STANDARD OPERATING PROCEDURE

Hazardous Chemical Handling SOP

Document no.	SOP-SAF-006
Revision	1.0
Owner	Safety Officer
Effective date	September 15, 2026
Review cycle	Every 12 months

1. Purpose

To prevent chemical exposure, fire and spills by requiring employees to follow the safety data sheet and label instructions for every hazardous chemical they use, store or dispose of.

2. Scope

Applies to all hazardous chemicals used, stored or disposed of on company premises, including cleaning agents, solvents and process chemicals.

Definitions

Safety data sheet (SDS)	The document supplied by a chemical manufacturer describing its hazards, safe handling, storage, PPE and emergency response information.
Incompatible chemicals	Chemicals that react dangerously if mixed or stored together, such as producing heat, gas or fire.
Spill kit	A kit of absorbent material, PPE and tools kept near chemical storage or use areas for containing and cleaning up a spill.

3. Responsibilities

Employee	Reads the SDS before first use, wears specified PPE, and reports spills, damaged containers or exposure immediately.
Supervisor	Confirms employees are trained on chemicals they use and enforces storage and labeling rules in their area.
Safety Officer	Maintains the SDS register, approves new chemicals for use, and leads spill response above the local team's capability.
Storekeeper	Manages chemical storage segregation, inventory and disposal scheduling.

RACI matrix

Activity	Employee	Supervisor	Safety Officer	Storekeeper
Review the SDS before first use	R/A	C	C	I
Store chemicals per compatibility rules	R	A	C	R
Respond to a chemical spill	R	A	R	I
Maintain the SDS register	I	I	R/A	C

Activity	Employee	Supervisor	Safety Officer	Storekeeper
Dispose of chemical waste	R	C	A	R

R = Responsible, A = Accountable, C = Consulted, I = Informed

4. Materials and PPE

Materials, tools and systems

- Safety data sheet register, physical or electronic
- Labeled chemical containers
- Spill kit with absorbent material
- Eyewash station or safety shower near use areas
- Chemical inventory log
- Segregated storage cabinets by compatibility group

Personal protective equipment

- Chemical-resistant gloves
- Safety glasses or goggles
- Apron or chemical-resistant clothing
- Respiratory protection where specified on the SDS

5. Procedure

Step	Task	Owner	Done
5.1	**Review the SDS before first use** Before using a chemical for the first time, read its safety data sheet for hazards, required PPE, handling precautions and first aid measures. **Checkpoint:** The SDS for a chemical is read and understood before that chemical is used for the first time by an employee.	Employee	☐
5.2	**Verify container labeling** Check that the chemical container has a legible label showing its identity and hazard information before use, and never use an unlabeled container. **Warning:** Never use, transfer into, or store a chemical in an unlabeled container.	Employee	☐
5.3	**Select PPE from the SDS** Put on the PPE specified on the SDS or the task risk assessment, such as chemical-resistant gloves, eye protection or a respirator, before handling the chemical.	Employee	☐
5.4	**Use in a ventilated area** Work in a ventilated area or fume hood where the SDS requires it, and never rely on PPE alone to substitute for required ventilation.	Employee	☐
5.5	**Avoid mixing incompatible chemicals** Check the SDS for incompatible substances before combining or working near other chemicals, since mixing incompatible chemicals can produce heat, toxic gas or fire.	Employee	☐
5.6	**Store chemicals by compatibility group** Store chemicals in designated, segregated storage following the SDS storage instructions, keeping incompatible groups physically separated.	Storekeeper	☐

Step	Task	Owner	Done
5.7	**Keep spill and emergency equipment accessible** Keep a spill kit, eyewash station or safety shower accessible and unobstructed near any area where the chemical is used or stored. **Checkpoint:** A spill kit and, where required by the SDS, an eyewash or safety shower are accessible within the work area.	Supervisor	☐
5.8	**Respond to a spill** For a spill within your training and the spill kit's capacity, contain and clean it up following the SDS instructions; for a larger spill, evacuate the area and call for help. **Warning:** Never attempt to clean up a spill beyond your training or the capacity of the available spill kit.	Employee	☐
5.9	**Report exposure or near misses** Report any chemical exposure, splash or near miss to the supervisor immediately, and seek first aid or medical attention as directed by the SDS.	Employee	☐
5.10	**Dispose of chemical waste correctly** Dispose of chemical waste following the SDS disposal section and local regulations, using labeled waste containers and never pouring chemicals down a drain unless specifically permitted.	Storekeeper	☐
5.11	**Maintain the SDS register** Keep an up-to-date SDS on file for every hazardous chemical on site, and add a new SDS before a new chemical is approved for use.	Safety Officer	☐
5.12	**Update the chemical inventory** Record chemical quantities received, used and disposed of in the chemical inventory log to keep stock and hazard information current.	Storekeeper	☐

6. Quality checks

- Every hazardous chemical on site has a current SDS in the register.
- No unlabeled chemical containers are found during inspections.
- Spill kits and eyewash stations are accessible and stocked near chemical use areas.
- Incompatible chemicals are physically segregated in storage.

7. Records

- SDS register
- Chemical inventory log
- Spill and exposure incident reports
- Chemical waste disposal records

8. KPIs

- Percentage of chemicals on site with a current SDS on file
- Number of spill or exposure incidents per quarter
- Percentage of storage areas passing compatibility segregation checks

9. Common mistakes

- Transferring a chemical into an unlabeled spray bottle or container.
- Storing incompatible chemicals next to each other for convenience.

- Skipping the SDS review because the chemical looks similar to one used before.
- Attempting to clean up a large spill without evacuating or calling for help.

10. Revision history

Revision	Date	Description	Reviewed by
1.0	September 15, 2026	Initial release	Ilia Pirozhenko

Approval

Prepared by	Approved by	Date

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