Chemicals in Schools

Schools have a moral and legal duty under the Occupational Health and Safety Act 2004, the Dangerous Goods Act 1985, and the Occupational Health and Safety (Hazardous Substances) Regulations 2007 to manage chemicals in a safe manner. For primary schools the main chemicals are generally found in the cleaner's cupboard, the maintenance shed, the art room and areas where LPG gas barbecue bottles are stored or used.

The complexity of managing chemicals increases in secondary schools. Additional areas to manage include science labs, food and material technology, pools, etc.

Chemicals that pose a risk to people's safety can be classified as being either a **Hazardous Substance** or a **Dangerous Good**.

Hazardous Substances

Hazardous substances have the potential to harm human health over a short or long term basis. They can include solids, liquids, gases, mist, dusts, aerosols, vapours and fumes. They can be identified by checking the label for code words such as Keep out of reach of children, First Aid instructions or other code words that do NOT legally have to mention the word 'hazardous'.

Dangerous Goods

Dangerous goods are substances that may be corrosive, flammable, explosive, spontaneously combustible, toxic, oxidising or water-reactive. Dangerous goods can be deadly and seriously harm people, property and the environment. They are grouped into nine classes on the basis of immediate physical or chemical effects such as fire, explosion, corrosion or poisoning. They are most easily identified by a diamond shaped symbol on the label.

Dangerous goods and hazardous substances are classified according to different criteria. The same substance can be both a hazardous substance and a dangerous good.

Many people overlook the health effects of chemicals which can build up in their bodies over years or decades from regular exposure to a substance. This is a major cause of workplace illnesses and diseases around the world.

Safety Data Sheets

The best way to reduce the risk with chemicals is to buy safer chemicals in the first instance. You can assess a particular chemical by reading the manufacturer's Safety Data Sheets (SDS) which contains detailed technical information on the chemical. Safety Data Sheets are also known traditionally as Material Safety Data Sheets (MSDS).

Paper or electronic copies of SDSs are available from the supplier or by downloading them from the relevant manufacturer's website. They are essential when training staff and students on the safety precautions for using a particular substance.

Suppliers such as manufacturers, importers and wholesalers have a legal obligation to provide you with SDSs when requested. However, retailers such as supermarkets, hardware stores and discount shops do not have a legal obligation to provide you with copies.

It is a legal requirement to have SDS for all hazardous substances and dangerous goods kept on the school premises. The SDS must be readily accessible, written in English, in a paper-based format and prepared (or reviewed) within the last five years. The SDS must be for the exact substance you are using and readily available to anybody using or exposed to the chemical.

Other information that should be on a valid SDS includes:

- Australian emergency services phone numbers
- the classification of the substance as a dangerous good and/or hazardous substance
- health and First Aid information
- properties of the substance and precautions for use
- the type of Personal Protective Equipment (PPE) to be worn when using the substance
- information on how to deal with a substance if there is a spill or an emergency.

Note: A paper-based SDS may be required during an emergency by the fire brigade, first aid or medical staff. Legally an electronic SDS must always be supported by readily accessible paper-based SDS.

If ever in doubt about a chemical, read the SDS.

Hazardous Substances and Dangerous Goods Register

Copies of SDSs must be kept in a folder in a central location, such as reception, so that it can be used during emergencies by the fire brigade, ambulance and other emergency services. The folder is called a *Hazardous Substances and Dangerous Goods Register*. It must contain SDSs for all the chemicals used at the school in a table format with some key details about them.

Note: The three columns under the heading Dangerous Goods only need to be completed if the SDS classifies the substance as a Dangerous Good.

In addition, secondary hazardous substances and dangerous goods registers need to be readily accessible in other areas of the school where chemicals are used or stored. The secondary registers only require the details of the chemicals used in that particular area. The register in the science lab would normally have different substances to those in the art room and the maintenance shed.

For secondary schools the register should also include a basic map for emergency services that shows the main storage areas: science labs, technology areas, maintenance shed, cleaner's cupboards, etc.

Managing the risks of chemicals

To manage the risks of hazardous substances and dangerous goods:

- inspect the school buildings and grounds – science lab, cleaner's cupboard, maintenance and storage sheds, art room, food areas, technology area
- and staff room – for cleaning chemicals, paints, oils, LPG gas bottles, chemicals for science experiments, glues, herbicides, etc. and they are safely stored
- reduce the varieties and volumes of chemicals used or stored at the school

- purchase lower-risk chemicals by comparing the SDS of different substances prior to making a decision (this is particularly important for substances that are used for cleaning student desks that could potentially cause allergies and other problems)
- prevent unauthorised access to areas such as cleaner's cupboards, science labs and other storage areas by staff, students and visitors
- make sure all containers and decanted substances are correctly labelled
- train staff in the correct use of chemicals and keep appropriate training records
- ensure that staff and students do not bring their own chemicals to school
- make sure that appropriate safety glasses, masks, gloves and clothing are being worn as recommended in the relevant SDS
- ensure that there are no ignition sources (pilot lights, static electricity, naked flames, welders, sparks, hot work, electrical saws, etc.) in areas where dangerous goods such as solvents, LPG, acetylene and petrol are used or stored
- inspect and service filters and exhaust ventilation fans in areas such as school laboratories
- do not dispose of chemicals in septic sewage systems, sinks, rubbish bins or stormwater drains as per the *Environment Protection Act 1970* legislation.

Summary

Chemicals in schools summary

To manage chemicals in schools in a safe manner:

- inspect the school buildings and grounds to identify all the chemicals being used
- reduce the varieties and volumes of chemicals used
- purchase safer chemicals by comparing the SDS for the different substances
- control the purchase of chemicals in the school
- ensure that people do not bring unauthorised chemicals to school
- obtain SDSs for all chemicals used in the school and make sure that they are readily accessible to anybody using a particular substance
- record each substance in the *Hazardous Substances and Dangerous Goods Register*
- prevent unauthorised access to areas such as cleaner's cupboards and other storage areas by staff, pupils and visitors
- make sure all containers and decanted substances are correctly labelled
- train staff and students in the safe use of chemicals that they may be exposed to and keep appropriate training records

- make sure that the correct safety glasses, masks, gloves and clothing is worn as per the recommendations in the relevant SDS.

Resources

- *The Code of Practice for Hazardous Substances, published by WorkSafe Victoria, provides practical guidance on hazardous substances.*
- *WorkSafe Victoria, 1999, Occupational Health and Safety Act 1985: Code of Practice for Hazardous Substances, No. 24, 1 June 2000, accessed 1 November 2012, <http://www. worksafe.vic.gov.au/forms-and-publications/forms-and-publications/hazardous-substances- code-of-practice-no.-24,-2000>.*
- *The Code of Practice for Storage and Handling of Dangerous Goods, published by WorkSafe Victoria, provides practical guidance on storing and handling of dangerous goods.*
- *WorkSafe Victoria, 2011, Occupational Health and Safety Act 1985: Code of Practice for Storage and Handling of Dangerous Goods, No. 27, 8 December 2000, accessed 1 November 2012, <http://www.worksafe.vic.gov.au/forms-and-publications/forms-and-publications/ dangerous-goods-storage-and-handling-code-of-practice-no.27,-2000>.*

Further assistance

- You can contact the Catholic Education Commission of Victoria (CECV) on 03 9267 0228
- or visit <www.cecv.catholic.edu.au> for advice, safety guidelines, checklists, online resources and other information on safety matters relevant to Catholic schools.