

GLOSSARY OF SAFETY AND HEALTH TERMS AND ACRONYMS

SAFETY AND HEALTH PROGRAM

Glossary of Terms and Acronyms

A

Abatement: Reducing the degree or intensity of, or eliminating a hazard.

Absorption: The process by which a substance can be readily taken into the body. For example, some chemicals can be absorbed through unbroken skin.

Acid: A compound consisting of hydrogen plus one or more other elements and which, in the presence of some solvents or water, reacts to release hydrogen. Acids have the ability to turn litmus paper red, neutralize bases, and have a pH range of 0 to 7.

Action level. A term used in OSHA regulations—the level of exposure to a chemical or other hazard that a worker must have before the employer is required to take certain precautions (such as medical surveillance). The action level is often half the permissible exposure limit (PEL).

Acute. Refers to health effects that show up right away after exposure to a chemical or other hazard. Effects can be Severe. Acute effects are easier to reverse than are the effect of chronic exposure (see chronic).

Air Monitoring: Sampling for and measuring pollutants in the atmosphere.

Air purifying respirator (APR). A type of respirator. Unlike an air supplied respirator, an APR doesn't have its own separate air supply. Instead, it uses disposable filter cartridges to remove harmful vapors and dusts from the surrounding air before you breathe it. Different types of cartridges are used to filter out different substances.

Air supplied respirator. A respirator that has its own air supply. You need one when an air purifying respirator (APR) can't give you enough protection, when no APR cartridge is available for the specific chemical hazard involved, or when there is insufficient oxygen in the surrounding air. There are two main types of air supplied respirators: airline respirators and Self-Contained Breathing Apparatus (SCBA).

Alkali: A compound, which has the ability to neutralize acid and form a salt. Alkalis turn litmus paper blue and have a pH range of 7 to 13.

Aromatic: Fragrant or distinguished odor. Applied to a group of hydrocarbons and their derivatives characterized by the presence of one or more six-carbon rings. Examples are benzene, toluene, and xylene.

Asphyxia: unconsciousness due to suffocation from a lack of oxygen or interference with the oxygen of the blood.

Authorized person: means a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.

Auto-Ignition Temperature: The lowest temperature at which a flammable gas or vapor in air mixture will ignite from its own heat source or a contacted heat surface without the presence of a spark or flame.

Asbestos. A mineral that is very strong and fireproof. Because of these qualities, it was once used in many construction products. Inhaling asbestos fibers is now known to cause serious lung diseases like asbestosis. It can also cause several types of cancer, including mesothelioma.

Asbestos-containing material (ACM). Any product with asbestos in it. For example, roofing material, tile, linoleum backing, and pipe insulation all once contained asbestos. ACM is more of a hazard when remodeling or demolishing an older structure, but some new ACM is still manufactured today.

B

Base: A compound, which reacts with an acid to form a salt. A base will turn litmus paper blue and has a pH of 7 to 13. Base is another term for "alkali".

Biohazard: A biological hazard; organisms or products of organisms that present a risk to humans.

Bloodborne: Carried by or found in the blood.

Boiling Point: The temperature at which a substance will change from a liquid to a gas. This is the point at which the vapor pressure of the liquid is equal to the atmospheric pressure.

Building Condition Survey: Inspection required under the RESCUE Regulation.

C

Carbon Dioxide: A colorless, odorless, toxic gas produced by incomplete combustion of carbon containing substances.

Carcinogen: Any substance, which, under certain quantified exposures, produces cancer in animals or humans. A chemical is considered to be a carcinogen if:

1. It has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or a potential carcinogen.
2. It is listed as a carcinogen or potential carcinogen in the annual report on carcinogens published by the National Toxicology Program (NTP).
3. It is regulated by OSHA as a carcinogen.

Carcinogenic: Cancer-producing.

CAS Number: An identification number assigned by the Chemical Abstract Service (CAS) of the American Chemical Society. The CAS Number is used in various databases, including Chemical Abstracts for identification and information retrieval.

Caustic: Something that strongly irritates, chemically burns, or destroys living tissue.

Ceiling Value: A maximum established level, which no human exposure should ever exceed.

Chemical Inventory: A list of the hazardous chemicals known to be presenting an identity that is referenced on the appropriate material safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas).

Chemical: Any element, chemical compound, or mixture of elements and/or compounds.

Chemical resistant gloves. Special rubber or plastic gloves that protect you from chemicals. There are different gloves to stop different chemicals from getting through to your skin. The package should tell you which chemicals the glove is designed for. These gloves break down over time. (Intended service time should be shown on the package.)

