

WL20

COSHH essentials for
welding, hot work and allied
processes

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) require employers to ensure that exposure is prevented or, where this is not reasonably practicable, adequately controlled. This guidance gives practical advice on how this can be achieved by applying the principles of good practice for the control of exposure to substances hazardous to health, as required by COSHH.

It is aimed at people whose responsibilities include the management of substances hazardous to health at work (eg occupational health specialists, anyone undertaking COSHH assessments and supervisors). It is also useful for trade union and employee safety representatives. It will help you carry out COSHH assessments, review existing assessments, deliver training and supervise activities involving substances hazardous to health.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance, you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

See Essential information near the end of the sheet.

Surface preparation: pressure blasting (large items)

Control approach R Respiratory protective equipment (RPE)

What this sheet covers

This sheet describes good control practice when carrying out surface preparation of large items.

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

Follow all the points, or use equally effective measures.

Hazards

- ✓ Fume and dust from allied processes, eg flame and arc cutting, blasting and post-weld dressing, can cause lung disease. Abrasive blasting produces a great deal of dust that includes metals and metal oxides.

Access to work area

- ✓ Use a permit-to-work for access.
- ✓ Allow access to authorised and appropriately trained people only.
- ✓ Designate an exclusion zone, set up barriers, and post warning signs.
- ✓ Consider doing larger jobs at meal breaks or out of normal work hours when fewer people are nearby.

Equipment and procedures

- ✓ Wherever possible, do this work in a fully enclosed booth with local exhaust ventilation (LEV).
- ✓ Consider using wet blasting or high-pressure water jetting in place of dry abrasive blasting.
- ✓ Provide blasting equipment with a fast-actuating cut-off.
- ✓ Assistants (eg kettlemen) may also require RPE.
- ✓ Do not use sand abrasives.

Respiratory protective equipment (RPE)

- ✓ Use a blasting helmet with airline breathing apparatus (BA).
- ✓ Tell workers to check RPE is working properly before every use.
- ✓ Examine and test non-disposable RPE thoroughly at least once every month and record this.
- ✓ Make suitable arrangements for maintenance, storage and replacement of RPE.
- ✓ Maintain all RPE in effective and efficient working order.
- ✓ Visually check compressed airlines for signs of damage before use.
- ✓ Keep records of all examinations and tests for at least five years.
- ✓ Wearers must be medically fit to wear BA.

-
- ✓ Air supplied to BA should meet minimum quality requirements, in line with the latest British Standard.
 - ✓ Keep RPE clean and store it in a clean place.

Personal protective equipment (PPE)

- ✓ Ask your supplier to advise on suitable PPE.
- ✓ Ensure compatibility with RPE and other PPE required.
- ✓ Workers also need blast suits, protective gloves and footwear.
- ✓ Provide coveralls that do not retain dust.
- ✓ Use a contract laundry or a suitable equivalent to wash work clothing. Don't allow workers to do this at home.
- ✓ Make suitable arrangements for maintenance, storage and replacement of PPE.

Personal decontamination

- ✓ Provide warm water, mild skin cleansers, and soft paper or fabric towels for drying. Avoid abrasive cleansers.
- ✓ Provide pre-work skin creams, which will make it easier to wash dirt from the skin.
- ✓ Provide after-work creams to replenish skin oils.

Caution: 'Barrier creams' are not 'liquid gloves' and do not provide a full barrier.

Cleaning and housekeeping

- ✓ Keep the work area clean and free of combustible materials.
- ✓ Do not use brushes to dry sweep the blasting dust. Damp clean when possible.

Exposure monitoring

- ✓ You may need to assess lead exposure when blasting surfaces coated with old paint that contains lead. See sheet WLO for further information.

Health surveillance

- ✓ Provide health surveillance for asthma where there is a reasonable likelihood that asthma may occur in your workplace. See sheet G402.

Training and supervision

- ✓ Workers need specific training for abrasive blasting.
- ✓ All people involved in the selection, use, storage and maintenance (if required) of RPE require training. An appropriate training programme could cover the following areas:
 - why RPE is needed;
 - the hazards, risks and effects of exposure;
 - what RPE is being provided;
 - how RPE works;
 - why fit testing is required (if relevant);
 - how to wear and check the RPE correctly;
 - fit checking before use;
 - what maintenance is required and when;
 - where and how it should be cleaned and stored;
 - how to report/tackle any problems;
 - employee and employer responsibilities;
 - use and misuse of RPE.

- ✓ Involve managers and supervisors in health and safety training.
- ✓ Consider keeping training records.

Essential information

WL0 – *Advice for managers*

G402 – *Health surveillance for occupational asthma*

G409 – *Exposure measurement: Air sampling*

Further information

For further health and safety information for welding and allied processes, visit the HSE Welding website: www.hse.gov.uk/welding/

For further information on local exhaust ventilation (LEV): HSG258 *Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV)* www.hse.gov.uk/pubns/books/hsg258.htm

For further information on respiratory protective equipment: HSG53 *Respiratory protective equipment at work - A practical guide* www.hse.gov.uk/pubns/books/hsg53.htm

G series: General Guidance COSHH Essentials sheets:
<http://www.hse.gov.uk/pubns/guidance/gseries.htm>

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

Occupational Safety and Health Consultants Register: www.oshcr.org/

The Control of Lead at Work Regulations 2002. (Third edition). ACOP and guidance www.hse.gov.uk/pubns/books/l132.htm

For information about health and safety, visit <https://books.hse.gov.uk> or <http://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.

To report inconsistencies or inaccuracies in this guidance, email: commissioning@wlt.com

Employee checklist

- Do you know how to use your blasting helmet with airline breathing apparatus correctly?
- Do you know how to fit your RPE correctly?
- Use, maintain and store your RPE and PPE in accordance with instructions.
- 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, smoking or using the lavatory.
- Never clean your hands with solvents or concentrated cleaning products.
- Use skin creams provided as instructed.