

Chemical Spill Response

WHY THIS MATTERS

Chemical spills can cause burns, respiratory damage, explosions, and environmental contamination within seconds. OSHA's HAZWOPER standard (29 CFR 1910.120) requires employers to have emergency response plans. Knowing what to do first saves lives.

~50K

Chemical incidents reported yearly (NRC)

15 sec

Max time to reach emergency eyewash (OSHA)

100%

Of spill injuries are preventable with training

5 Rules for Chemical Spill Response

Every worker must know these steps before a spill happens:

1

ALERT AND EVACUATE

Immediately warn nearby workers. If the spill is large, unknown, or involves toxic/flammable materials, evacuate the area. Pull the fire alarm if needed. Never assume a spill is harmless.

2

IDENTIFY THE CHEMICAL

Check the label and Safety Data Sheet (SDS). Know the hazards: flammable, corrosive, toxic, or reactive. Never touch, smell, or taste an unknown substance.

3

CONTAIN — DON'T CLEAN

If trained and safe to do so, use absorbent materials, spill pillows, or berms to prevent spreading. Only trained HAZMAT personnel should clean up large or hazardous spills.

4

PROTECT YOURSELF FIRST

Wear proper PPE for the chemical: gloves, goggles, face shield, chemical-resistant apron, or respirator as indicated by the SDS. Never respond without appropriate protection.

5

REPORT IMMEDIATELY

Notify your supervisor and the designated spill response team. Report what was spilled, how much, where, and whether anyone was exposed. Document everything.

Before You Start — Quick Checklist

- Do you know the location of all SDS binders on site?
- Are spill kits accessible and fully stocked?
- Do you know your site's chemical spill evacuation route?
- Is the emergency eyewash/shower within 15 seconds of travel?
- Are all chemical containers properly labeled?
- Do you know who to call for spill response on your site?

Spill Response by Type — Know Your Action

Acid/Base: Neutralize only if trained. Use appropriate spill kits. Flush skin/eyes with water for 15+ minutes. Do not use rags.

Flammable: Eliminate ignition sources immediately. No sparks, flames, or electrical switches. Evacuate and ventilate the area.

Toxic/Poison: Evacuate upwind and uphill. Do not attempt cleanup — call HAZMAT. Monitor exposed workers for symptoms.

Oxidizer: Keep away from organics and flammables. Can intensify fire. Use inert absorbents only — never sawdust or paper.

Gas leak: Evacuate immediately. Do not operate electrical equipment. Shut off source only if safe. Call emergency services.

Unknown: Treat as worst case. Evacuate, isolate the area, call HAZMAT. Never assume it is safe — identify before acting.

Common Mistakes That Make Spills Deadly

- ✗ Trying to clean up a spill without proper PPE or training — skin burns and inhalation happen fast
- ✗ Using water on chemicals that react violently with water (check the SDS first)
- ✗ Not evacuating quickly enough — 'it's just a small spill' kills more workers than large ones
- ✗ Failing to report a minor spill — small leaks become major incidents over time
- ✗ Not knowing the location of spill kits, eyewash stations, or emergency contacts

Safety Tips to Remember

- ✓ Read the SDS BEFORE working with any chemical — Section 6 covers spill response procedures
- ✓ Keep spill kits within 50 feet of chemical storage and use areas — seconds matter
- ✓ Practice spill response drills at least annually — muscle memory saves lives in real emergencies
- ✓ Never mix chemicals during cleanup unless the SDS specifically allows it — reactions can be fatal
- ✓ If skin or eye contact occurs, flush with water for at least 15-20 minutes and seek medical attention

Discussion Questions for Your Team

1. What chemicals are used or stored in our current work area?
2. Where are the nearest spill kits and eyewash stations?
3. Who is the designated spill response contact on this site?
4. When was our last chemical spill response drill?
5. Does everyone know how to read an SDS for spill procedures?

TOOLBOX TALK SIGN-OFF

Date: _____

Supervisor: _____

Project: _____

Location: _____

Attendance sheet attached: [] Yes