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| **SAFE OPERATING PROCEDURE****[NAME OF CHEMICAL ACTIVITY]** |
| **SOP No:**  | **Version No:** | **Review date:** |
| **Chemical Work Process** | **[ ]**  | **Hazardous Chemical** | **[ ]**  | **Hazardous Chemical Class** | **[ ]**  |
| **[General advisory statement]** |
| **DESCRIPTION OF WORK PROCESS, CHEMICAL OR HAZARD CLASS:**  |
| **POTENTIAL HAZARDS:** |  |  |  |
| **PERSONAL PROTECTIVE EQUIPMENT** |
|  | Eye protection as identified in SDS must be worn at all times |  | Appropriate footwear with substantial uppers must be worn |  | Protective gloves as identified in Safety Data Sheet |
|  | Protective clothing must be worn |  | Protective clothing must be worn |  | Protective clothing must be worn  |
|  | Respiratory protection as identified in SDS must be worn |  | Maintain personal hygiene throughout work processes |  | Face shield must be worn |
|  | Ear protection must be worn |  | Hearing and eye protection must be worn |  | Mandatory requirements are specified and must be followed. Report any accidents. |
|  | Store in a secure location/ keep locked up |  | Keep aisle and work area clean |  | All cylinders must be secured with a chain |
|  | A welding mask is required for this process |  | Switch power off after use |  | Use machinery guards  |
| **PRE-OPERATIONAL SAFETY CHECKS/ SPECIAL HANDLING AND STORAGE REQUIREMENTS** |
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| **OPERATIONAL SAFETY CHECKS (Control measures in place)** |
| **Ensure ALL hazards are controlled at all times through good work practice** |
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| **STEP BY STEP WORK PROCEDURE** |
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| **WASTE DISPOSAL:**  |
| **EMEREGENCY RESPONSE- First aid:**  |
|  | **Emergency safety equipment**: Click here for 'Emergency - FIRST AID - large' sign options.Click here for 'Emergency - EMERGENCY EYE WASH' sign options.Click here for 'Emergency - EMERGENCY SHOWER - large' sign options.SPILL KITifire ext |
| **Spill kit and spill response:**  |
| **Clean up/ decontamination:**  |
| **Fire control:**  |
| **Person(s) completing the SOP:**  | **Role/Position(s):** |

Instructions for developing a SAFETY OPERATING PROCEDURE (chemicals)

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| A **safety operating procedure** (SOP) is a written procedure explaining how to safely work with chemicals. A SOP helps to ensure a safe work environment by documenting the key risks associated with an activity and how the risks can be controlled. |
| **There are three ways that you can use this SOP template for your activity:**  |
| 1. For a **Chemical Work** **Process:** (spraying, dilution, mixing, storage, distillation etc.)
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| 1. For a **Hazardous Chemical**: (e.g. ethanol, pool chlorine, hydrochloric acid etc.)
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| 1. For a **Hazardous Chemical Class**: (a group of compatible flammables, corrosives, oxidizers etc.)
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| A SOP can link your safety operating procedure to a companion CHEMICAL RISK ASSESSMENT to show all your risk mitigation processes.  |

**Filling in the SOP template**

**Chemical activity:** Modify the title box at the top of your SOP so that it clearly identifies the type of activity you are undertaking. Fill in the SOP number (a number that has meaning for your workplace), version number and review date to allow for effective tracking, reviewing and archiving of your documents.

**Activity type:** identify the type of activity the SOP is being used for by checking the box (double click on the box and select “checked” in the dialogue box) for either a:

* **Chemical Work Process** – Briefly describe the process which involves hazardous chemicals. List all chemicals used in the process.
* **Hazardous Chemical** – List the hazardous chemical for which the SOP is being developed. Include the CAS or UN number (this helps with accurate chemical identification) and product name used for the chemical.
* **Hazardous Chemical Class** - Describe the hazards associated with a particular group of similar chemicals and list the chemicals used in the work space. List all chemicals used in the process.

