



Control approach R

# Hand-held sanding machines

Respiratory protective equipment

**WD07**

This guidance sheet is for 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 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.

Wood dust can cause serious respiratory diseases including asthma, and dermatitis. Wood dust includes dust from hardwood, softwood, and composite boards such as MDF.

Exposure to substances which cause occupational asthma should be prevented, or if that is not reasonably practicable, control exposure to prevent workers from developing asthma. This applies to short-term high as well as long-term exposures. If an individual develops occupational asthma, exposure must be controlled to prevent triggering further attacks. Suitable levels are likely to be well below any exposure limit.

Control approach R (respiratory protective equipment) with control approach 2 (engineering control) is recommended to control dust from sanding machines.

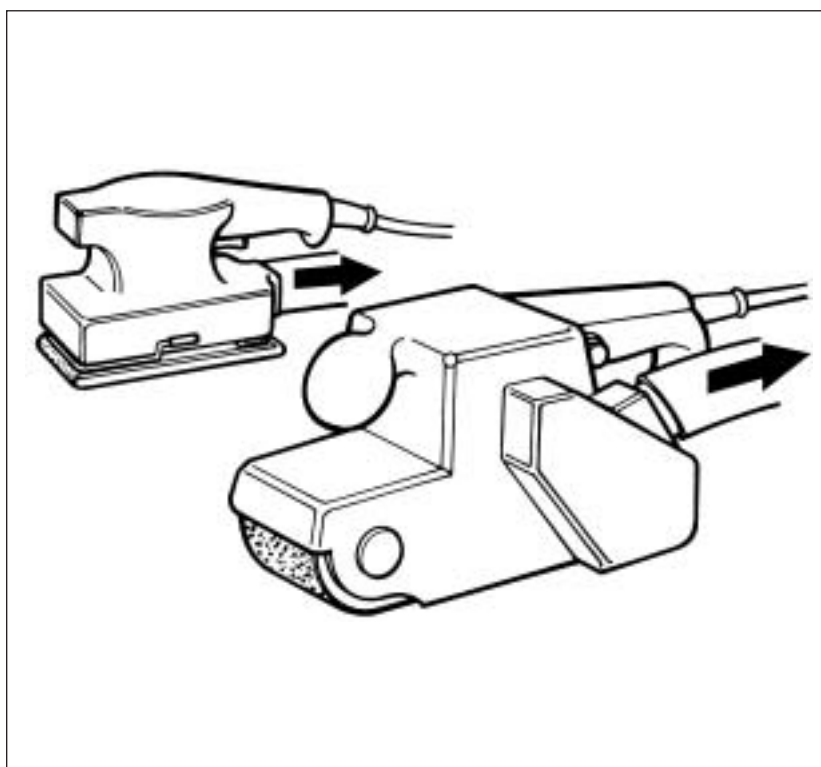
For environmental advice see Further information on the back page.

## Access

- ✓ Restrict access to those staff who need to be there.

## Design and equipment

- ✓ The machines covered include portable belt, disc and orbital sanders etc and finishers.
- ✓ Workers are likely to need respiratory protective equipment (RPE).
- ✓ Hand sanders (disc, orbital, belt etc and finisher) emit dust into the workroom. When possible, buy sanders with on-tool extraction, ideally connected to a Type H vacuum cleaner. On-tool filter bags perform less well.
- ✓ If using a pneumatic-powered hand sander with other extraction (eg a downdraught bench), make sure the air exhaust does not interfere with the extraction.
- ✓ If connected to a vacuum cleaner, keep extraction ducts short and simple. Otherwise, empty the on-tool dust bag regularly into the general dust extraction system.
- ✓ Remove as much surface dust as possible into the dust extraction system. Freshly sanded surfaces are coated with wood dust that becomes airborne during stacking and in furniture assembly.
- ✓ Consult a qualified ventilation engineer to design new control systems (see Control guidance sheet FD14).



## Maintenance

- ✓ Follow instructions in maintenance manuals.
- ✓ Keep equipment in effective and efficient working order.

## Examination and testing

- ✓ At least once a week, look for signs of damage to the sander and dust collection system.
- ✓ You need to know the extraction design performance. Your supplier's literature should give this information.
- ✓ Keep this information in your testing logbook.
- ✓ Keep records of all examinations and tests for at least five years.
- Consider air monitoring to decide the need for RPE and to make sure the controls are working well.

## Cleaning and housekeeping

- ✓ Clean the machinery and work area every day. Regular cleaning will help you find dust leaks.
- ✓ Clean general workrooms once a week. Remember to clean overhead beams, heating pipes and light fittings to reduce the risk of secondary dust explosion.
- ✓ Use a Type H vacuum cleaner fitted with a HEPA filter to clear up dust.
- ✗ Don't clean up with a brush or with compressed air.

