

# MW3

## COSHH essentials for machining with metalworking fluids



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, supervisors and 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.

# Sump cleaning: water-mix fluids

## Control approach S Harm via skin or eye contact

### What this sheet covers

This sheet describes good control practice to reduce fluid contact with the skin during sump cleaning. It does not include the use of pressure washers to clean sumps as these can create high levels of mists.

It covers the points you need to follow to reduce exposure to an adequate level. Follow all the points, or use equally effective measures.

### Hazards

- ✓ Metalworking fluids can cause skin diseases such as dermatitis.
- ✓ Prolonged or frequent contact with water (including water-based fluids) can cause dermatitis, 'wet work' is the term used to describe such tasks in the workplace.
- ✓ Metal 'fines' may abrade and irritate the skin leading to dermatitis.
- ✓ Some chemicals and contaminants in metalworking fluids can cause skin allergies.

### Access to work area

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

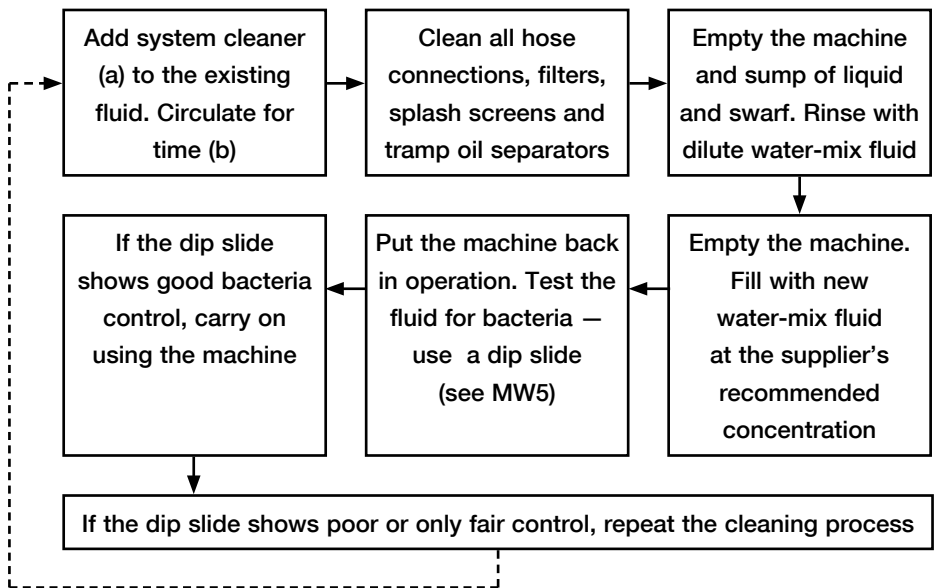
### Equipment and procedures

- ✓ Confirm that you are using the most suitable fluid. Take advice from your fluid supplier about any hazards.
- ✓ If possible prevent skin contact. If you cannot prevent skin contact can you limit it?
- ✓ Provide equipment to remove and replace sump fluids with minimum spillage. Never put clean fluid in a dirty sump.
- ✓ Provide clean facilities for washing and taking refreshment, away from all machining activities.
- ✓ Keep absorbent material to hand in case of spillages.

**Caution:** Don't use plain water for washing out. You may de-passivate metal surfaces and increase corrosion risks.

- ✓ Decide how often you need to clean your system. Discuss this with your fluid supplier.
- ✓ Prepare a permit to work for any cleaning in potentially confined spaces.
- ✓ Follow your supplier's guidelines as well as this sheet.

- ✓ Check your supplier’s recommendation for dosage levels and circulation times. Mark these in the gaps in the list below and follow the steps shown in the flow chart:



- \_\_\_ System cleaner (a) – amount to add: \_\_\_% by volume ( \_\_\_ litres).
- \_\_\_ Circulation time (b): At least \_\_\_ hours with all fluid pipes open.

**Respiratory protective equipment (RPE)**

- ✓ RPE normally not needed.

