

Chemical Management Policy

Rationale

The Jennings Street Chemical Management Policy will identify prohibited, dangerous and hazardous chemicals and provide key information to staff around the safe registering, storage, labelling, management and use of chemicals together with the response to spills of chemicals within the school environment.

Aims

The Identification of dangerous and hazardous chemicals policy identifies the following;

Dangerous chemicals have a diamond symbol on the product label, they can be corrosive, flammable, explosive, spontaneously combustible, toxic and oxidising or water reactive.

Hazardous chemicals do not have a specific identifying symbol, so look for the word “**hazardous**” or similar wording on the label.

Examples of hazardous chemicals are: acids, caustic substances, disinfectants, pesticides and herbicides, solvents and thinners.

The following chemicals are **prohibited** from use in the school: ammonium nitrite, asbestos fibre, benzene, carbon disulphide, carbon tetrachloride, chloroform, 1,2-dichloroethane (ethylene dichloride), hydrofluoric acid, perchloric acid, picric acid, potassium cyanide, sodium cyanide and toluene (methyl benzene).

Implementation

Guidelines for the management of dangerous and hazardous chemicals

- All dangerous goods and hazardous substances stored or handled in the school must be entered into a **Chemical Register**
- The **Chemical Register** must be kept up to date and reviewed when hazards are identified, risk controls are changed or new chemicals are introduced into the workplace
- Material Safety Data Sheets (MSDS) must be obtained for each dangerous good and/or hazardous substance that is stored and handled within the school.
- Employees must read and familiarise themselves with the MSDS for the chemicals they require prior to use.
- MSDS must be no longer than 5 years old from date of issue and kept in the area where chemicals are stored and used. Where a SDS has not been provided by manufacturer or supplier, one can be obtained from GoldFX (chemWatch).
- Records of purchasing, training and consultation must be kept up to date.

Guidelines for the storage of dangerous and hazardous chemicals

- Wherever possible, dangerous goods and hazardous substances must be stored in original containers and labelled as supplied. The label must remain intact and legible.
- The date of receipt and opening of a hazardous substance should be marked on the original container to allow for monitoring of the age of the chemical and promote the use of older materials first.
- New or used food and drink containers must not be used to store chemicals.



- Containers must be checked regularly for deterioration and replaced when necessary.
- Containers with unknown substances in them should be labelled ‘**CAUTION DO NOT USE: UNKNOWN SUBSTANCE**’ and then disposed of appropriately.
- Chemical storage areas may require additional signage, such as ‘**DO NOT USE TO STORE FOOD**’.
- Incompatible chemicals within the same Dangerous Goods Class must be stored separately.
- Storage quantities should be kept to a minimum.
- Staff must not be exposed to atmospheric concentrations of a substance above the standard (if any) for that substance. Further information on exposure standards is available from Workplace Exposure Standards for Airborne Contaminants accessible at <http://hsis.safeworkaustralia.gov.au/>.
- Dangerous and/or hazardous substances contained in an enclosed system (such as a pipe or piping system or a process) must be identified and labelled accordingly. Suitable means of identification include colour coding (AS 1319, Safety Signs for the Occupational Environment) and labelling (AS 1345 Identification of the Contents of Piping, Conduits and Ducts). The DET OHS Advisory Service can be contacted on 1300 074 715 for further information.

Fire risk Dangerous Goods	Class/ Division 2.1, 3, 4.1, 4.2, 4.3, 5.1, 5.2 or C1 Combustible Liquids.
Storage	Fire risk Dangerous Goods may contribute to the risk of fire either by adding to the fuel load or by increasing the ease and rate of combustion. Fire risk Dangerous Goods must be stored at least 5 metres from any potential source of ignition or heat if not stored in specialised chemical storage cabinet.

Guidelines for preventing a Chemical Spill

- Storage containers must be regularly checked for signs of deterioration, including seals.
- Chemicals must be stored in locked cupboards or storage areas with drip trays.
- Maintain and review the MSDS to ensure the correct risk controls are in place.
- Develop and maintain Safe Work Procedures for the handling of dangerous and hazardous chemicals using the Safe Work Procedure Template.
- Verify whether a physical process can be substituted with the chemical process.
- Check whether a safer substance or safer form of the substance can be used, e.g. using a detergent instead of a chlorinated solvent for cleaning.
- A risk assessment must be conducted by the Science coordinator before any new or existing experiments can be conducted. Any potential hazards must be identified and appropriate control measures selected to reduce risk.
- Laboratory Technicians must document a risk assessment for the preparation of chemicals that are to be used in science experiments in the classroom. If the risk assessment identifies the process as a high or extreme risk then a Safe Work Procedure must be completed.

- Any other staff members who are required to prepare mixtures containing dangerous or hazardous chemicals as part of their role must conduct a risk assessment in consultation with the OHS representative.

Guidelines for managing a Chemical Spill

- A chemical Spill Response Kit or containment equipment must be available at all times.
- Appropriate Personal Protective Equipment (PPE) must be provided and worn.
- Train the relevant employees in spill procedures, including location and proper use of spill kit, appropriate PPE, turning off equipment and energy sources (air-conditioning, gas, electricity).

