



## Safe Method of Use 2 Workshop and Arts Studios

**Purpose:** This Safe Method of Use applies to **principal investigators (PIs), sector managers, designated laboratory person (DLPs)**, technical staff and students who use workshops within the University of Auckland.

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**This Safe Method of Use has been specifically formulated for workshops and arts studios with a limited number of small quantities hazardous compounds to enable these workshops or arts studios claim exempt laboratory status under s33 of the HSNO Act.**

**This Safe Method of Use is only applicable in workshops and arts studios involved in fabrication of materials for teaching and research to qualify.**

**This document refers to the 'Workshop Manager' who is the equivalent to the 'Laboratory Manager' for the purposes of the HSNO Exempt Laboratory Code of Practice (HSNO CoP 1/1).**

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**Note: the word 'must' connotes a mandatory requirement and the word 'should' connotes a recommendation.**

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### **A. Requirements for the Management of Chemicals in Workshops and Arts Studios**

1. Every Workshop or Art Studio where chemicals are present or used must have a Workshop Manager.
2. The Workshop Manager in conjunction with Departmental Management **must**:
  - a. identify the major hazards associated with all chemicals or groups of compounds (ie inks, enamel paints, spray thinners) within the workshop.
  - b. consult MSDS databases (such as ChemGold II) in order to identify these major hazards
  - c. identify what protective measures are required for storage, use and disposal for each substance. In particular, personal protective equipment requirements for each substance or group of substances must be identified. Particular attention shall be paid to identify instances where eye protection must be available and used and to identify the resistance of glove materials.

- d. Identify areas where spill kits are required.
- e. All of the above must be in writing and reviewed at least annually.

Note: This is an existing requirement under Health and Safety in Employment Act

3. The Workshop/Studio Manager may draft written local rules for handling these compounds to ensure that the requirements of this Safe Method of Use are met. Local rules must be available to all workshop and studio personnel.
4. In the case where students or inexperienced staff are present, the Workshop/Studio Manager and all persons handling any compound that is highly toxic or corrosive **must** ensure any compound is stored in a locked cabinet when not in use. Access to these compounds is only available when a Workshop/Studio Manager is readily available on site (see section on Work After hours).
5. In the case where experienced workshop personnel are the only persons with access to corrosive/highly toxic compounds, the Workshop Manager may dispense with the requirement to have these compounds in a locked cabinet provided that workshop staff are told of the hazards, instructed on correct procedures (or have local rules) and users are provided with appropriate PPE.
6. Decanting of flammable solvents such as spray paint thinners must be undertaken in normal working hours when the Workshop/Studio Manager is present.

## **B. Requirements for the Use and Storage of Chemicals**

1. MSDS sheets **must** be consulted prior to handling any chemical whose properties the user is not familiar with. Note that the Workshop Manager may choose to make MSDS sheets available or may choose to identify the hazards within each set of written local rules.
2. Flammable solvents **must** be kept in cabinets (if volumes are greater than 5 litres then these cabinets must be flameproof). No more than 100 litres of flammable solvent can be stored in each cabinet.
3. Flammable solvents and combustible organics **must** not be stored with oxidisers (hydrogen peroxide, sodium nitrate, hypochlorite) or any oxidising acid (conc nitric or perchloric acids).
4. Highly toxic or corrosive compounds **must** be stored in a locked cabinet and access to this cabinet is only available when a Workshop Manager is readily available on site (see Section F - Work Alone or After hours)

5. Bulk flammable solvents in the laboratory **must** be kept to a minimum – Dangerous Goods stores should be used for storage of bulk solvent (such as containers greater than 20 litres).
6. Flammable liquids **must** not to be stored or used near sources of ignition such as heaters.
7. Waste flammable solvents **must** be stored inside flameproof cabinets, closed cupboard or Dangerous Goods Stores.
8. Where liquids are stored inside cabinets there **should** be some form of secondary containment – flameproof cabinets have sumps which provide secondary containment.
9. Waste rags that have come in contact with turpentine, linseed oil or any other flammable paint thinner **must** be placed in appropriate metal container at the end of task.
10. Large glass containers of acid or solvent (i.e. Winchesters) **should** be transported in a carrier.
11. Ducted fume hoods or air extraction units **should** be ducted to the outside of a building. Recirculating fume hoods are **not** an ideal method of local air extraction and have severe limitations. Therefore, all recirculating fume hoods or air extraction equipment **must** be clearly labelled with limitations of use.
12. All gas cylinders **must** be secured.
13. Cylinders of flammable gases **must** be used with a flashback arrestor when attached to a source of ignition (ie welding apparatus)
14. Cylinders of flammable, toxic and oxidising gases **must** have cylinder key attached to cylinder when in use.
15. Fume hoods or extraction hoods **must** be used for handling large quantities (greater than 1 litre) of Class 3.1, Class 4, highly toxic compounds and concentrated acids. If fume hoods are not available
16. Highly toxic chemicals (Oral LD50 < 5 mg/kg) **must** be stored in a secure area or locked cupboard/refrigerator if the laboratory is not secure. A register should be kept of these toxic compounds (see SMOU for 6.1 compounds for more detail)

