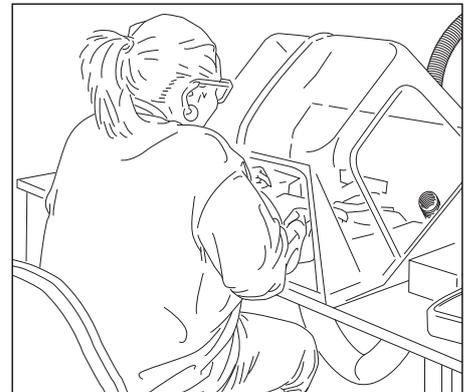
Also see sheet SR0.

Soldering: Hand-held with lead-based, rosin-cored solders

Engineering control

Hazard

- ✓ Fumes from soldering with rosin-cored solder can cause asthma.
- ✓ Control exposure to stop occupational asthma developing - this means short-term and long-term exposure to solder fume.
- ✓ If an individual develops occupational asthma, avoid further exposure.
- ✓ When all controls are applied properly, less than 0.05 mg/m³ solder fume is usually achievable (based on an 8-hour time-weighted average).



Access and premises

- ✓ Only allow access to authorised staff.
- ✓ Locate the work away from doors, windows and walkways. Stop draughts interfering with the extraction.

Equipment

- ✓ Can you use mechanical jointing, rosin-free or rosin-reduced solder?
- ✓ Avoid soldering fume. Wherever possible, use an extracted booth or cabinet. See illustration.
- ✓ You need an inward air speed between 0.5 and 1 metre per second into the booth.
- ✓ If you use a capture hood, always keep it close to the soldering point. Show it is effective by air sampling. See sheet G409.
- ✓ If you use tip extraction, provide extraction tubes with a diameter greater than 5 mm. Show it is effective by air sampling. See sheet G409.
- ✓ See the manufacturer's specification for tip extraction speeds.
- ✓ Fit a manometer, pressure gauge or tell-tale to show that the extraction is working.
- ✓ Discharge cleaned, extracted air to a safe place outside the building, away from doors and windows.
- ✓ Have a supply of clean air coming into the workroom to replace extracted air.

Caution: Don't use bench-mounted filtration units that return air to the workroom unless fitted with HEPA filters.

Personal protective equipment (PPE)

- ✓ Ask your safety equipment supplier to help you get the right PPE.
- ✓ Provide and ensure that workers use protective gloves. Single-use gloves are acceptable. If you must use latex gloves, use only 'low-protein, powder-free' gloves.
- ✓ Throw away single-use gloves every time they are taken off.
- ✓ Use a properly equipped contract laundry or a suitable equivalent to wash work clothing.
- ✓ Skin creams help in washing contamination from the skin. After-work creams help to replace skin oils.

Procedures

- ✓ Confirm that extraction is turned on and working.
- ✓ Use soldering irons at the lowest temperature possible for an acceptable joint.