Chronic. Refers to health effects that show up after you are repeatedly exposed to a chemical or other hazard over a long period of time. Chronic effects take longer to appear than acute effects, and last longer. They are difficult to cure, and some may be permanent. An example is liver disease caused by repeatedly breathing solvent vapors over a long period of time.

Code of Federal Regulations: Collection of rules and regulations published in the Federal Register by various agencies.

Combustible Liquid: A liquid having a flashpoint at or above 100 F but below 220 F except mixtures having components with flashpoints greater than 220 F (99%+ of all mixtures).

Confined Space: refers to a space which by design has: 1) limited openings for entry and exit, 2) unfavorable natural ventilation which could contain or produce dangerous air pollutants, and 3) which is not intended for continuous employee occupancy.

Contact Dermatitis: Caused by contact with a primary irritant, a skin irritation at the area of skin contact.

Contingency Plan: A document specifying an organized, planned, and coordinated course of action to be followed in case of fire, explosion, or other accident that releases toxic chemicals, hazardous wastes, or radioactive materials which threaten human health or the environment.

Corrosion: The dissolving and wearing away of metal caused by chemical reaction such as between water and the pipes that the water contacts, chemicals touching a metal surface, or contact between two or more metals.

Corrosive: Any material, liquid or solid, that causes visible destruction of, or reversible alterations in, human skin tissues at the site of contact (burns). Examples of corrosives are sodium hydroxide (lye) or ammonium solutions.

disease caused by repeatedly breathing solvent vapors over a long period of time.

CPR. (Abbreviation for “cardiopulmonary resuscitation.”) A procedure for reviving a person whose heart and/or breathing have stopped. CPR requires special training.

Crystalline silica. A colorless mineral, also called quartz. It is an ingredient in sand and flint, which are used in making glass, cement, and concrete. Exposure to crystalline silica can cause lung diseases such as silicosis.

D

Decibel: A unit of sound measurement. Abbreviated as dB. In general, a sound doubles in loudness for every increase of 6-10 decibels.

De-energized. Refers to an electric line which has been disconnected from its power source *and* which is free from any stored electric charge.

Dermal: Relating to the skin.

Disinfectant: A chemical or physical process that kills pathogenic organisms. Ordinary chlorine laundry bleach (5.25% sodium hypochlorite) is an effective disinfectant when mixed one part to 10 parts water.

Direct-Reading Instrumentation: Instruments that give an immediate indication of the concentration of aerosols, gases, vapors, or the magnitude of a physical hazard by some means such as a dial or meter.

Dyspnea: Labored or difficult breathing.

E

Ecology: The relationship of living things to one another and to their environment, or the study of such relationships.

Edema: An abnormal accumulation of watery fluid in tissues or serous cavities; swelling.

Environmental Protection Agency: Federal agency responsible for enforcing regulations related to the control of hazardous materials.

Explosive: A chemical that causes a sudden, almost instantaneous, release of gas, pressure, and/or heat when subjected to shock, pressure, or high temperature.

Exposed or Exposure: Coming into contact with a hazardous chemical in the course of employment through any route of entry.

Eye wash station. A source of water (such as a fountain) with a basin; used for flushing your eyes if you get chemicals or dust in them.

F

Fit-test. A procedure to find out if a respirator forms a good seal on a person's face, or if there is a leak. The test uses irritant smoke or banana oil, which are released into the air around you while you are wearing the respirator. You fail the fit test if you can detect the odors of these substances.

Friable. A term used to describe an asbestos-containing material that can easily be crumbled by finger or hand pressure. Friable asbestos products are more dangerous because they are more likely to release fibers into the air.

Flammable: Any substance that is easily ignited, burns intensely, or has a rapid rate of flame spread.

Flashpoint: The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite under testing conditions.

Formaldehyde: A colorless, pungent, irritating gas, CH₂O, used chiefly as a disinfectant and preservative and in synthesizing other compounds and resins.

Fungicide: Pesticides that are used to control, prevent, or destroy fungi.

G

Grounding: Electrically connecting an object to the ground, preventing sparks and shock.

GFI. See *Ground fault circuit interrupter*.

Ground fault circuit interrupter (GFI). A device that senses ground faults (accidental electrical paths to ground) in a circuit, and cuts off all power. For example, if there is a short in a power tool, the metal casing can become “live.” A GFI will cut off all power in the circuit before you can get a serious shock.

H

Hazard Communication: Recognition and evaluation of hazardous materials in the workplace, accurate labeling of hazards, and effective training of employees about the proper handling and use of those hazardous materials. Also called Right To Know.

