

WL21

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.

Weld cleaning with pickling paste

Control approach special
Harm via skin or eye contact

What this sheet covers

This sheet describes good control practice when weld cleaning with pickling paste.

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

- ✓ Many pickling pastes contain nitric acid and hydrofluoric acid (HF).
- ✓ These pastes can cause very serious burns and can be very toxic by inhalation, in contact with skin and if swallowed.

Access to work area

- ✓ Allow access to authorised and appropriately trained people only.

Equipment and procedures

- ✓ Consider using alternative post-welding cleaning measures, eg mechanical or electrochemical.
- ✓ Consider using a paste with a lower acid concentration or a higher viscosity.
- ✓ Provide a good standard of general ventilation.
- ✓ Buy pastes in the right-sized containers. Don't store far more than you need and avoid decanting.
- ✓ Remove surplus paste with a damp cloth. Discard it immediately to contaminated waste.
- ✓ Avoid using pastes in confined spaces.
- ✓ Avoid paste spraying. If you must do this, seek specialist advice.
- ✓ Apply by brush rather than by roller.
- ✓ Ensure that first aid provisions are adequate. Stock calcium gluconate gel and keep it handy for HF burns.
- ✓ Wash contaminated skin with large amounts of running water.
- ✓ In the case of HF burns, apply gel to the affected area. Continue massaging this into the skin until the patient reaches hospital and gets medical attention.
- ✓ Procedures are described in the HSE publication INDG307 – see Further information.

Respiratory protective equipment (RPE)

- ✓ RPE is normally not needed when applying paste with a brush.

Personal protective equipment (PPE)

- ✓ Ask your supplier to advise on suitable PPE.
- ✓ Provide suitable chemical protective gloves, eg nitrile (and new gloves when these are damaged), eye protection, overalls and footwear.
- ✓ Make suitable arrangements for maintenance, storage and replacement of PPE.
- ✓ Use a contract laundry or suitable equivalent to wash work clothing. Don't allow workers to do this at home.

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.
- ✓ Store and dispose of hazardous waste safely.
- ✓ Deal with spills immediately – use suitable protective gloves.

Health surveillance

- ✓ Provide health surveillance for dermatitis where there is a reasonable likelihood that dermatitis may occur in your workplace. See sheet G403.

Training and supervision

- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Tell workers that paste can cause serious skin and eye damage. Instruct them how to get first aid after any skin or eye contact.
- ✓ Working in the right way and using the controls correctly is important for exposure control.
- ✓ Training could include toolbox talks on:
 - following safe working procedures;
 - how to use equipment correctly;
 - what to do if they get pickling paste on their skin or eyes.
- ✓ Consider keeping training records.
- ✓ Have a procedure to check that control measures are in place and being followed.
- ✓ Involve managers and supervisors in health and safety training. See sheet WL0.

Essential information

WL0 – *Advice for managers*

G402 – *Health surveillance for occupational contact asthma*

Further information

Hydrofluoric acid poisoning: Recommendations on first aid procedures, Leaflet INDG307 www.hse.gov.uk/pubns/indg307.pdf

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

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/

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

- ☐ Are you sure about safe work procedures?
- ☐ Do you understand the health hazards associated with your work?
- ☐ Wear your personal protective equipment (PPE).
- ☐ Discard single use gloves everytime you take them off.
- ☐ Check the room is well ventilated.
- ☐ Get first aid immediately if pickling paste comes into contact with your skin or eyes.
- ☐ Use, maintain and store your PPE in accordance with instructions.
- ☐ If you find any problems, tell your supervisor. Don't just carry on working.
- ☐ Clean up spills immediately.
- ☐ Co-operate with health surveillance.
- ☐ Wash your hands and face after using pickling pastes, also before eating, drinking, smoking, using the lavatory and after work.
- ☐ Never clean your hands with solvents or concentrated cleaning products.
- ☐ Use skin creams provided as instructed.