## Personal protective equipment (PPE)

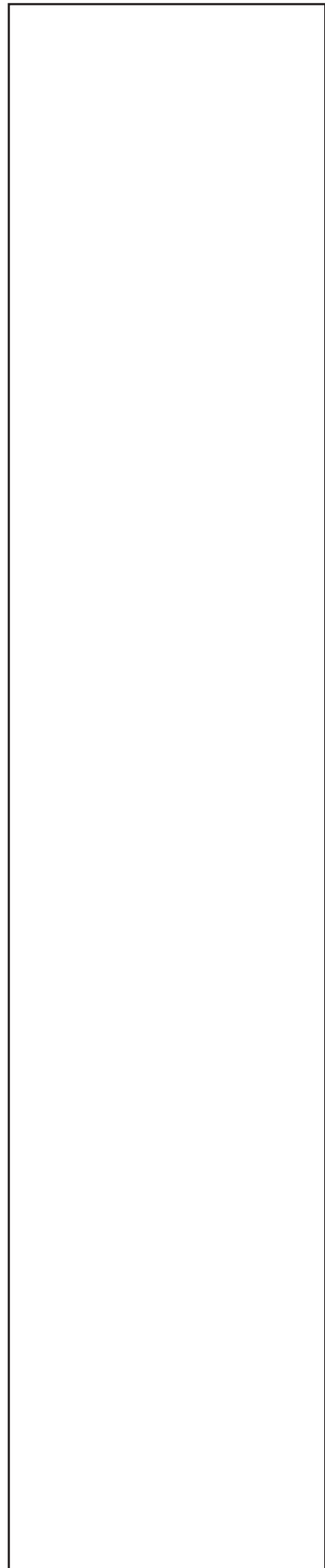
- ✓ Respiratory protective equipment (RPE) is likely to be needed, even if the extraction system is working properly.
- ✓ Use a P2 or P3 standard of RPE. Consult your supplier for advice.
- ✓ Replace RPE filters as recommended by your supplier. Throw away disposable masks after one use.
- ✓ Keep RPE clean and store it away from dust.
- ✓ 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.
- ✗ Never allow compressed air use for removing dust from clothing.

## Health surveillance

- ✓ Use health surveillance (see Control guidance sheet 402). There is a chance of asthma developing, even with good controls in place.
- ✓ Use skin surveillance.
- ✓ Consult an occupational health professional (see Further information).

## Training

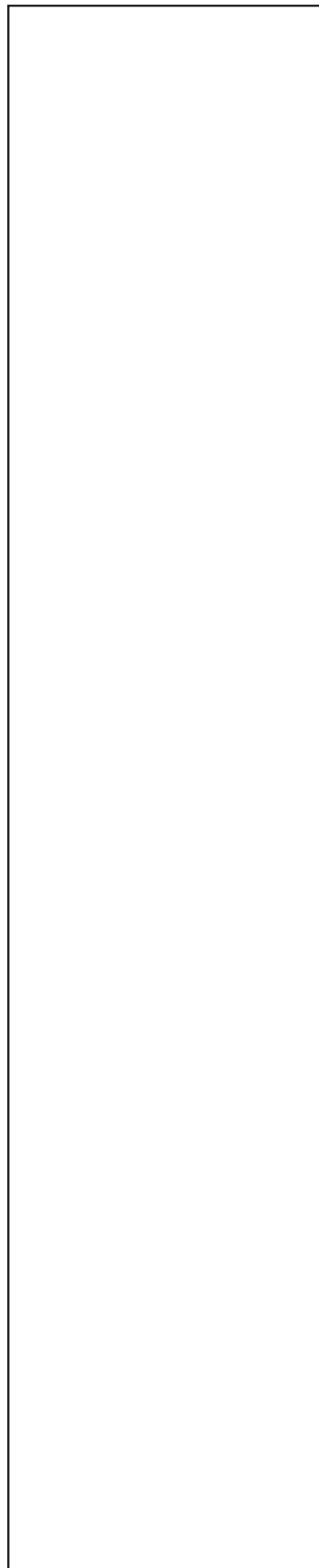
- ✓ Tell your workers that wood dust can cause asthma, cancer and dermatitis. Tell them what the early signs of asthma are.
- ✓ Warn them also about hand-arm vibration and noise.
- ✓ Provide health and safety training. Include supervisors and managers. Ask your local Learning Skills Council for advice on training providers.
- ✓ Ensure training includes how to keep exposures low; how to check that the extraction is working; how to use and look after PPE and RPE; and what to do if something goes wrong.



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## Supervision

- ✓ Check that the extraction is working properly; PPE is being used properly; and the rules on personal hygiene are being followed.
- ✓ Ensure the health surveillance programme is being carried out for everyone that needs it.
- ✓ 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.
- ✓ Swap workers over if they need to use hand-held tools for long periods of time.



## Further information

- *The selection, use and maintenance of respiratory protective equipment: A practical guide* HSG53 (Second edition) HSE Books 1998 ISBN 0 7176 1537 5
- *Safe use of woodworking machinery. Provision and Use of Work Equipment Regulations 1998 as applied to woodworking machinery. Approved Code of Practice and guidance* L114 HSE Books 1998 ISBN 0 7176 1630 4
- *Toxic woods* Woodworking Information Sheet WIS30 HSE Books 1995 (also available via [www.hse.gov.uk/pubns/woodindx.htm](http://www.hse.gov.uk/pubns/woodindx.htm))
- 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)
- Buy tools with low vibration ratings. Use them only for short periods to reduce hand-arm vibration syndrome (HAVS). Electrically powered hand-held tools require portable appliance testing (PAT).

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.

## Employee checklist

- Always follow the standard operating procedures.
- Is the extraction switched on and working properly?
- 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.
- Co-operate with health surveillance schemes.
- Use, maintain and store your PPE in accordance with instructions.
- Clear up sanding dust regularly.
- Wash your hands before and after eating, drinking, smoking and using the lavatory.
- Never use solvents to clean your skin.
- Use skin creams provided as instructed.



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