



Department
for Education

Safe storage and disposal of hazardous materials and chemicals

Departmental non-statutory guidance for school leaders, governing bodies, academy trusts and local authorities

November 2017

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1. About this departmental guidance

This non-statutory guidance provides practical advice for teachers, technicians and other members of staff involved in the delivery of practical science, including the purchase, storage and disposal of hazardous chemicals. It should be read in conjunction with advice provided by the suppliers of hazardous chemicals (known as 'Material Safety Data Sheets'), information and guidance provided by recognised professional bodies or organisations, such as CLEAPSS or the Health and Safety Executive (HSE), and considered alongside the Home Office's [Secure Your Chemicals](#) guidance.

Who is this guidance for?

This guidance is for:

- School leaders, school staff and governing bodies in all maintained schools, all academies, independent schools and pupil referral units
- Academy trusts
- Local authorities
- Further education and sixth form colleges.

Key points

This guidance is not definitive and schools and colleges should ensure that they have access to professional advice, as well as their own suitably qualified and trained staff, competent in handling hazardous substances and materials. We strongly advise that schools and colleges secure advice on these matters through membership of CLEAPSS, either through a local authority or by direct subscription. CLEAPSS is independent of any other commercial or non-commercial organisation and accordingly its advice and guidance is impartial.

Information about CLEAPSS can be found at [Welcome to CLEAPSS](#). Schools and colleges may also wish to contact the [Royal Society of Chemistry](#), the [Institute of Physics](#) or the [Association for Science Education](#), which are also able to provide information and advice in relation to the teaching and learning of practical science.

2. General Guidance

Current Legislation

The Health and Safety at Work etc. Act 1974 makes general provisions for the control and keeping of explosive, highly flammable or otherwise dangerous substances. Under the [Workplace \(Health, Safety and Welfare\) Regulations 1992](#) schools and colleges must ensure that the workplace is ventilated by a sufficient quantity of fresh or purified air. The School Premises (England) Regulations 2012 sets out that school premises and the accommodation and facilities provided therein must be maintained to a standard such that, so far as is reasonably practicable, the health, safety and welfare of pupils are ensured. Schools will find more detailed information regarding ventilation in the [associated guidance](#) to the School Premises Regulations helpful, and the DfE's [Building Bulletin 101](#) also provides information about ventilation for school buildings.

The handling and use of hazardous substances and chemicals is controlled under the [Control of Substances of Health Regulations 2002 \(COSHH\)](#). The HSE provides practical advice about the Regulations (see www.hse.gov.uk/coshh).

COSHH aims to protect workers from being exposed to hazardous substances and applies to a wide range of substances with the potential to cause harm if inhaled, ingested or absorbed through the skin. COSHH requires employers to carry out a risk assessment to establish the hazards associated with products and processes they are using, and to put appropriate controls in place to control those risks.

The Explosives Regulations 2014 make provision for small quantities of explosives to be used for demonstration or experimentation purposes, without the need for a licence from the HSE. Schools using this provision may still need to have an explosives certificate in place in relation to certain explosives. Local authority or multi-academy trust schools may have a certificate in place covering all their schools. Independent schools can obtain this from their local police force. Advice on the [authorisation and licensing](#) of explosives has been produced by the HSE.

Obtaining and Storing Chemicals

Schools and colleges should ensure that they purchase chemicals and other hazardous materials from a reputable source. Most retailers will be members of the [Chemical Business Association \(CBA\)](#) or [Chemical Industries Association \(CIA\)](#) and both associations can provide advice. CLEAPSS is also able to provide advice on the purchasing of chemicals and materials.

All reputable retailers should provide a material safety data sheet (MSDS) with any chemicals purchased. A MSDS contains important information about potential hazards, how to work safely with the chemical, and advice about use, storage and disposal. Further information can be found [here](#).

CLEAPSS also provides comprehensive advice on its *Hazcards*, which are consistent with the requirements upon which MSDSs advise. These are recognised by Ofsted and the HSE as a definitive basis for safe practice for practical work in schools.

When ordering and purchasing chemicals, schools and colleges should take care to ensure that they order the correct amount. It is important that those responsible for ordering hazardous chemicals check that stores do not already contain an adequate supply and give due consideration to rotation of existing stock in line with shelf-life dates. Some substances can decay over time, which can then present a hazard. Schools and colleges should make sure they take account of advice provided on the MSDS and *Hazcard* and undertake an appropriate risk assessment when storing and handling chemicals and other hazardous materials.

