

# MR1

## COSHH essentials in motor vehicle repair



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.

### Main points

- Keep exposures as low as possible using all the controls in this sheet.
- Get safety data sheets – consider using safer substitutes.

# Mixing two-pack (2K) paint containing isocyanate

## Control approach 1 General ventilation

### What this sheet covers?

This sheet describes good control practice when mixing two-pack (2K) paint containing isocyanate. 'Isocyanate' means all isocyanate-based two-pack products. It may be described as 'prepolymer'. This still contains active isocyanate.

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

### Hazards

- ✓ Breathing in isocyanate paint mist can cause asthma.
- ✓ Control exposure to stop occupational asthma developing. Even short-term exposures can cause harm.
- ✓ Isocyanates can cause skin allergies and dermatitis by skin contact.
- ✓ There is no evidence for cancer from isocyanate in paints.

### Access to work area

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

### Equipment and procedures

- ✓ Designate a room for paint mixing. This may be the paint store.
- ✓ Connect the room ventilation with the lighting circuit.
- ✓ Provide a good standard of general ventilation. This can be natural ventilation from doors, windows etc, or controlled, where air is supplied or removed by a powered fan.
- ✓ Discharge extracted air outside the building, away from doors, windows and air inlets.
- ✓ Keep lids on cans and keep containers closed when not in use to stop vapour escaping.

**Caution:** Don't store more than 50 litres of flammable liquid indoors. Keep larger stocks in a secure, open-air storage area or in a separate fire-resisting store with spillage retention and good ventilation. Electrical equipment needs protection against fire and explosion risks.

### Respiratory protective equipment (RPE)

- ✓ RPE should not be needed if the ventilation is working properly in the mixing room.

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### Personal protective equipment (PPE)

- ✓ Provide single-use nitrile gloves.
- ✓ Discard single-use gloves every time they are taken off.
- ✓ Ask your supplier to advise on suitable protective equipment.

### Personal decontamination and skin care

- ✓ 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 used for the task in effective working order. Maintain it as advised by the supplier or installer.
- ✓ Noisy or vibrating fans can indicate a problem. Repair as soon as possible.
- ✓ Keep records of all examinations and tests for at least five years.

### Exposure Monitoring

- ✓ Biological monitoring may not be required for workers carrying out mixing of isocyanate based paints.
  - Carry out biological monitoring if workers spray as well as mix paint.
  - Carry out biological monitoring during the first few months of employment to show that airline breathing apparatus, PPE and working practices are sufficient to control isocyanate exposure. It is good practice to have urine samples taken for sprayers using isocyanate-containing paints once a year and more often if previous biological monitoring exposure results have exceeded the BMGV (see G408).

### Cleaning and housekeeping

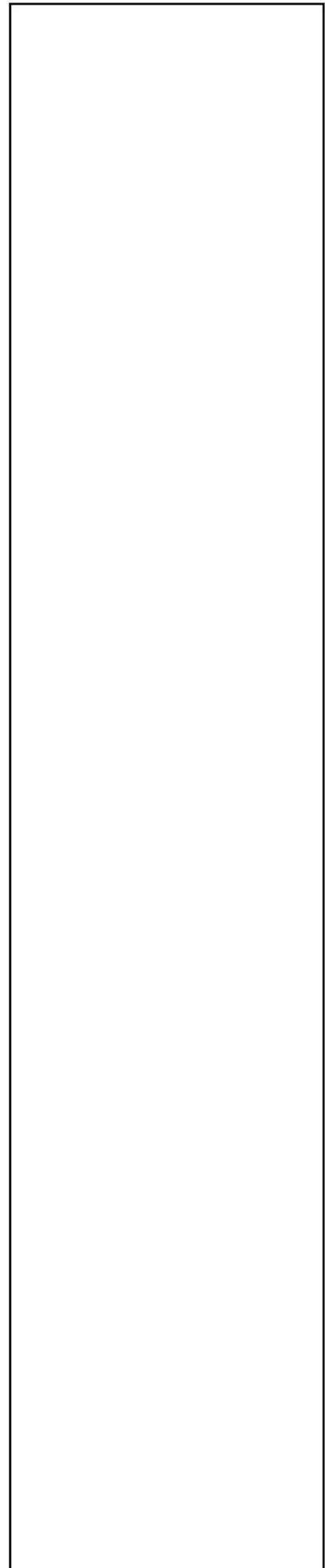
- ✓ Clean work equipment and the work area daily. Clean other equipment and the workroom regularly – at least once a week.
- ✓ Deal with spills immediately – absorb liquid spills with granules and decontaminate (ask your product supplier or follow the safety data sheet instructions).
- ✓ You may also need RPE for cleaning up larger spills of hardener or liquid containing isocyanates.
- ✓ Dispose of hazardous wastes safely.

### Health surveillance

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



- which two-pack paints and products contain isocyanates; and
  - that these can cause asthma and dermatitis.
- ✓ Involve managers and supervisors in health and safety training.

## Essential Information

*COSHH essentials in motor vehicle repair: Advice for managers* MR0  
HSE 2011 [www.hse.gov.uk/pubns/guidance/mr0.pdf](http://www.hse.gov.uk/pubns/guidance/mr0.pdf)

*Spraying two-pack (2K) products in a spray booth or room* COSHH  
Guidance Sheet MR2 HSE 2011 [www.hse.gov.uk/pubns/guidance/mr2.pdf](http://www.hse.gov.uk/pubns/guidance/mr2.pdf)

*Cleaning two-pack (2K) paint spray guns* COSHH Guidance Sheet MR3  
HSE 2011 [www.hse.gov.uk/pubns/guidance/mr3.pdf](http://www.hse.gov.uk/pubns/guidance/mr3.pdf)

*SMART spraying with two-pack (2K) products* COSHH Guidance Sheet  
MR5 HSE 2011 [www.hse.gov.uk/pubns/guidance/mr5.pdf](http://www.hse.gov.uk/pubns/guidance/mr5.pdf)

*Health surveillance for occupational asthma* COSHH Guidance Sheet G402  
HSE 2011 [www.hse.gov.uk/pubns/guidance/g402.pdf](http://www.hse.gov.uk/pubns/guidance/g402.pdf)

*Health surveillance for occupational dermatitis* COSHH Guidance Sheet  
G403 HSE 2011 [www.hse.gov.uk/pubns/guidance/g403.pdf](http://www.hse.gov.uk/pubns/guidance/g403.pdf)

*Urine sampling for isocyanate exposure measurement* COSHH Guidance  
Sheet G408 HSE 2011 [www.hse.gov.uk/pubns/guidance/g408.pdf](http://www.hse.gov.uk/pubns/guidance/g408.pdf)

## Further Information

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

- Keep unprotected people away while you are using two-pack products.
- Check the ventilation is turned on before starting work.
- Replace lids on paint and solvent containers promptly.
- Decontaminate spills immediately, then clear them up as soon as possible.
- Look for signs of leaks, wear and damage before every job.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Co-operate with health surveillance.
- Use, maintain and store your PPE in accordance with instructions.
- Discard single-use gloves every time you take them off.
- Wash your hands before eating, drinking, smoking and using the toilet.
- Never use solvents to clean your skin.
- Use skin creams provided as instructed.
- Your employer should request you to provide a urine sample to check that you are not exposed to isocyanates.

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