**Personal protective equipment (PPE)**

- ✓ Make suitable arrangements for maintenance, storage and replacement of PPE.
- ✓ Provide 0.4 mm nitrile gloves. These protect for up to eight hours only. These gloves are normally thin enough to provide dexterity.
- ✓ Provide thicker gloves to protect against abrasions and sharp edges.
- ✓ Workers should change and discard damaged gloves immediately. Deal with used gloves in accordance with the supplier’s recommendations.
- ✓ Provide eye protection where there is a risk of splashing.
- ✓ Provide overalls and make sure forearms are covered.
- ✓ Ensure contaminated overalls are laundered before re-use.
- ✓ Ask your supplier to advise on suitable protective equipment.

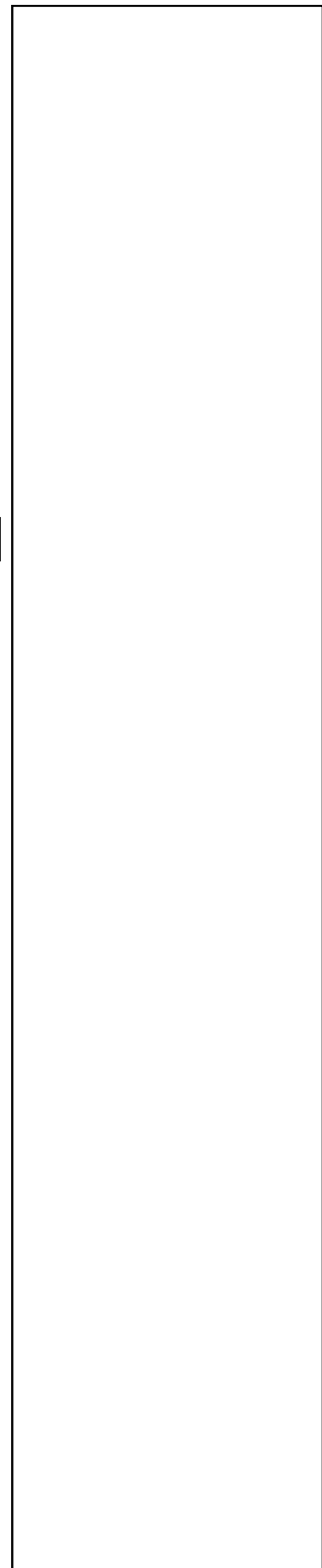
**Personal decontamination**

- ✓ 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 they do not provide a full barrier.

**Maintenance, examination and testing**

- ✓ Keep all equipment in effective and efficient working order, follow instructions in maintenance manuals.
- ✓ Monitor fluid quality and change fluids as frequently as necessary, see MW5.



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- ✓ Minimise leaks of tramp oil into the sump.
  - ✓ Check all filters regularly for blockages and slime formation.
  - ✓ If you follow the guidance in this series of sheets, systems should never become heavily contaminated with bacteria.

### **Cleaning and housekeeping**

- ✓ Clean work equipment and the work area daily. Clean other equipment and the workroom regularly – at least once a week.
- ✓ Deal with spills immediately – absorb liquid spills with granules and decontaminate (ask your product supplier or follow the safety data sheet instructions).
- ✓ Dispose of hazardous wastes safely.

### **Health surveillance**

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

### **Training and supervision**

- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Tell workers about the hazards associated with their work and how to recognise early signs of asthma and dermatitis.
- ✓ Provide workers with training on:
  - working safely with hazardous substances;
  - when and how to use controls;
  - how to check they are working;
  - what to do if something goes wrong.
- ✓ 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.
- ✓ Working in the right way and using the controls correctly is important for exposure control. Train and supervise workers.

