



## Control approach 2

# Vapour from solvent-based adhesives (small scale work)

## Engineering control

SR22



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.

Solvent and solvent-based adhesives produce vapours (solvent fumes) that can be breathed in.

Solvent vapours can cause headache, dizziness, nausea, and other ill health.

Engineering control (local exhaust ventilation) is recommended for prolonged use and for adhesive spraying.

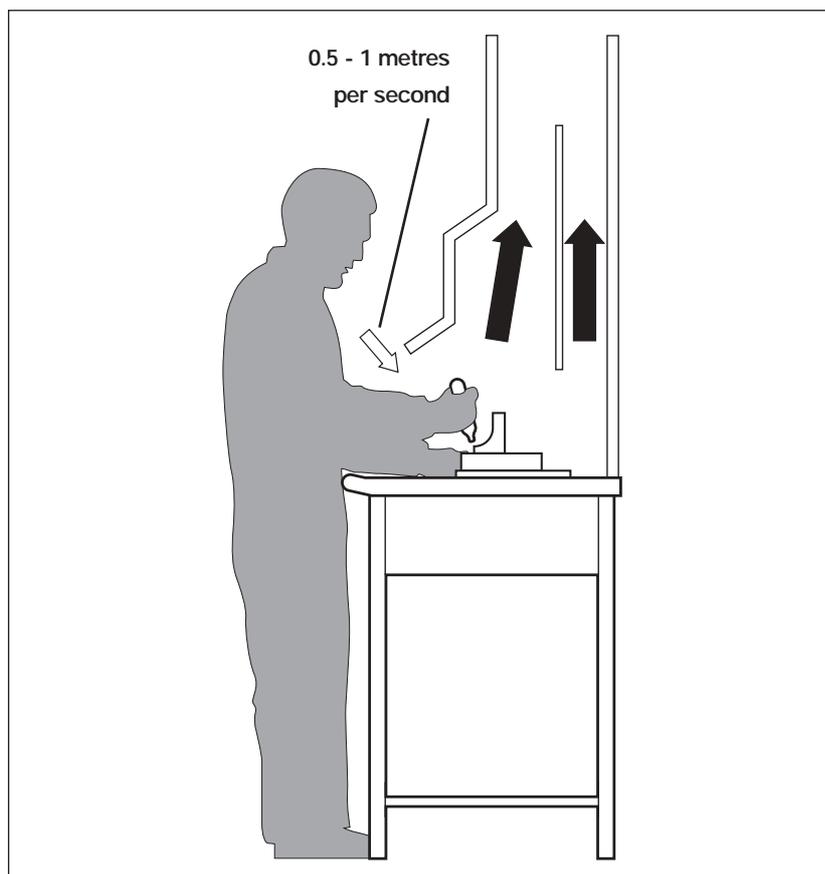
Caution: aerosol propellants are often flammable.

## Workplace and access

- Solvent-based adhesives are used for resoling shoes, attaching fabrics, mounting photographs, temporary repairs etc.
- ✓ Restrict access to those people who need to be there.

## Design and equipment

- ✓ Keep the workplace well ventilated - 5 to 10 air changes per hour with a through draught.
- ✓ Use an extracted booth or workstation if spraying adhesive, coating large surfaces, or working with adhesives for more than 30 minutes a day.
- ✓ You need an air speed between 0.5 and 1 metres per second at the face of the booth.
- ✓ Make sure a manometer or pressure gauge is fitted near the extraction point, to show that the extraction is working properly.
- ✓ Discharge extracted air to a safe place, away from doors, windows and air inlets. Have a supply of clean air coming into the workroom to replace extracted air.
- ✓ You need washing facilities for decontamination after handling products.



## Procedures

- ✓ Store products containing chemicals securely in a cool, dry, dark place, capable of keeping in spills. Don't store far more than you need.
- ✓ Some adhesives are a fire risk. Don't allow smoking and keep other ignition sources away.
- ✓ Confirm that the extraction is turned on and working at the start of work. Check the gauge.

## Special care

- Contact with many chemicals can lead to skin soreness and itching, rashes, blistering (dermatitis). Some can also damage the eyes.
- Try to avoid products containing n-hexane - this causes nerve damage.
- Superglues (cyanoacrylates) give off very irritating vapours.
- Products containing dichloromethane (methylene chloride) may cause irreversible health effects.

## Maintenance

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

## Examination and testing

- ✓ At least once a week, look for signs of damage.
- ✓ You need to know the extraction design performance to know if it is working properly. The equipment supplier's manual should give this information.
- ✓ Get a competent ventilation engineer to examine the system thoroughly and test its performance at least once every 14 months (see HSE publication HSG54).
- ✓ Keep records of all examinations and tests for at least five years.

