

INSIDER NEWSLETTER



WHAT ARE CHEMICAL HAZARDS AND TOXIC SUBSTANCES?

Chemical hazards and toxic substances pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and explosibility).

This page provides basic information about chemical hazards and toxic substances in the workplace. While not all hazards associated with every chemical and toxic substance are addressed here, we do provide relevant links to other pages with additional information about hazards and methods to control exposure in the workplace.

HOW DOES OSHA REGULATE WORKER EXPOSURE TO CHEMICALS?

Worker education and training (Hazard Communication Standard)

29 CFR 1910.1200, 1915.1200, 1917.28, 1918.90, and 1926.59

OSHA's Hazard Communication Standard (HCS) is designed to ensure that information about chemical and toxic substance hazards in the workplace and associated protective measures is disseminated to workers.

In order to ensure chemical safety in the workplace, information about the identities and hazards of the chemicals must be available and understandable to workers.

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- Chemical manufacturers and importers are required to evaluate the hazards of the chemicals they produce or import, and prepare labels and safety data sheets to convey the hazard information to their downstream customers;
- All employers with hazardous chemicals in their workplaces must have labels and safety data sheets for their exposed workers, and train them to handle the chemicals appropriately. The training for employees must also include information on the hazards of the chemicals in their work area and the measures to be used to protect themselves.

For more information see OSHA's Hazard Communication page.

Allowable airborne concentrations

Employers are required to identify and evaluate the respiratory hazard(s) in their workplaces. Various types of Occupational Exposure Limits (OELs) have been established by a number of organizations, and are listed on many of OSHA's Safety and Health webpages on chemical hazards and toxic substances. Here is an explanation of some of the different levels.

- **OSHA Permissible Exposure Limits (PELs).**
- 29 CFR 1910 Subpart Z, 1915 Subpart Z, 1926 Subparts D and Z
- OSHA sets enforceable permissible exposure limits (PELs) to protect workers against the health effects of exposure to hazardous substances, including limits on the airborne concentrations of hazardous chemicals in the air. Most OSHA PELs are 8-hour time-weighted averages (TWA), although there are also Ceiling and Peak limits, and many chemicals include a skin designation to warn against skin contact. Approximately 500 PELs have been established.

Most of OSHA's PELs for General Industry are contained in 1910.1000 – Air Contaminants, and are listed by chemical name in Tables Z-1, Z-2, and Z-3. The standards for Marine Terminals and Longshoring both incorporate the General Industry standards (1910 Subpart Z).

Most of OSHA's PELs for Shipyard Employment are contained in 1915.1000 – Toxic and Hazardous Substances, and are listed by chemical name.

Most of OSHA's PELs for Construction are contained in 1926.55 – Gases, Vapors, Fumes, Dusts, and Mists, and are listed by chemical name.

However, many of these limits are outdated. Also, there are many substances for which OSHA does not have workplace exposure limits.

To provide employers, workers, and other interested parties with a list of alternate occupational exposure limits that may serve to better protect workers, OSHA has annotated the existing Z-Tables with additional selected occupational exposure limits. OSHA has chosen to present a side-by-side table with the California/OSHA PELs, the NIOSH Recommended Exposure Limits (RELs) and the ACGIH® TLVs®. The tables list air concentration limits, but do not include notations for skin injury, absorption or sensitization.

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- California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).
- Cal/OSHA has established an extensive list of PELs (Cal/OSHA AC-1 Table) that are enforced in workplaces under its jurisdiction. Cal/OSHA PELs are promulgated under statutory requirements for risk and feasibility that are no less protective than the OSH Act. Though not enforceable in establishments outside of Cal/OSHA's jurisdiction, these PELs can provide information on acceptable levels of chemicals in the workplace. Of all the states that have OSHA-approved State Plans, California has the most extensive list of PELs.
- National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs).

NIOSH RELs are Federal agency recommendations established according to the legislative mandate for NIOSH to recommend standards to OSHA. RELs are recommended exposure limits for hazardous substances in the workplace to protect worker health. In developing RELs and other recommendations to protect worker health, NIOSH evaluates all available medical, biological, engineering, chemical, and trade information relevant to the hazard. NIOSH transmits its recommendations to OSHA for use in developing legally enforceable standards.

NIOSH also publishes its recommendations in publicly available sources such as the NIOSH Pocket Guide to Chemical Hazards, Criteria Documents, Current Intelligence Bulletins, Alerts, Special Hazard Reviews, Occupational Hazard Assessments, and Technical Guidelines.

How do I control chemical hazards and toxic substances?

It is OSHA's long standing policy that engineering and work practice controls must be the primary means to reduce employee exposure to toxic chemicals, where feasible. Respiratory protection is required to be used if engineering or work practice controls are infeasible or while engineering controls are being implemented.

What are the requirements for respirator use?

When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used. Employers must provide appropriate respiratory protection at no cost to workers, provide appropriate training and education regarding its use, and ensure that workers use it properly. (See 29 CFR 1910.134 or OSHA's Respiratory Protection Safety and Health Topics Page).

Where can I find other information relating to specific chemicals?

First, explore this Safety and Health Topic webpage that includes links to much of the related information available from OSHA, in addition, near the top of this page is a list of other Safety and Health Topic pages which address specific chemicals. Other sections contain information or links on subjects such as laboratory safety, and Hazard Communication or Process Safety. The OSHA Occupational Chemical Database compiles information from several government agencies and organizations. Information available on the pages includes chemical identification and physical properties, exposure limits, sampling information, and additional resources.

February Workshop

IMEA Supervisor Safety Workshop



Date: March 6 - 7 , 2024
When: 8:30 a.m. - 3:30 p.m

Location: Mid-America Science Park
Scottsburg, IN.

If you're a new supervisor – or even an experienced one – you may not realize how much responsibility you have in the workplace. Supervisors are legally required to ensure the health and safety of all workers under their supervision. Even if you're not called a “supervisor”, if you instruct, direct, and oversee workers as they perform their duties, then you are responsible for their safety on the job. As a supervisor you are responsible for many things to include knowing, complying with and enforcing workplace health and safety regulations that apply to your workplace and the specific jobs you are supervising. Topics for this workshop include:

- * All About OSHA (A comprehensive look at OSHA) * IOSHA
- * Safety Culture * OSHA Training Requirements

Certificates upon completion.

**For more workshop details and information please visit: [www.imea.com / workshops](http://www.imea.com/workshops)
Register Today!**

March

March 6 – 7 Supervisor Safety Scottsburg

March 13–15 Apprentice Top-Out Exam Scottsburg (032320)



April

April 1 – 5 IMEA 611 Basic Workshop Scottsburg (032023)

April 15–19 IMEA 613 Advanced Workshop Scottsburg (041921)

April 29–May 1 APPA Legislative Rally Washington

May 6 -17 IMEA 610 Wood Pole Climbing Workshop Scottsburg (050624)

May 20 – 24 IMEA 612 Intermediate Workshop Scottsburg (050222)



June

June 5–6 Line Clearance Arborist Certificate Frankfort

June 19 - 21 IMEA 212 Transformer Theory and Connections Workshop Scottsburg





Careers in Public Power

Public power is more to communities than just an essential utility. It is a source of unique and fulfilling career opportunities in your local community. Employees make a difference by serving their own neighborhoods and families. Talented high school, college and technical college graduates and even technology, environmental and public service professionals will find that competitive salaries aren't the only thing attractive about careers in public power.

Do you have important news or photos that you would like to share in our bi-weekly newsletters? Please email all news and photos to janel@imea.com

To post a classified ad to our jobs in Public Power page. Please email text to janel@imea.com.

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