### **Essential information**

*COSHH essentials for machining with metalworking fluids: Advice for managers* COSHH Guidance Sheet MW0 HSE 2006  
[www.hse.gov.uk/pubns/guidance/mw00.pdf](http://www.hse.gov.uk/pubns/guidance/mw00.pdf)

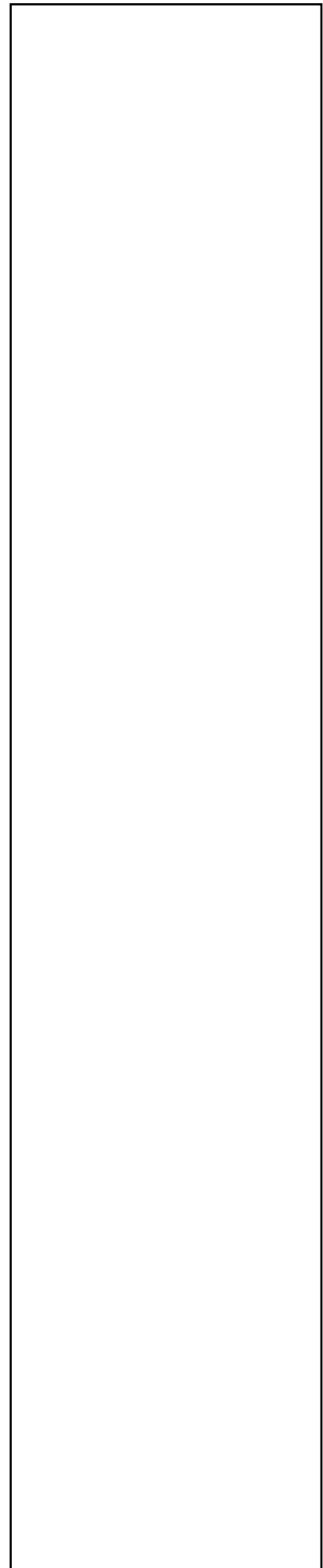
*Mist control: inhalation risks* COSHH Guidance Sheet MW1 HSE 2015  
[www.hse.gov.uk/pubns/guidance/mw01.pdf](http://www.hse.gov.uk/pubns/guidance/mw01.pdf)

*Fluid control: skin risks* COSHH Guidance Sheet MW2 HSE 2015  
[www.hse.gov.uk/pubns/guidance/mw02.pdf](http://www.hse.gov.uk/pubns/guidance/mw02.pdf)

*Sump cleaning: neat oils* COSHH Guidance Sheet MW4 HSE 2015  
[www.hse.gov.uk/pubns/guidance/mw04.pdf](http://www.hse.gov.uk/pubns/guidance/mw04.pdf)

*Managing sumps and bacterial contamination* COSHH Guidance Sheet MW5 HSE 2015 [www.hse.gov.uk/pubns/guidance/mw05.pdf](http://www.hse.gov.uk/pubns/guidance/mw05.pdf)

*New and existing engineering control systems* COSHH Guidance Sheet G406 HSE 2011 [www.hse.gov.uk/pubns/guidance/g406.pdf](http://www.hse.gov.uk/pubns/guidance/g406.pdf)



### Further information

Health Surveillance web page:  
[www.hse.gov.uk/health-surveillance/index.htm](http://www.hse.gov.uk/health-surveillance/index.htm)

*Working safely with metalworking fluids: A guide for employees* Leaflet INDG365(rev1) HSE 2013 [www.hse.gov.uk/pubns/indg365.pdf](http://www.hse.gov.uk/pubns/indg365.pdf)

*Managing risks from skin exposure at work* HSG262(Second edition) HSE Books 2015 [www.hse.gov.uk/pubns/books/hsg262.htm](http://www.hse.gov.uk/pubns/books/hsg262.htm)

*Guidance on permit-to-work systems: A guide for the petroleum, chemical and allied industries* HSG250 HSE Books 2005 [www.hse.gov.uk/pubns/books/hsg250.htm](http://www.hse.gov.uk/pubns/books/hsg250.htm)

You can find the full COSHH essentials series at [www.hse.gov.uk/coshh/essentials/index.htm](http://www.hse.gov.uk/coshh/essentials/index.htm)

Occupational Safety and Health Consultants Register [www.oshcr.org/](http://www.oshcr.org/)

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit [www.hse.gov.uk/](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.

### Employee checklist

- Are you clear about the procedures for doing the job?
- Always follow the standard operating procedure.
- Make sure you know what to do if there is a fluid spill.
- Use, maintain and store your PPE in accordance with instructions.
- 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.
- 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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