Hazards Analysis: Procedures involved in: 1) Listing, in sequence, the activities of job duties, 2) identifying actual or potential hazards associated with each activity, and 3) determining the possible methods to minimize or eliminate the hazards.

Health Hazard: Anything (including certain chemicals) that, according to at least one significant scientific study, may be harmful to the health of the body. Chemicals classified as health hazards include:

1. Carcinogens
2. Toxic or highly toxic agents
3. Reproductive toxins
4. Irritants
5. Corrosives
6. Hematopoietic system effectors
7. Agents which damage the lungs, skin, eyes, or the mucus membranes

Hearing protection. Various types of personal protective equipment that you wear on the job to cut down loud noise. Examples are ear plugs and ear muffs.

Heat stress. A general term for various medical conditions you can get from working in the heat. These include heat cramps (muscle pains or spasms), heat exhaustion, and heat stroke.

Heat stroke. The most serious medical condition you can get from working in the heat. Symptoms often include high body temperature (around 105° F), rapid pulse, dizziness, confusion, red skin, nausea, vomiting, and fainting. 50% of people with heat stroke die, so immediate medical attention is vital.

Heavy metals: Metallic elements with high atomic weights (mercury, arsenic, chromium, cadmium, and lead). They can damage living things at low concentrations and tend to accumulate in the food chain.

HVAC: Heating, ventilation, air conditioning system.

Hydrocarbons: Compounds composed solely of hydrogen and carbon, which are the basic building blocks of all organic chemicals.

Hygroscopic: Readily absorbs moisture from the air.

Hypothermia. A medical condition in which your body temperature drops way below normal. The most serious effect of prolonged exposure to cold temperatures. Symptoms can include violent shivering, slow or slurred speech, drowsiness, confusion, hallucinations, a weak and irregular pulse, or unconsciousness. If not treated quickly, you may die.

I

Incompatible chemicals. Chemicals that should not be stored near each other because they could combine and have a chemical reaction. The reaction might produce a fire, explosion, or a different chemical--possibly a hazardous one.

Immediately Dangerous to Life and Health (IDLH): A term describing very hazardous atmospheres where exposure can cause serious injury, death, or serious delayed effects.

Immediate Use: The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Incompatible: Materials that could cause dangerous reactions. Materials that should be kept apart due to hazards involved if they come into contact with each other.

Inorganic: A term to designate compounds that generally do not contain carbon. Source matter other than vegetable or animal. An example is salt.

Inorganic Chemicals: Chemical substances of mineral origin, not of basically carbon structure.

Ionizing Radiation: Radiation that can remove electrons from atoms, i.e., alpha, beta, and gamma radiation.

J

Job Hazard Analysis: A process by which a job is studied to determine the hazards involved and ways to safely complete the job by procedures and/or personal protective equipment.

K

L

Label: Any written, painted, or graphic material, displayed on or fixed to containers of a hazardous chemical.

Lockout/Tagout: The placement of a lock/tag on the energy-isolating device in accordance with an established procedure, indicating that the energy-isolating device shall not be operated until removal of the lock/tag in accordance with an established procedure.

Long Range Facility Plan: Evaluation of enrollment and curriculum requirements as it affects future facility

Lanyard. A flexible line (of rope or wire) that secures a worker wearing a safety belt or harness. The lanyard is connected to a drop line, lifeline, or structural member.

Lethal Dose (LD): An amount of a substance that is sufficient to kill a test animal.

M

Material Safety Data Sheet (MSDS): Written or printed material concerning a hazardous chemical. The MSDS is filled out by the manufacturer, and lists hazardous ingredients, OSHA exposure limits, flammability, health hazards, protective measures, and other information. Employers must keep MSDSs, and let workers see them and make copies.

Medical Surveillance: Surveillance on an employee to assure that chemical exposure is within the acceptable limits.

Mercury: A heavy metal that can accumulate in the environment and is highly toxic if breathed or swallowed.

Milligrams per cubic meter (mg/m³). A unit of measure used to describe the amount of chemical vapors, fumes, or dust in the air. Indicates how many milligrams of a particular chemical are present in a cubic meter of air. (A milligram is one-thousandth of a gram.) Cal/OSHA permissible exposure limits for some chemicals are expressed in mg/m³.

MSDS. See *Material Safety Data Sheet*.

N

National Fire Protection Association (NFPA): Nonprofit organization that provides information on fire protection and prevention. It published the 704 Standard for the Identification of the Fire Hazards of Materials.

National Institute for Occupational Safety and Health (NIOSH): National safety and health research organization that recommends methods for reducing or elimination of hazards.

