THE PRINCIPLES OF CHEMICAL MANAGEMENT

How to Successfully—and Safely—Manage the End-to-End Process

Prepare for New Chemical

Identify potential new hazards, training, processes and reporting.

Acquire New Chemical

Ensure proper labeling, storage and receipt of the safety data sheet (SDS).

Update Written HazCom Program

Add the new chemical to the list of hazardous chemicals and ensure the SDS is accessible.

Conduct Training

Train all exposed employees on the chemical's hazards and safe handling procedures.

Manage Chemical's Inventory

Track ongoing inventory per operational and verify accuracy with periodic facility walkthroughs.

Store Chemical

Determine chemical incompatabilities, shelf life and container requirements.

Control Chemical Hazards

Implement process modifications, engineering and administrative controls, and PPE as needed.

Minimize Chemical Waste & Prevent Pollution

Identify opportunities to reduce chemical use or to reuse chemicals.

Manage Chemical Emergencies

Identify chemical threats and implement emergency plans and training. Provide secondary containment.

Complete Required Records & Reporting

Keep records and file reports and permits as applicable (Tier II, RCRA, TSCA, SPCC, RMP, PSM, etc.)

Dispose of Chemical

Determine options for shipping to another facility, returning to vendor or waste treatment or disposal.

Transport Chemical

Comply with all Department of Transportation regulations for transporting hazardous materials on public roads.

The Principles of
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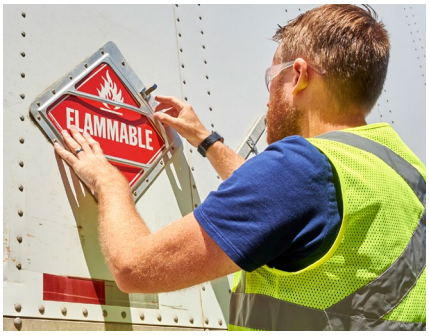
How to Keep Your Employees Safe & Your Company in Compliance



Chemical management is a critical part of your company's safety program. However, it often takes a siloed approach, each set of requirements separately. This not only creates inefficiencies, it can also create inconsistencies in the mismanagement of the entire chemical management process. And with the serious risks to both employee safety and regulatory compliance, a more integrated approach is the best solution.

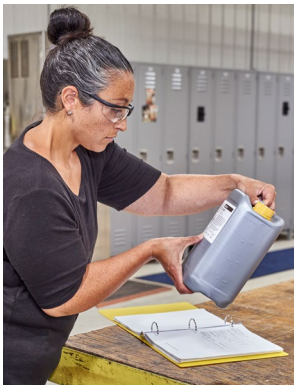
Therefore, combining the chemical lifecycle with the following safety principles will ensure a consistent, comprehensive and centralized approach to ongoing chemical management.

PREPARATION – Before a new chemical is brought onsite, analyze your current chemicals and the potential hazards the addition of this chemical might pose. Think about how it will impact your facility, processes, training, reporting and employee safety.

ACQUISITION – This involves the approval and purchase of chemicals to come onsite, along with chemicals supplied by subcontractors. Chemical reuse is preferred over new purchases, but you may also consider smaller quantities and less-hazardous substitutes. When chemicals arrive, ensure proper labeling, storage and receipt of the safety data sheet (SDS).

WRITTEN PROGRAM UPDATES – As part of the Hazard Communication (HazCom) Standard, you must keep your written program updated to include information on container labeling for the chemical, the SDS, required employee training, and methods for communicating precautionary measures (including at multi-employer workplaces).

EMPLOYEE TRAINING – Develop chemical HazCom training for all staff members potentially exposed to the chemical during normal operations or in foreseeable emergencies. In addition, job-specific training might include other topics, such as chemical storage, chemical packaging, waste identification and disposal, pollution prevention and waste minimization.



CHEMICAL INVENTORY MANAGEMENT – A best practice in this area is to automate your inventory tracking system so it offers electronic inventory records of all chemicals onsite, including new chemicals. At the same time, verify its accuracy with periodic facility walkthroughs.

CHEMICAL STORAGE – Investigate chemical quantities, incompatibilities and shelf lives before selecting chemical storage locations at your facility. Bear in mind that storage includes all chemicals, including used and unused chemicals; sealed, opened, or partially filled chemical containers; and chemicals in the piping.

HAZARD CONTROL – Follow a hierarchy of controls by first trying to eliminate a chemical hazard through chemical substitution or process modification when practical. Then, opt for engineering controls, followed by administrative controls. If those measures are not feasible or don't fully eliminate the hazard, personal protective equipment may be required.

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POLLUTION PREVENTION AND WASTE MINIMIZATION – Identify opportunities to reduce chemical pollution and waste. Consider concepts like source reduction, product substitution and chemical reuse. Or you can cut down on how much non-hazardous, hazardous, radioactive, and mixed waste you generate, and strive to reduce how much of it requires treatment or disposal.

CHEMICAL EMERGENCY MANAGEMENT – Identify chemical threats, develop emergency plans, and determine the staff and resources needed for an effective emergency response. In an actual emergency, work to mitigate consequences to staff, the public, and the environment.

CHEMICAL REPORTING – Based on the type and quantity of chemicals in your facility, a variety of records, reports and/or permits may be necessary. These range from Tier II to TRI, RCRA, SPCC, PSM and more. It's imperative to know when and how to comply with the reporting requirements, and to file accurately and on time.

CHEMICAL DISPOSITION – When your facility has excess or unwanted chemicals, consider using them up in a different work area, shipping them to another facility at your company, making them available for community use, returning them to the vendor, or having them recycled by a third party. Waste disposal is preferably the last option.

CHEMICAL TRANSPORTATION – Consider the shipment/transportation of chemicals over public roads, site transportation on non-public roads, and within and between buildings. Be sure to understand and comply with all applicable Department of Transportation (DOT) regulations.