## Cleaning and housekeeping

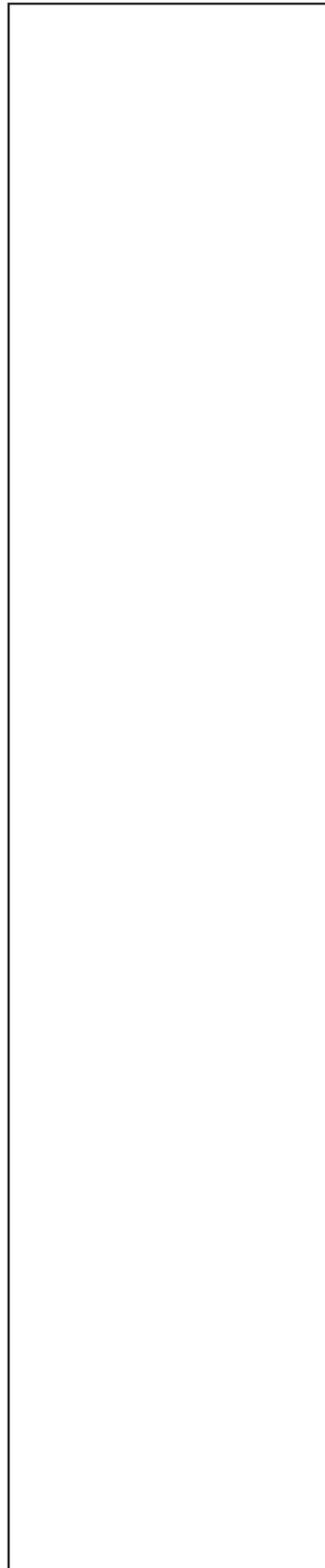
- ✓ Keep the work area clean.
- ✓ Clean up spills promptly - practise how to do this.

## Personal protective equipment (PPE)

- ✓ Follow instructions on product labels.
- ✓ Respiratory protective equipment (RPE) should not be needed if the extraction and ventilation are working properly.
- ✓ 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.

## 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.



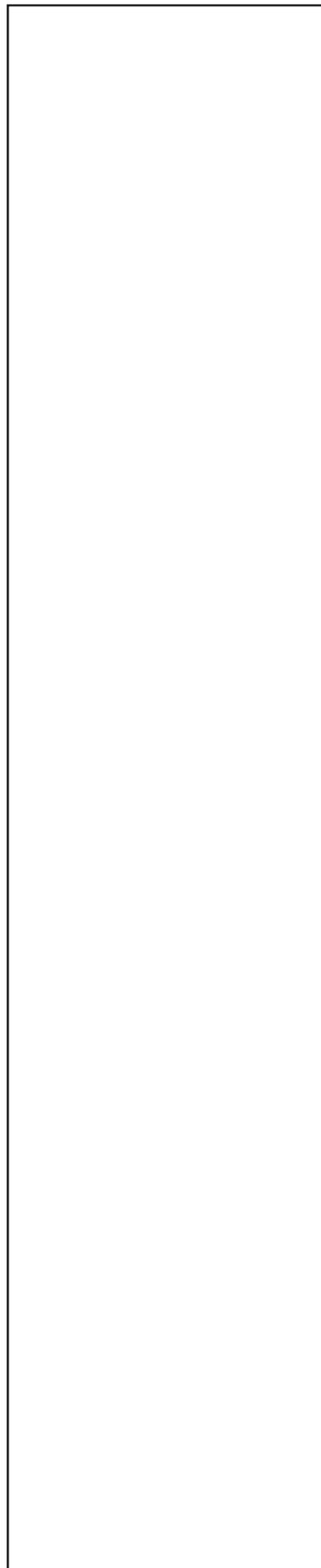
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## Training

- ✓ 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 check that the extraction system is working, how to use and look after PPE and RPE, and dealing with spills etc.

## Supervision

- ✓ Get safety data sheets from your suppliers and identify the more dangerous chemicals. Consider substitution.
- ✓ Check that ventilation and extraction is being used properly.



## Further information

- *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)
- *Working safely with solvents: A guide to safe working practices* Leaflet INDG273 HSE Books 1998 (single copy free)
- *Maintenance, examination and testing of local exhaust ventilation* HSG54 (Second edition) HSE Books 1998 ISBN 0 7176 1485 9
- 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/](http://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](http://www.nhsplus.nhs.uk)

## Employee checklist

- Is the extraction switched on and working properly?  
Check the gauge.
- Look for signs of leaks, wear and damage.
- 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.
- 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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easy steps to control chemicals*  
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