Complete a **general advisory statement** in the green box that identifies the main hazards associated with the activity and describes the safest way to undertake the activity. For example, an advisory statement for preparing a dilution of acid could be written as *“When diluting liquid acids for use as laboratory agents, special precautions must be taken as concentrated acids are corrosive and cause serious burns”.*

**Description of work process, chemical or hazard class:** describe the process used in the activity. You may find it helpful to outline the process in a step-by-step list.

* For specific chemicals, include **concentrations** and the **volume** required.
* Describe the approximate **frequency and duration** of use, and **location** of use.
* Insert a copy of your specific procedures for working with this particular chemical work process, hazardous chemical or hazard class if they are listed elsewhere (e.g. on the chemical label, in a reference manual).

**Potential Hazards:** List the potential hazards for each chemical work process, hazardous chemical, or hazardous class that you have identified.

* Include physical and health hazards such as fire, explosion, exposure hazards (burns to the skin, toxic fume generation and absorption through the skin).
* Refer to the chemical SDS or the chemical label, instruction manuals and other reference material.
* Be sure to include any hazards that may be associated with the work environment and equipment used to undertake the task.

**Personal Protective Equipment (PPE):** Eye, skin and body protection is important to protect against chemical exposure. You can use the chemical’s safety data sheet, label and/or manufacturer’s instructions to identify the required level of PPE and hygiene practices needed for your activity.

A selection of PPE pictograms and directives is provided in a table for your use. It is by no means comprehensive. Relevant additional information should be sought from other sources if required. Simply delete or add any protective equipment pictograms and modify any written descriptions listed in the safety data sheet or on the label that may be required to undertake the activity safely.

**Pre-operational safety checks/ special handling and storage requirements:** Provide details on any actions that need to be implemented before starting the activity. These may include, but are not limited to:

* specified SDS requirements
* setting out equipment required to safely complete the task
* checking for adjacent hazards in the workplace
* ensuring personnel are familiar with safety procedures
* compliance (e.g. ACDC compliance for herbicides)

List any handling and storage requirements for the hazardous chemicals involved in the SOP, including:

* specific handling instructions
* storage areas
* storage according to compatibility and policies regarding access to chemicals
* special procedures such as dating chemicals upon receipt, and expiry dates should be listed
* Also, indicate the location of other pertinent safety information, i.e. SDS, risk assessments, equipment manuals, chemical references etc.

**Operational safety checks (controls in place):** List any safety checks or control measures that need to be used during the work process (e.g., replace lids on chemicals immediately after use, clean up spills immediately, change gloves if chemical contact occurs). Describe engineering controls that will be used to prevent or reduce exposure to hazardous chemicals for the chemical work process, hazardous chemical or hazard chemical class. This includes ventilation devices such as fume hoods, safety screens etc.

**Step by step procedure:** List the steps (i.e. instructions) that will be followed to complete the activity.

**Waste disposal:** List which materials or substances will require disposal as hazardous waste and indicate how they are to be disposed of.

**Emergency response:**

* Detail specific **first aid** responses (eyes, skin, inhalation, ingestion) from SDS and identify the location of first aid kits and trained first aid personnel.
* List the location of appropriate **emergency equipment** (spill kits, showers, eye washes and fire equipment). Any special requirements for personnel exposure should also be identified in this section. Identify the location of emergency response phone numbers.
* Detail the nearest **spill kit** location and describe any specific requirements (e.g. neutralising agents, special absorbents or disposal methods). Refer to any **spill response** and emergency guidelines in use in the workplace. Indicate how spills or accidental releases will be handled and by whom.
* Detail any **clean-up/decontamination** actions. If items such as glove boxes, equipment, work surfaces and controlled areas have been contaminated by hazardous chemicals, remove chemical contaminants with appropriate solvents or cleaning solutions.
* List the **fire/explosion responses** for the chemical as described in the SDS.

**Person(s) completing the SOP/signature(s):** The author(s) of the SOP print their name(s) and sign the document. The SOP should be reviewed annually or sooner if an incident occurs or changes are made.

Save the SOP with other electronic chemical risk management materials or print and use with other safety information in your work area.

**Your Safe operating procedure can be used as a ‘work procedure’ or as a training tool.**