

Chemical Burn Prevention Fact Sheet

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Whether you're cleaning with bleach, handling industrial acids, or mixing concrete additives, chemical safety depends on awareness and preparation. Chemical burns can happen anywhere — on a construction site, in a hospital, or during routine cleaning. By following the same basic prevention steps, every worker can reduce the risk of injury and protect their health.



Why chemical burn awareness matters

Each year, thousands of workers suffer chemical burns that cause pain, lost work time, and sometimes permanent injury. These injuries affect employees in every field — **janitors** who handle strong cleaners, **lab technicians** who mix acids, **mechanics** who use solvents, and **construction workers** who apply adhesives or coatings.

Chemical burns occur when harmful substances damage the skin, eyes, or lungs. Acids and bases (like bleach, ammonia, or lye) can destroy tissue quickly. Solvents and fuels may cause delayed burns or respiratory irritation from vapors. Understanding these hazards is the first step toward prevention.

Recognizing universal hazards

Different jobs use different products, but many contain similar chemical dangers.

- **Strong acids and bases** – such as bleach, drain cleaners, ammonia, or lye, can burn on contact.
- **Solvents, fuels, adhesives, and coatings** – may irritate skin or eyes and give off harmful vapors.

- **Vapors and mists** – can injure the eyes or respiratory system even without direct contact.

For example, a janitor using drain cleaner and a lab technician using hydrochloric acid face similar burn risks. Both must recognize corrosive symbols on containers and take precautions before starting work.

Universal safe practices

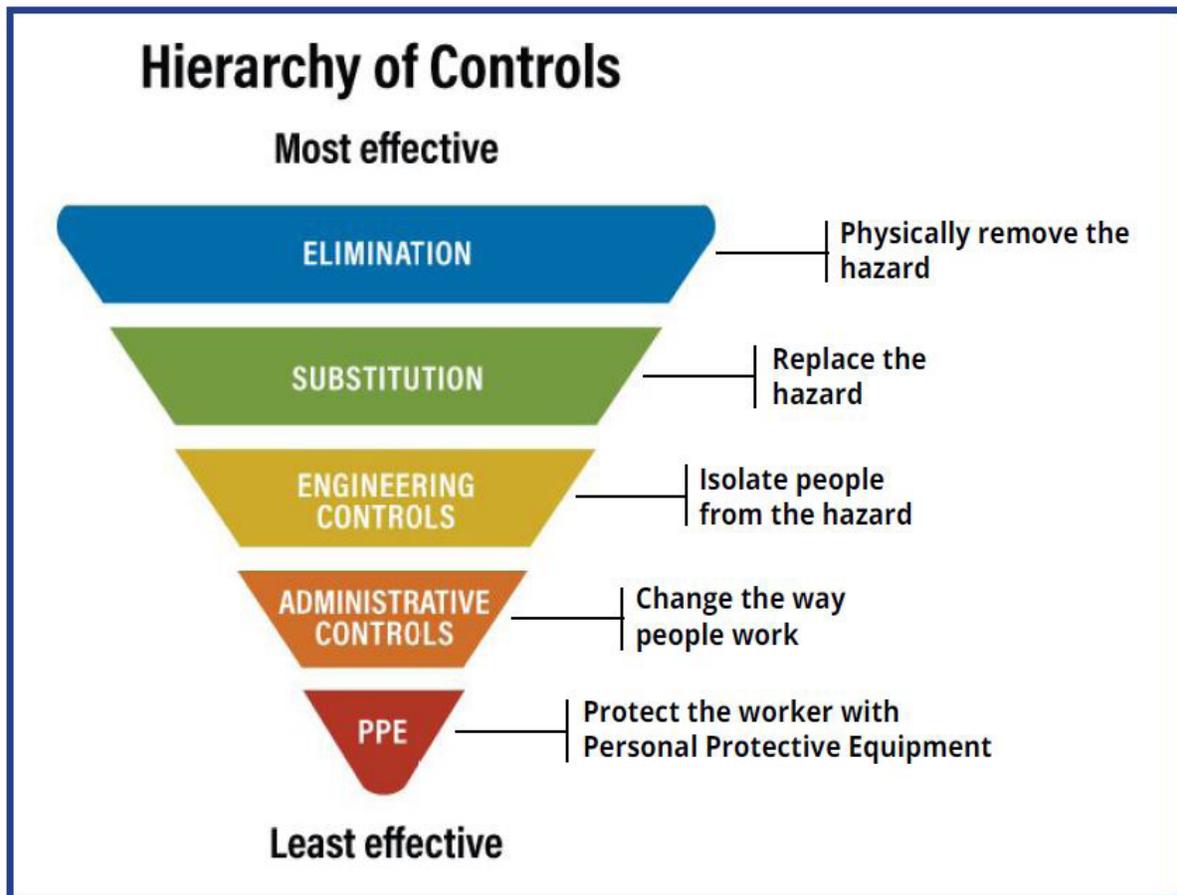
No matter where you work, these steps help prevent chemical burns:

- **Read and follow the [Safety Data Sheet \(SDS\)](#)** for each chemical before use. The SDS explains hazards, first aid, and proper handling.
- **Label and store chemicals correctly.** Never mix incompatible substances. Keep containers sealed, upright, and clearly marked.
- **Maintain emergency equipment.** Eyewash stations and safety showers must stay clean, tested, and easy to reach.

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- **Act fast if contact occurs.** Flush the affected area immediately with clean, cool water for 15–20 minutes. Report the incident right away, even if symptoms seem mild.
- **Practice emergency drills.** Regular training builds confidence and ensures quick response in real situations.

Applying the “Hierarchy of Controls”



Chemical burn prevention follows the same model recommended by the [National Institute of Occupational Safety and Health](#) and the [Occupational Safety and Health Administration](#) — the **Hierarchy of Controls** — which prioritizes safer solutions before relying on protective gear.

1. **Eliminate hazards.** Physically remove a dangerous chemical if it’s not required.
2. **Substitute hazards.** Replace a caustic cleaner with a neutral pH product whenever possible.

3. **Use engineering controls.** Install ventilation, fume hoods, or splash guards near chemical stations to reduce exposure.
4. **Adopt administrative controls.** Rotate tasks to limit exposure, maintain written handling procedures, and train workers to respond to spills quickly.
5. **Wear proper personal protective equipment (PPE).** Gloves, goggles, face shields, long sleeves, and aprons act as the final barrier when other controls aren’t enough.

Strengthening training and communication

Effective training helps workers recognize hazards before accidents happen. Make sure everyone can understand:

- **Labels and pictograms.** The [Globally Harmonized System of Classification and Labeling of Chemicals](#) corrosion symbol — showing test tubes pouring onto a hand and surface — means a chemical can burn skin or metal.
- **Simple language.** Make safety information clear and in a language workers understand.
- **Open communication.** Encourage questions and discussions about safer alternatives or better storage methods.

Building a culture of prevention

Preventing chemical burns takes teamwork. Supervisors must ensure chemicals stay labeled, PPE is available and used correctly, and spill response plans stay up to date. Employees must follow safe practices, report hazards, and help maintain a clean, organized workspace.

A culture of prevention closes the gaps that lead to injury. Whether you're mopping floors, mixing epoxy, or testing samples in a lab, the same message applies: **Know your chemicals, use them safely, and protect yourself and others every time you work.**

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