Chemical Safety 7 Training Mistakes to Avoid



What Are Dangerous Chemicals

First, a definition: By “hazardous chemicals,” I mean those regulated by WHMIS (Workplace Hazardous Materials Information System) in Canada or the OSHA Hazardous Communication Standard (HazCom) in the U.S.

Now, on to the mistakes:

Mistake 1: Relying Heavily on the SDS Information for Hazard Communication

The Problem: The quality of information in SDSs (safety data sheets) is always improving. But there are still too many SDSs that don’t provide enough relevant information about the chemical. A poor quality SDS doesn’t help the employee understand the potential hazard. For example, how often have you looked at an SDS that simply stated “use appropriate gloves & respirators”?

There’s also a tendency for an SDS to exaggerate the potential hazard and recommend the most protective forms of PPE possible. Such recommendations are not practical and are designed less to protect workers from hazard than to protect the supplier of the chemical from liability.

The Solution: You have a choice. You can:

- Ask the supplier for a more thorough explanation of their SDS; or
- Select a different manufacturer provides a more thorough SDS; and/or
- Conduct your own risk assessment on the chemical before buying it.

Mistake 2: Not Reviewing the SDS before Using the Chemical

The Problem: While it’s not a good idea to rely too heavily on the SDS, it is essential that the SDS be consulted before the product is used. But how often have you seen an employee actually reviewing an SDS for a chemical before using it? Not very often, I bet.

The Solution: Ensure that the SDSs are accessible. For example, in our facility, we:

- Store our SDSs in binders at strategic locations around the site;
- Make SDSs easily accessible electronically from any computer.

Making SDSs accessible is not just a safety requirement but a legal one. It's also important to stress to employees the value of the information contained in the SDS. Through our annual training, we reinforce the importance of understanding the health (e.g., is it absorbed through the skin?) and safety (e.g., is it flammable?) aspects of the chemicals used in our workplace.

Mistake 3: Not Having the Proper PPE for the Chemicals Used in the Workplace

The Problem: SDSs tend to be pretty generic regarding PPE requirements. Of course, not all forms of PPE are the same. Even if the SDS is specific, it can raise problems. For instance, if the SDS specifies that it is a skin absorption hazard and that neoprene gloves must be used, should you stock neoprene gloves?

The Solution: A health and safety person should review the SDS of each chemical onsite to ensure adequate protection is available. At our workplace, we developed a PPE selection guide that is available to all employees. This guide outlines:

- All of the PPE stocked onsite and the specific hazards they are designed to protect against; and
- Available respirator cartridges/canisters and outlines the specific chemicals onsite that they are appropriate for.

Mistake 4. Overlooking the Importance of Fit-Testing for Respiratory Protection

The Problem: The importance of following the CSA Standard Z94.4-02 "Selection, Use and Care of Respirators" cannot be overlooked when using respiratory protection to reduce exposure to chemical hazards. Quite often there is a temptation to "just throw on a dust mask" without considering: Is the employee fit-tested? Clean-shaven? Medically fit? Trained?

The Solution: When using respiratory protection, follow the CSA standard or ideally use other controls up the hierarchy of control, such as ventilation or substitution to reduce the exposure so that respiratory protection is not required.

Mistake 5: Failing to Label Containers of Chemicals

The Problem: Unless they fall into certain exempt situations, regulated chemicals must be labeled as per the WHMIS regulations in Canada or the HazCom in the U.S. One reason for these requirements is that without labels, workers might try to use their senses to determine what a chemical is. Although I've never seen it personally—knock on wood—I've heard colleagues tell stories of first aid cases for burnt tongues, fingers, etc. resulting from such incidents.

The Solution: Make labeling easy by providing blank stickers and permanent markers for workers to use. Ideally, you should keep these materials readily available at the spot where the worker obtains the chemical. Training on labeling requirements and auditing the workplace will help reduce labeling errors.

Mistake 6: I WHMIS/HazCom Training Is Not Site-Specific

The Problem: Although there are lots of good generic WHMIS and HazCom training packages on the market, these packages come up short on site-specific training. Workers return from generic training –often from an outside service provider like a consultant, contractor or CD ROM – and think they are "all done." But they're not. Information provided in these training sessions must now be tied to the chemicals, operations, processes and conditions of your own workplace. You need to give your workers context.

The Solution: Once workers complete generic training, provide them site-specific training that transfers the information to your site. This training should include SDS locations, safe handling procedures and spill response.

Mistake 7: Inadequate Precautions about Smoking & Chemicals

The Problem: Most workers are pretty good about washing their hands before eating. The same can't be said about washing hands before smoking. Poor hand hygiene habits can result in inadvertent ingestion and inhalation of workplace chemicals via cigarettes. As an occupational hygienist friend of mine quipped, "We wouldn't want smoking to be unhealthy now, would we?"

The Solution: When providing training on the safe handling of hazardous chemicals, remind workers that all hand-to-mouth actions – including smoking – carry the risk of ingesting hazardous chemicals.

Conclusion

Many of the mistakes highlighted in this article will be common sense for most health and safety professionals. But you'd be surprised at how these seemingly self-evident points get overlooked. So, it's important for supervisors to bring up these points, if only to give them a few ideas on how to improve your current program and provide reassurance that your programs are working appropriately.