All hazardous chemicals and materials should be stored securely and systematically in a locked store and the number of persons who have access to the store should be restricted to the minimum necessary, i.e. only science staff should have access to the store. Access to any preparation area adjacent to the chemicals store or dedicated preparation room should also be restricted to science staff. Some types of chemicals should be stored separately from others, and some require a fire-resisting store.

The security of hazardous chemicals and equipment is extremely important; thieves can target science laboratories and chemical stores. Schools and colleges should carefully consider how best to prevent the theft of chemicals and valuable equipment. Advice about the arrangements, controls and physical security measures schools and colleges should consider putting in place are set out in [Secure Your Chemicals](#), and additional guidance is available from CLEAPSS.

It is essential that an up-to-date inventory is kept of all the hazardous chemicals and materials held in school and college stores. Keeping this up-to-date is an effective method of managing hazardous substances and will help reduce any health, safety, and security risk.

It is important that schools and colleges have in mind, that in the event of a fire on the premises, the fire service will need to see an up-to-date inventory of the hazardous chemicals and materials held in store, and information about what risks they pose.

Good labelling and record keeping is an essential component of safe storage and stock management. Schools and colleges need to be able to account for their chemicals and other hazardous materials at all times, and should conduct a regular audit of their hazardous chemicals with routine surveillance to ensure that they remain safe to store. The oldest stock should be easily accessible and used first. These measures will allow identification of unwanted or surplus chemicals and materials, including those that for any reason have become unsafe, and systematically arrange for their safe removal. CLEAPSS is able to provide advice on arrangements for the regular audit and removal of surplus chemicals.

Schools and colleges should have agreed procedures or protocols for the handling and use of chemicals and other hazardous materials. These should include clear guidance for staff on the protection and safety arrangements necessary, including any requirements identified in risk assessments. Further advice on the dispensing and use of hazardous chemicals and materials is available from CLEAPSS.

Advice about storage and accountability can be obtained from CLEAPSS and is provided in [Secure Your Chemicals](#).

Disposal

Schools and colleges need to be aware of the range of legislation covering the disposal of waste. The HSE provides a wide range of advice and guidance for those who need to dispose of [hazardous chemicals and substances](#).

The [Environmental Protection Act 1990](#) places an explicit duty of care on all those handling waste, including those producing it. It also places a duty of care on the disposer to ensure that waste does not harm future handlers. EU legislation is implemented by the [Hazardous Waste Regulations 2005 \(as amended\)](#). These regulations mean that hazardous wastes from schools and colleges are considered differently to domestic and household wastes, and this has implications for how they must be dealt with.

Schools and colleges should be aware that in addition to chemicals, hazardous waste may include many other items, e.g. computers, fluorescent light tubes and refrigerators. They can check with the Environment Agency (EA) on how to [classify different types of waste](#), and use the EA's [hazardous waste](#) guidance, which sets out the steps that must be followed when producing, storing and disposing of hazardous waste, to check their responsibilities. Further advice can be obtained from CLEAPSS.

Hazardous waste must be collected by a registered waste carrier. In some instances, such as transport and disposal of desensitised explosives, the carrier will need a classification or an authorisation from HSE (see [HSE Explosives - Classification for transport](#)). Schools and colleges should have in place arrangements to remove hazardous waste where this is required.

CLEAPSS provides a list of registered hazardous waste disposal companies and where schools and colleges are setting up or making changes to arrangements for disposal they are advised to contact CLEAPSS to discuss their requirements and the appropriate arrangements. Radioactive substances require specialist disposal, as will some chemicals, if they have not been stored correctly, such as 2,4-DNPH or picric acid. CLEAPSS can advise about this.

Schools and colleges should be aware that there are some 'companies' operating illegally, offering to dispose of hazardous waste at discount prices. Contacting CLEAPSS will ensure that schools and colleges are put in touch with competent, qualified and registered hazardous waste companies.

Training

As well as providing comprehensive advice about hazardous chemicals, CLEAPSS also provides a range of training courses for teachers and technicians. The number of suitably qualified staff competent in handling hazardous chemicals and materials will depend on the size of the school or college, the size of the science department and the amount of practical science required by the curriculum. It is good practice to have more than one, or indeed a number of suitably trained members of staff competent in the handling of hazardous chemicals and materials.



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