Maintenance, examination and testing

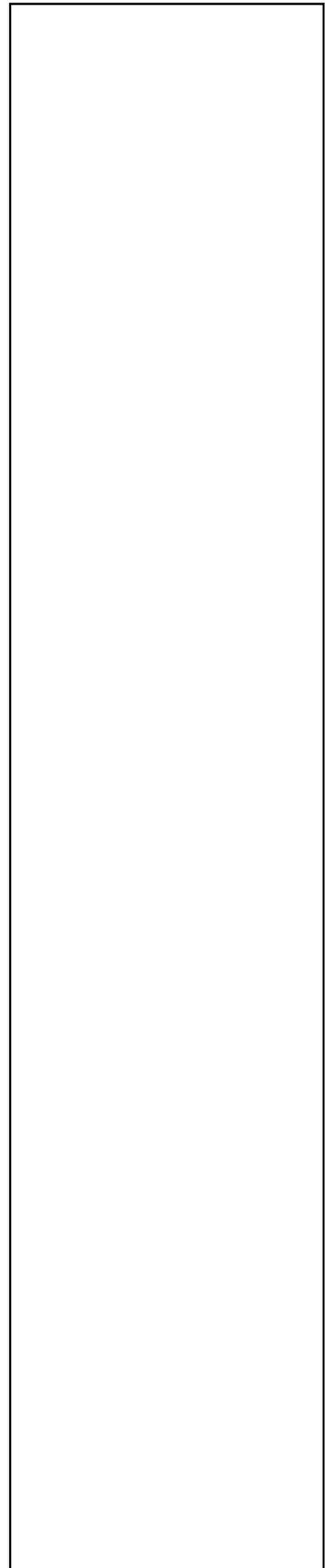
- ✓ Follow the instructions in the manual - keep equipment in effective and efficient working order.
- ✓ If any equipment is faulty, repair it straight away.
- ✓ When using tip extraction, keep the extraction tubes free of condensed fume. Clear the tubes at least once an hour, and wash them out thoroughly at the end of each shift.
- ✓ Daily, look for signs of damage.
- ✓ At least once a week, check that the extraction system and gauges work properly.
- ✓ You need to know the manufacturer's specifications to check the extraction's performance.
- ✓ If this information isn't available, hire a competent ventilation engineer to determine the performance needed for effective control.
- ✓ The engineer's report must show the target extraction rates.
- ✓ Keep this information in your testing log-book.
- ✓ Get a competent ventilation engineer to examine the extraction thoroughly and test its performance at least once every 14 months. See the HSE publication HSG54 - see 'Further information'.
- ✓ Keep records of all examinations and tests for at least five years.
- ✓ Review records - failure patterns show where preventive maintenance is needed.

Health surveillance

- ✓ You need to do health surveillance. See sheet G402.
- ✓ Consult an occupational health professional - see 'Useful links'.
- ✓ Keep health records and the results of tests for 40 years.

Cleaning and housekeeping

- ✓ Clean the general workroom once a week.
- ✓ Dispose of hazardous wastes safely.



Training and supervision

- ✓ Tell workers about the risks - see products labels or Section 15 of the safety data sheet.
- ✓ Working in the right way and using the controls correctly is important for exposure control. Train and supervise workers. See sheet SR0.

Further information

- *Maintenance, examination and testing of local exhaust ventilation* HSG54 (Second edition) HSE Books 1998 ISBN 978 0 7176 1485 1
- *Solder fume and you* Leaflet INDG248(rev) HSE Books 2001 (single copy free) www.hse.gov.uk/pubns/indg248.pdf
- *Controlling health risks from rosin (colophony) based solder fluxes* Leaflet INDG249 HSE Books 1997 (single copy free or priced packs of 10 ISBN 978 0 7176 1383 0) www.hse.gov.uk/pubns/indg249.pdf
- For environmental guidelines see sheet SR0

Useful links

- Your trade association may advise on health and safety consultants and training providers.
- For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.
- Contact the British Occupational Hygiene Society (BOHS) on 01332 298101 or at www.bohs.org for lists of qualified hygienists who can help you.
- Look in the Yellow Pages under 'Health and safety consultants' and 'Health authorities and services' for 'occupational health'.
- Also see www.nhsplus.nhs.uk.

This document is available at: www.hse.gov.uk/pubns/guidance/ and www.hse.gov.uk/coshh/essentials/

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

© Crown copyright If you wish to reuse this information visit www.hse.gov.uk/copyright.htm for details. First published 11/07

Employee checklist

- Do you know how to use the controls properly?
- Is the extraction working?
- Use, maintain and store your protective equipment in accordance with instructions.
- Throw away single-use gloves every time you take them off.
- Look for signs of leaks, wear and damage.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Co-operate with health surveillance.
- Wash your hands before eating, drinking, or using the lavatory.
- Never clean your hands with solvents or concentrated cleaning products.
- Use skin creams provided as instructed.