Noise monitoring. Measuring the amount of noise in a specific location, using a scientific instrument such as a sound level meter. OSHA requires noise monitoring on the job under some circumstances.

O

Occupational Safety and Health Administration (OSHA): a US Government agency that makes and enforces workplace safety and health regulations.

Organic: Chemicals that contain carbon and usually are derived from living or once lived organisms.

Oxidizer: A chemical, other than a blasting agent or explosive, as defined in section 1910.109(a) that initiates or promotes combustion in other materials thereby causing fire either of itself or through the release of oxygen or other gases.

Oxygen-deficient Atmosphere: An atmosphere containing less than 19.5% oxygen by volume.

P

Parts per million (ppm). A unit of measure used to describe the amount of chemical vapors, fumes, or dust in the air. Indicates how many parts of a particular chemical are present in a million parts of air. OSHA permissible exposure limits for some chemicals are expressed in PPM.

Pathogens: Microorganisms that can cause a disease in other forms of living organisms.

Permissible Exposure Limit (PEL): The maximum exposure that a worker may have to a particular chemical, as an average over an 8-hour shift. PELs are established by OSHA.

Permit-Required Confined Space (PRCS): A confined space that has one or more of the following characteristics:

- Contains or has potential to contain a hazardous atmosphere;
- Contains a material that has the potential to engulf an entrant;
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
- Contains any other recognized serious safety or health hazard.

Personal Protective Equipment (PPE): Devices, equipment, or clothing used or worn by the employee, as a last resort, to protect against hazards in the workplace. Some examples of PPE are gloves, goggles, and respirators.

pH: A symbol used to quantify the level of acidity or alkalinity (base). A pH of 7 is neutral, a pH of 0 to 7 is acidic, and a pH of 7 to 13 is alkaline. The farther away from 7 the pH number is, the stronger the acid or base.

Q

Qualified person. Someone who is qualified (by training or experience) to identify and correct a particular job hazard, and who is authorized to do so. For example, when scaffolds are erected or dismantled, OSHA requires that a qualified person who is familiar with the job be present to advise on safety requirements, inspect materials and construction methods used, and determine if the soil is stable.

R

Radon: A colorless, odorless, naturally occurring, radioactive, inert gaseous element formed by radioactive decay of radium atoms in soil or rocks.

Reactive: A chemical in the pure state that will polymerize, decompose, condense, or will become self reactive under certain conditions of shocks, pressure, or temperature.

RESCUE: Rebuilding Schools to Uphold Education - 1998

Respirator. A device used to protect people from breathing harmful contaminants (like vapors or dusts) in the air. There are several types of respirators, ranging from dust masks (least protection) to Self-contained Breathing Apparatus (most protection)

Resuscitation. Reviving someone who is unconscious. (For example, see CPR.)

Right-To-Know: Name also used for the Hazard Communication Standard.

Route of Entry: Methods by which pathogens or gasses can enter the body; most notable are inhalation, ingestion, or absorption.

S

Safety Can: An OSHA approved closed container which has the following characteristics:

1. A capacity of not more than five gallons.
2. Spring closing lid and spout cover.
3. Flash-arresting screen.
4. Designed to safely relieve internal pressure if exposed to fire.

SAVE: Schools Against Violence in Education.

School Facility Report Card: Reporting of facility condition to the public.

SCBA. See *Self-contained Breathing Apparatus*.

Self-contained Breathing Apparatus (SCBA). One type of air supplied respirator. A SCBA has its own air tank that is carried on the user's back. This supplies clean air to the mask. (Similar to "scuba" diving equipment.)

Specific Gravity (sp. gr.): A measurement to quantify the weight of a substance by comparing the weight of a given amount of material to the same amount of water. Materials with a sp. gr. greater than 1 is heavier than water and will sink if it does not dissolve. Materials with a sp. gr. of less than 1 is lighter than water and will float if it does not dissolve. See "solubility in water."

T

Threshold Limit Value (TLV): A safe exposure to a chemical level that has been set by the American Conference of Governmental Industrial Hygienist (ACGIH). Refers to airborne concentrations of a substances and represents an exposure level under which most people can work constantly for eight hours a day, day after day, with no harmful effects. Three categories of TLVs are specified:

1. Time Weighted Average (TWA) - Time weighted average concentration for a normal 8-hour workday or 40-hour work week, to which all workers may normally be exposed day-after-day without adverse effect.
2. Short-Term Exposure Limit (STEL) - Maximum concentration to which workers can be exposed for a period up to 15 minutes continuously without suffering from irritation, chronic or irreversible tissue change, or narcosis of sufficient degree to impair self-rescue or reduced work efficiency. No more than four 15-minute exposure periods per day are permitted with at least 60 minutes between those exposure periods.
3. Ceiling (C) - The concentration that should never be exceeded.

