

SOP Template: Safe Handling and Storage of Hazardous Materials

This SOP provides comprehensive guidelines for the **safe handling and storage of hazardous materials** to prevent accidents, injuries, and environmental damage. It includes procedures for identifying hazardous substances, proper labeling and documentation, use of personal protective equipment (PPE), safe transportation, storage requirements to avoid chemical reactions, spill containment and cleanup protocols, and emergency response actions. Adhering to these practices ensures the safety of employees, protects property, and complies with regulatory standards.

1. Purpose

To establish standardized procedures for the safe handling, storage, and disposal of hazardous materials in compliance with all applicable regulations and to reduce risks to personnel, property, and the environment.

2. Scope

This SOP applies to all employees, contractors, and visitors involved in the handling, transportation, storage, and disposal of hazardous materials on site.

3. Responsibilities

- **Supervisors:** Ensure staff are trained and procedures are followed.
- **Employees:** Adhere to all safety protocols and report hazards.
- **Safety Officers:** Conduct inspections and maintain documentation.

4. Identification of Hazardous Materials

1. Review Safety Data Sheets (SDS) for all chemicals.
2. Maintain an up-to-date inventory of hazardous substances.
3. Clearly identify and segregate hazardous materials.

5. Labeling and Documentation

- Label all containers with contents, hazard category, and handling instructions.
- Ensure documentation is current and accessible to relevant personnel.

6. Use of Personal Protective Equipment (PPE)

- Determine PPE requirements from SDS and risk assessments.
- Ensure employees wear PPE such as gloves, goggles, and lab coats as specified.
- Regularly inspect and replace worn or damaged PPE.

7. Safe Handling and Transportation

- Use appropriate containers and equipment for transport.
- Avoid mixing incompatible chemicals or overfilling containers.
- Transport materials using secondary containment if needed.

8. Storage Requirements

Hazard Class	Storage Requirements
Flammable Liquids	Store in flammable cabinets away from ignition sources; segregate from oxidizers.
Corrosives	Store in corrosion-resistant containers; separate acids from bases.

Toxics	Store in locked, ventilated cupboards; limit access to trained personnel.
Compressed Gases	Secure cylinders upright and away from heat sources.

9. Spill Containment and Cleanup

- Evacuate area if spill poses immediate risk.
- Use appropriate spill kits and PPE for cleanup.
- Dispose of waste materials in accordance with regulations.
- Report spills promptly to supervisors and safety personnel.

10. Emergency Response

1. Follow site-specific emergency procedures.
2. Contact emergency services if needed.
3. Provide first aid and secure area until help arrives.
4. Document incident and participate in investigations as required.

11. Training

- All personnel must complete hazardous materials training before handling substances.
- Refresher training shall be conducted annually or as needed.

12. References

- Safety Data Sheets (SDS) for each hazardous material
- OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Local, state, and federal regulations