Spill Response Kit Contents	Example
Universal Spill Absorbent	1:1:1 mixture of Flor-Dri (or unscented kitty litter), sodium bicarbonate and sand. This all-purpose absorbent is good for most chemical spills including solvents, bases and acids (except hydrofluoric acid)
Absorbent pads and rolls	‘HazMat’ absorbent pads
Acid Spill Neutraliser	Sodium carbonate, sodium bicarbonate, or calcium carbonate
Alkali (base) Neutraliser	Sodium bisulphate, boric acid or oxalic acid
Solvents/Organic Liquid Absorbent	Vermiculite, clay or sand
Personal Protective Equipment	Disposable neoprene or nitrile gloves, safety goggles, laboratory coat or corrosive apron, enclosed footwear or shoe covers, dust mask or respirator (staff must be fit tested before using a respirator)
Clean-up material	Brooms, plastic dustpan and square mouth plastic shovel to sweep up absorbent materials. Paper towels for minor spills. Plastic tongs, scoops and an appropriately labelled wheelie bin to hold spill and absorbent residues prior to disposal. Heavy duty plastic bags for wrapping contaminated PPE.

Spill Response Checklist:

<p>Step 1 : Assess safety and stop the spill</p>	<p>Limit access to the immediate area where the spill has occurred and ensure that only staff with the appropriate training and equipment deal with the spill (providing it is safe to do so). This may involve righting an overturned container or placing the source (e.g. cracked container) in a larger container to contain the spill.</p>
<p>Step 2: Review safety precautions and risk controls</p>	<p>Review the relevant MSDS for specific instructions on how to deal with the chemical spill as well as first aid information.</p>
<p>Step 3: Clean up the spill</p>	<p>Wearing the appropriate PPE promptly cover the spill with absorbent material, taking care not to spread the spill further. Collect the absorbent material/waste, using a dust pan or spade, and place into the labelled wheelie bin or a puncture proof chemical resistant bag. The waste disposal method will depend on the amount and the type of chemical that was spilt and disposal should be in accordance with local and state regulations.</p>
<p>Step 4: Notify the appropriate authority</p>	<p>The Staff Member ultimately responsible should be notified immediately and the incident logged on eduSafe.</p> <p>If there is a hazard to health or property, call 000.</p> <p>The escape, spillage or leakage of any substance including dangerous goods must be reported to WorkSafe as per the DET Incident Notification to WorkSafe Flowchart and to the Victorian Environment Protection Authority on 1300 372 842.</p>
<p>Step 5: Restock the Spill Response Kit</p>	<p>Restock the items used in the clean-up, so the spill kit is ready for future use.</p>

Process for neutralising Chemical Spills:

Chemical type	Process
Acid	<p>Contain the liquid.</p> <p>Sprinkle absorbent powder over the spill slowly, starting from the outside.</p> <p>Acid is neutralised when the powder stops bubbling. Avoid breathing in the fine powder and the gas (carbon dioxide) released by the neutralising process.</p>
Alkali	<p>Ensure that there is adequate ventilation.</p> <p>Eliminate all sources of ignition as neutralising alkali can produce heat. This includes removing all combustible materials that are close to the spill.</p> <p>Right any overturned containers or stop leak at the source of the spill (only if safe to do so).</p> <p>Avoid handling any fluid even when wearing protective gloves.</p> <p>Liberally apply the Alkali Neutraliser around the perimeter of the spill to limit the extent of spreading and continue sprinkling it towards the centre. This should be done until the entire spill is covered. Stand clear. Neutralisation takes up to 5 minutes from when the spill is completely covered and splattering of reaction products may occur during the process. The heat and strength of the reaction depends on the type and concentration of alkali spilled. Alkali is neutralised when the powder stops bubbling. Make sure the neutralised mixture has cooled before carefully sweeping it up using plastic dustpan or shovel. Do not use metal cleaning equipment.</p>
Solids	<p>Wear a dust mask.</p> <p>Sweep solid material into a plastic dustpan and place in a sealed container. Care should be taken to avoid creating dust.</p> <p>Wipe the area down with a wet paper towel and dispose of it in a strong polyethylene bag. Seal the bag and ensure it is disposed of appropriately.</p>

<p>Flammable Liquids</p>	<p>Turn off all electrical and heat generating equipment.</p> <p>Starting at the edge, spread absorbent pads over the spill, allowing them to completely soak up the liquid.</p> <p>Pick up the contaminated pads with tongs or a plastic scoop and minimise direct contact.</p> <p>Place the waste into the chemical resistant wheelie bin.</p> <p>Wipe the area down with paper towel and copious amounts of water.</p> <p>Place the paper towel in the chemical resistant wheelie bin and seal to make it airtight.</p> <p>Never use a wet vacuum cleaner on flammable liquids.</p>
<p>Liquids (other than flammable)</p>	<p>Starting at the edge, spread absorbent pads over the entire spill to contain it.</p> <p>Pick up the contaminated pads with tongs or a plastic scoop and place the waste into the chemical resistant wheelie bin.</p> <p>If the chemical is water soluble, wipe the area down with paper towel, then clean with a wet mop and detergent.</p> <p>Place the paper towel in the chemical resistant wheelie bin.</p>

EVALUATION

This policy will be reviewed annually or more often if necessary due to changes in regulations or circumstances.

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