NOTE: If any one of the above TLVs is exceeded, a potential hazard from that substance is presumed to be permitted to exist.

Tie off. To use a safety belt and lifeline while working.

U

Underground Storage Tanks: An underground or partially underground storage tank for storage of gasoline or other petroleum products.

V

Vapor. When a substance that is usually a solid or liquid turns to gas, it is called a vapor. Vapors mix with the air and you may breathe them in. With some vapors, this can be hazardous. Vapors can change back to solids or liquids if the temperature drops or if the pressure increases.

Vapor Density: The measure of how heavy a vapor is compared to air [air has a vapor density of 1 (one)]. Vapors that have a density of greater than 1 will accumulate on the floor or ground or other low places. Substances with vapor densities of less than 1 will rise in the air.

Vaporization: The change of a substance from a solid or liquid to a gas state.

Volatility: The tendency of a substance to vaporize.

Volatile Organic Compound (VOC): An organic compound that evaporates or vaporizes.

W

Water Reactive: A chemical that reacts with water and the reaction produces a gas that is either flammable or presents a health hazard.

Warning properties. Refers to a hazardous chemical's ability to warn you that it is present. If you know that it's present, you can take precautions. Hazardous chemicals which have a strong odor, make your

eyes water, or cause throat irritation have good warning properties. But some very hazardous chemicals don't produce these effects at all. These chemicals have poor warning properties.

ACRONYMS

A

ACGIH: American Conference of Governmental Industrial Hygienist

ANSI: American National Standards Institute

AC: Alternating current

ACBM: Asbestos-Containing building Material

ACGIH: American Conference of Governmental Industrial Hygienists

AHERA: Asbestos Hazard Emergency Response Act

ALARA: As low As Reasonably Achievable

ATSDR: Agency for Toxic Substances and Disease Registry

B

BP: Boiling Point

C

C: Celsius, Centigrade

CAA: Clean Air Act

CAR, CARC: Abbreviation for Carcinogenic

CAS: Chemical Abstracts Service

CDC: Center for Disease Control

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CFM: Cubic Feet Per Minute

CFR: Code of Federal Regulations

CHEMTREC: Chemical Transportation Emergency Center

CO: Carbon Monoxide

CO₂: Carbon Dioxide

CWA: Clean Water Act

D

dB: Decibel

DOT: U.S. Department Of Transportation

E

EPA: Environmental Protection Agency

F

F: Fahrenheit

f/cc: Fibers Per Cubic Centimeters (of air)

FEMA: Federal Emergency Management Agency

FR: Federal Register

G

H

HazMat: Hazardous Materials

HAZWOPER: Hazardous Waste Operations And Emergency Response

HBV: Hepatitis B Virus

HCS: Hazard Communication Standard

HEPA: High Efficiency Particulate Air

HIV: Human Immunodeficiency Virus

I

IARC: International Agency for Research on Cancer

IC: Incident Commander

ICS: Incident Command System

IDLH: Immediately Dangerous to Life and Health

K

L

LC: Lethal Concentration

LD: Lethal Dose

LEL: Lower Exposure Limit Or Lower Explosive Level

LEPC: Local Emergency Planning Committee

LO/TO – Lockout Tagout

M

mg/m³: Milligrams Per Cubic Meter

MSDS: Material Safety Data Sheet

MSHA: Mine Safety and Health Administration

N

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

O

OSHA: Occupational Safety And Health Administration

P

PEL: Permissible Exposure Limit

PPE: Personal Protective Equipment

ppm: Parts Per Million

Q

QA: Quality Assurance

QC: Quality Control

R

RCRA: Resource and Conservation and Recovery Act

REL: Recommended Exposure Limit

S

SARA: Superfund Amendments and Reauthorization Act

SCBA: Self Contained Breathing Apparatus

T

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

TWA: Time Weighted Average

U

UEL: Upper Exposure Limit

UN (#): United Nations (Number)

UC: Unified Command

USEPA: United States Environmental Protection Agency

UST: Underground Storage Tank

V

VOC: Volatile Organic Compound

SD: Virtually Safe Dose

X

XHS: Extremely Hazardous Substance

Y

YTD: Year To date

Z

ZRL: Zero Risk Level

Sources:

*Mr. Dudley Freeman - OKLAHOMA CITY COMMUNITY COLLEGE

*Tailgate Meetings That Work - California OSHA

*www.osha.gov/