

MR5

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

- Spraying produces high levels of invisibly-fine isocyanate mist, the main source of exposure.
- Keep exposures as low as possible using all the controls in this sheet.
- Check that controls work using biological monitoring.

SMART spraying with two-pack (2K) products outdoors

Control approach R Respiratory protective equipment (RPE)

What this sheet covers?

This sheet describes good practice when spraying two-pack (2k) products outdoors. '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.
- ✓ Small to medium area repair technique (SMART) – typical characteristics:
 - spray with an airbrush, mini-spray gun or aerosol spray can;
 - an inlet pressure below 2 bar;
 - delivering less than 150 l/min air and less than 100 g/min paint;
 - spraying takes less than one minute and using less than 25 ml paint per coat; and
 - covering an area less than a whole panel.

Access to work area

- ✓ Allow access to authorised and appropriately trained people only.
- ✓ Keep people at least 5 metres but preferably 10 metres away, eg cordon off the area.

Equipment and procedures

- ✓ Provide a compressed air supply to airline breathing apparatus. Make sure the right amount of air is supplied, and that it is fit to breathe, eg by filtering the inlet air.

Respiratory protective equipment (RPE)

- ✓ Constant flow airline breathing apparatus is always needed.
- ✓ Use equipment with a Standard UK Assigned Protection Factor (APF) of 20 or higher, for example a constant flow airline breathing apparatus with a mask or a hood.
- ✓ Use disposable visor covers to protect the visor from spray
- ✓ Check the quality of the air supply to the airline breathing apparatus once a month.

- ✓ Visually check the compressed airlines for signs of damage before each use.
- ✓ Maintain the airline breathing apparatus at least once a month. Replace worn or damaged parts on respirators. The valves need changing frequently if substances such as paint sprays land on them.
- ✓ Keep a small stock of replaceable parts.
- ✓ Keep breathing apparatus clean and store it in a clean place.
- ✓ Never spray isocyanate-containing paints in an occupied workshop or spray without airline breathing apparatus. Even very small jobs, such as small to medium area repair technique (SMART) repairs, will create high-exposure peaks.
- ✓ Face fit testing is required for airline breathing apparatus that relies on a tight fitting face seal.

Personal protective equipment

- ✓ Provide disposable coveralls. Discard these at the end of a day's work.
- ✓ Provide clean chemical resistant gloves, eg nitrile. Single-use gloves are preferred.
- ✓ 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, and after-work creams to replace skin oils.

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

Maintenance, examination and testing

- ✓ Keep equipment, including airline breathing apparatus in effective and efficient working order.
- ✓ Keep records of all examinations and tests for at least five years.

Exposure Monitoring

- ✓ Carry out biological monitoring if workers are spraying isocyanate paints
- ✓ 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

Cleaning and housekeeping

- ✓ Deal with spills immediately absorb liquid spills with granules and decontaminate (ask your product supplier or follow the safety data sheet instructions).
- ✓ Decontaminate and 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.

Employee checklist

- Keep unprotected people away while you are using two-pack products.
- Check that your airline breathing apparatus works properly every time you put it on.
- Never remove your face-piece or lift a ventilated visor for any reason until you are well away from the work area.
- Decontaminate spills immediately, then clear them up as soon as possible.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Co-operate with health surveillance.
- If you develop any symptoms that may be related to work, inform your line manager.
- 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. The sample will not be tested for anything else.

Training and supervision

- ✓ Working in the right way and using the controls correctly is important for controlling exposure.
- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Tell your workers:
 - which two-pack paints and products contain isocyanates;
 - that these can cause asthma and dermatitis and the signs to watch out for; and
 - mist that gets breathed in is invisible under normal lighting.
- ✓ Instruct workers never to remove their airline breathing apparatus for any reason (eg lift visor to check spray quality) before mist has cleared.
- ✓ Involve managers and supervisors in health and safety training.
- ✓ Tell workers about the hazards associated with their work.

Essential Information

COSHH essentials in motor vehicle repair: Advice for managers MR0
HSE 2011 www.hse.gov.uk/pubns/guidance/mr0.pdf

Mixing two-pack (2K) paint containing isocyanate COSHH Guidance Sheet
MR1 HSE 2015 www.hse.gov.uk/pubns/guidance/mr1.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

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

Health surveillance for occupational asthma COSHH Guidance Sheet G402
HSE 2011 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

Urine sampling for isocyanate exposure measurement COSHH Guidance
Sheet G408 HSE 2011 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

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

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Published by the Health and Safety Executive 09/16