### C. Particular Storage Requirements

1. Water sensitive compounds must be stored away from sources of water
2. Acids must be stored away from alkalis.

3. Oxidisers **must** be stored separately from flammable or combustible organic compounds and **must** never be stored with flammable solvents

#### **D. Compounds with Chronic Toxicity**

1. Care **must** be taken to reduce exposure to any chemical (through the use of fume hoods and gloves). The adverse effects of some compounds are only evident after repeated low-level exposures (e.g. sensitising agents).
2. Particular care should be taken when MSDS sheets indicate a compound is teratogenic, mutagenic or sensitising agent.
3. Fume hoods or some form of air extraction **must** be provided when handling sensitising agents such as formaldehyde as well as many common solvents( xylene) to reduce inhalation hazard not only to the user but also to other laboratory personnel. Gloves of appropriate resistance must also be worn when handling these compounds.

#### **E. Disposal of Chemicals**

With few exceptions all chemicals must be disposed by a licensed chemical waste contractor (see Chemical Safety Website for more details).

#### **F. Work Alone or After-hours**

1. Workshop personnel working alone or after-hours must ensure they obtain prior permission from Workshop/Studio Manager.
2. Laboratory personnel working alone or after-hours must familiarise themselves with emergency procedures and have easy access to emergency telephone numbers.
3. It is strongly recommended that any person working after-hours notifies Unisafe when they enter the building and expected time of leaving.

#### **G. Requirements for an s33 Workshop or Arts Studios**

##### **1. Laboratory Management**

1. Every workshop or arts studio with hazardous chemicals must have a Workshop Manager.
2. Nominate 'Persons in Charge' of the Workshop of Studio in the absence of the Laboratory Manager. Note that absence is when the Manager is not readily available (ie off site).
3. There can only be one person in charge of the Workshop or Studio at any one time. Therefore a hierarchy must be established.
4. All of the above must be in writing and all workshop and studio personnel must be aware of who is in charge of the workshop or studio at any given time.
5. It is suggested that a list giving name of the Workshop/Studio Manager and Persons in Charge in order of hierarchy is posted in a prominent

place in the workshop or studio. Alternatively, the information can be put on a readily available website.

6. An inventory of all containers of laboratory chemicals will have to be established giving identity of chemical and size of container.
7. Workshops or art studios with no significant chemical hazard may claim exemption from the requirement to follow this Safe Method of Use. This exemption must be in writing, outlining the lack of significant chemical hazard and signed by the Head of Department. The status of such workshops or studios must be reviewed annually

## **2. Requirements of the Workshop/Studio Manager**

The Laboratory Manager or “Person in Charge” must:

1. Ensure that requirements of Section A of this Safe Method of Use are carried out.
2. Make themselves available to Emergency Services in the event of laboratory evacuation and must ensure any laboratory staff who can provide information to Emergency Services are also available.
3. Make any Local Rule (outlined in Section A above) readily available.
4. Ensure workshop/studio personnel know location of spill kits and protective equipment and how to operate this equipment.
5. Ensure workshop/studio personnel know which gloves are appropriate for the chemical they are using. Note that this information is available on the Chemical Safety Website
6. Ensure all workshop/studio personnel have access to a 24 hours emergency number.
7. Check (or arrange to have checked) all containers of chemicals to ensure they are not leaking, properly labelled. Particular attention should be paid to labels on containers of corrosive compounds.
8. Check to ensure chemicals are properly segregated.
9. Ensure there is adequate shelf-space assigned for chemical storage.

Note:

Labelling means that primary containers have the following information:

- Identity of compound
- Its concentration (if applicable)
- Warning label (a UN pictogram or written warnings on the label will suffice)

And all working containers must have the following information:

- Identity of compound
- Its concentration (if applicable)

Segregation means that acids and bases are not put together, Class 3 solvents and Class 4 reactive compounds or Class 5.1 oxidising compounds are not together.

Segregation can be achieved by distance or in some cases by enclosing small bottles of incompatible chemical in a plastic container.

## **3. Requirements of the Workshop/Studio Personnel**

All Workshop/Studio personnel (including students) must:

1. Use protective equipment as directed by the Local Rules
2. Comply with the requirements of Local Rules.
3. Make themselves available to the Workshop/Studio Manager and Emergency Services if they are able to provide information relevant to the emergency.
4. Ensure (in writing) that the Workshop/Studio Manager is aware of any acquisition of chemical for which there is no Local Rule.
5. Ensure laboratory is locked when either Workshop/Studio Manager or Person-in-Charge is absent and hazardous chemicals are readily available.
6. Destroy any warning labels on packaging before discarding the packaging.
7. Report any leaking container or malfunctioning equipment to the Workshop/Studio Manager.
8. Know the location of spill kits and protective equipment.
9. Know how to deal with spill of any chemical in the laboratory.

#### **H. Reporting Accidents and Incidents**

- All accidents and incidents ***must*** be reported to Workshop/Studio Manager
- All accidents and incidents ***must*** be reported to University Health and Safety Office **on the prescribed University Accident/Incident form**
- Accidents involving splashes to the eye may require notification to OSH. These accidents ***must*** be reported as soon as possible to the University Health and Safety Office.