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| C:\Users\susanb\AppData\Local\Microsoft\Windows\Temporary Internet FilesContent.Word\PRIMARY_A_Vertical_Housed_RGB.PNG | Health & Safety guide to chemical risk hierarchy of control |

| This guide provides help in selecting appropriate risk controls when undertaking activities that include the use of chemicals. Use this guide in conjunction with the [Chemical Risk Assessment Form](https://safety.unimelb.edu.au/__data/assets/word_doc/0006/4592166/Chemical-risk-assessment-form-1.docx) and the [*Health & Safety: Chemical requirements*](https://safety.unimelb.edu.au/__data/assets/word_doc/0011/4592153/health-and-safety-chemical-requirements.docx)*.* For more information, refer to <https://safety.unimelb.edu.au/safety-topics/management-systems/implement> or contact your local [Health and Safety Business Partner](https://safety.unimelb.edu.au/health-and-safety-contacts). |
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| HIERARCHY OF CONTROL | EXPLANATION |
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| Elimination:  Eliminate the use of the chemical | Use a physical process instead of a chemical process. Examples include:  use ultrasound to clean equipment instead of a process using cleaning chemicals  use clips/bolts or nails instead of adhesive. |
| Substitution:  Use a safer chemical or a safer form of the chemical | Examples include:  Safer chemical  use detergent instead of chlorinated solvent for cleaning  use water-based chemicals instead of solvent-based  use chemicals where compatible  Safer form or process  paint with a brush instead of spraying  purchase a substance in a safer form |
| Isolation:  Separate people or property from the chemical by distance or barriers | Examples include:  use closed systems  isolate the process to one room with restricted access or use appropriate barriers/screens to separate substances  distance workers from substances/processes through the use of remote controls  distance property, incompatible chemicals and ignition sources (e.g. flames, sparks) from goods |
| Engineering:  Adopt physical controls (such as plant/equipment) that eliminate or reduce the generation of chemicals; suppress or contain chemicals; or limit the area of contamination in the event of spills and leaks. | Examples include:  use fully or partially enclosed ventilation booths  fully or partially enclose the process with exhaust extraction  use local exhaust or natural ventilation systems (e.g. air ducts, open doors/windows)  design buildings that are: compatible with the intended goods; made of non-combustible construction as far as is practicable; designed to reduce contamination  use bunding to contain spillage  install drains, tanks or sumps to cope with spilled material  install automatic fire protection and chemical suppression systems |
| Administration:  Incorporate safe work practices including good housekeeping. | Examples include:  reduce the amount of property or the number of employees exposed  reduce the duration and/or frequency of exposure e.g. through job rotation  reduce the amount of goods/products stored and used  ensure safe interim storage of wastes/products (e.g. labeled properly in suitable containers stored away from people, the environment, incompatible chemicals, ignition sources etc)  vacuum or wet sweep to suppress dust being generated  cover containers and make sure lids are attached  clean up spills immediately (includes provision of suitable aids, equipment and isolate floor and storm water drains)  ensure no eating, drinking or smoking in areas where substances are used  provide suitable washing facilities  provide First Aid facilities  instruct employees on how to use substances safely |
| Personal Protective Equipment (PPE):  Provide protective clothing and equipment for employees, supervisors and visitors. NB: | PPE must be compatible with chemical(s) being used/stored and where applicable meet the relevant Australian Standard. Example include:  overalls, aprons, gowns, chemical resistant suits  footwear (enclosed shoes, safety boots)  gloves  chemical resistant glasses (safety glasses)  face shields/masks, respirators . full/partial  head protection |